

## Workforce Innovation and Opportunity Act

# Governor's Statewide Activities Grants (GSA)

## Request for Applications ("RFA")

Grant Performance Period: May 14, 2025 – June 30, 2026

**HECC # 24-125** 

Date Issued: March 17, 2025 Applications Due: April 14, 2025 11:59 PM PST

Single point of contact ("SPC"): Jeanie Stuntzner jeanie.stuntzner@hecc.oregon.gov

For questions, clarifications, or if you need this material in a different format, please contact the SPC.

### SECTION 1. INTRODUCTION AND OVERVIEW

### 1.1 BACKGROUND

The State of Oregon, acting by and through its Higher Education Coordinating Commission ("HECC"), is issuing this Request for Applications ("RFA") to local workforce development boards to strengthen Oregon's behavioral health care and housing production workforce. Authority for this grant program is under 20 CFR § 683.120(b). \$1.5 million of the 2024 Governor's Statewide Activities Grant is dedicated to the award of two competitive grants: one for the behavioral health workforce and one for the housing production workforce.

### 1.2 COMMITMENT TO DIVERSITY, EQUITY, INCLUSION, AND ACCESSIBILITY

Individuals within a community, and communities within a larger society, need the ability to shape their own present and future, and HECC believes that workforce development and education are fundamental aspects of Oregon's ability to thrive. Equity is both the means to success and an end that benefits us all. Equity requires the intentional examination of systemic policies and practices that, even if they have the appearance of fairness, may in effect serve to marginalize some and perpetuate disparities. The data is clear that Oregon demographics have been changing to provide rich diversity in race, ethnicity, and language. Working toward equity requires an understanding of historical contexts and the active investment in changing social structures and practice over time to ensure that individuals from all communities have the opportunities and support to realize their full potential. Creating a culture of equity requires monitoring, encouragement, resources, data, and opportunity.

HECC applies its Equity Lens (<a href="https://www.oregon.gov/highered/about/Documents/State-Goals/Equity-Lens.pdf">https://www.oregon.gov/highered/about/Documents/State-Goals/Equity-Lens.pdf</a>) to all aspects of its work.

### 1.3 TIMELINE

This timeline represents a tentative schedule for this RFA. All times are listed in Pacific Time. All dates are subject to change. See <a href="https://www.oregon.gov/highered/about/pages/grants-contracts.aspx">https://www.oregon.gov/highered/about/pages/grants-contracts.aspx</a> for the most current information.

| Description  | Date and Time (all time is Pacific Time) |
|--|--|
| RFA Issued   | March 17, 2025                           |
| Application period opens   |  |
| Application Deadline   | April 14, 2025 11:59 PM                  |
| Notice of Award (approximate)  | May 14, 2025                             |
| Grant Agreement Drafting Awarded organizations should plan to be readily available during this time to negotiate Project budgets and activities. | June 14, 2025                            |

### SECTION 2. GRANT OPPORTUNITY AND REQUIREMENTS

### 2.1 APPLICANT ELIGIBILITY

In order to receive an award under this RFA, Applicants must be a local workforce development board certified by the Governor pursuant to 20 CFR § 679.310(a). Two contiguous local workforce development boards may partner to apply as joint Applicants, but must identify the lead Applicant who will serve as the fiscal agent.

### 2.2 PROJECT REQUIREMENTS AND LIMITATIONS

### 2.2.1 PROJECT PURPOSE: BEHAVIORAL HEALTH OR HOUSING PRODUCTION FOCUS AREAS

Applicants must choose a Project Focus Area ("Project") between housing production workforce and behavioral health workforce grants. Applicants **may not apply for both grants**. Applicants – including joint Applicants – may only submit one application total, for not more than \$750,000.

HECC will fund **one** project in each of the below identified focus areas:

**Project Focus Area 1:** Behavioral health workforce.

**Description:** The behavioral health industry is comprised of several occupations with varying training requirements that pertain to mental health conditions, substance abuse disorders, life stressors, and behaviors which impact an individual's overall health and wellbeing. The industry is separated by licensed prescribers, licensed and unlicensed providers. Licensed prescribers include individuals who provide prescription-based treatment for behavioral health conditions. This generally includes physicians (Medical Doctors and Doctors of Osteopathy), and advanced practice providers (Physician Assistants, Nurse Practitioners, and Licenced Professional Nurses). Licensed providers include individuals who administer therapy for behavioral health conditions and are licensed through Board of Psychologists, Board of Social Workers, and Board of Counselors and Therapists. Unlicensed providers are comprised of a diverse group of individuals that focus on counseling-based and supportive services, such as Certified Addiction Counselors and Traditional Health Workers. Workforce shortages exist throughout every tier of the behavioral health service industry. Proposals should be responsive to the HECC Sponsored Behavioral Health Talent Assessment.

**Project Focus Area 2:** Housing production workforce.

**Description**: The housing production sector includes portions of the broad construction industry, manufactured home manufacturing, prefabricated wood building manufacturing, architectural services, building inspection, and land surveying. Residential building construction consists of businesses that build new single-family and multi-family residential structures. General contractors and homebuilders are central to the coordination of every phase of a residential construction project. Specialty trade contractors include businesses that perform specific tasks, such as electrical work, plumbing, and painting. Manufactured homes are built in a manufacturing facility and then transported to their destination for final assembly and

connection to utilities. In Oregon, construction occupations exceed the state median wage. Not only are the wages often higher than average, but the training necessary for these occupations is often a post-secondary credential. Proposals should be responsive to the HECC Sponsored Housing Workforce Production Study.

### 2.2.2 ALLOWABLE USE OF FUNDS

Statewide employment and training activities under this grant must meet the definitions in <u>20</u> CFR 682.210.

For each Focus Areas, the following are allowable uses of funds:

- Creation and/or expansion of training programs and work experience opportunities that prepare individuals for direct entry into in-demand jobs in the industry.
- Provision of tuition and fee assistance for individuals participating in relevant training programs.
- Provision of wraparound services and supports to individuals participating in relevant training
  programs and work experiences, including but not limited to case management, counseling, and
  financial and other assistance with childcare, transportation, mental health services, housing
  support, job- or training-related materials and supplies.
- Wages or stipends for eligible youth who participate in training programs and/or adult work experience opportunities.
- Employer reimbursement for wages for on-the-job training participants, including for registered apprenticeships, at the standard 50% WIOA reimbursement rate.
- Implementation of other approaches to remove barriers to employment in the industry.
- Convening and strengthening of industry partnerships that bring together employers, education and training providers, economic development organizations, community-based organizations, and others to identify the industry's workforce challenges and develop solutions.

### 2.2.3 PROJECT REQUIREMENTS

#### Projects must:

- Identify the specific occupations and related training/work experience opportunities that will be the focus of the grant.
- Utilize evidence-based approaches.
- Identify the key partners they will work with to carry out this grant and provide letters of commitment from at least three of these partners, including at least one employer, one education/training provider, and one community-based organization.
- Identify a set of success metrics that will be used to evaluate the Project's progress and success, which may include a target number of individual participants to be served.

### 2.2.4 GRANT DURATION

The Allowable Cost Period for awards under this RFA is June14, 2025 – June 30, 2026. Activities that occur outside of the Allowable Cost Period are not eligible for funding.

### 2.2.5 AWARD AMOUNT

The award amount for each of the two Project Focus Areas will be \$750,000 per award. The funding source is federal WIOA funds. Resulting grant agreements will incorporate the federal notice of award and required federal and conditions.terms

Grant funds awarded under this RFA will be disbursed on an expense reimbursement or costs incurred basis. Grant recipients will be required to submit each disbursement request on a HECC-provided or -approved disbursement request form ("Disbursement Request") prior to the disbursement of any grant funds.

### SECTION 3. APPLICATION SUBMISSION

### 3.1 HOW AND WHEN TO APPLY

All Applications shall be submitted via the web-based program Survey Monkey Apply ("SMApply"): <a href="https://oregonhecc.smapply.us/prog/governors statewide activities grants request for application">https://oregonhecc.smapply.us/prog/governors statewide activities grants request for application</a> s

### All Applications must include:

- 1. Responses to all items in the Application within the Survey Monkey Apply web program
- 2. Project Plan (upload as attachment, template provided)
- 3. Project Budget (upload as attachment, template provided)
- 4. Application Certification Sheet (upload as attachment, template provided)
- 5. Letters of Commitment (upload as attachment)
- 6. Application submissions are due by April 14, 2025.

Late or incomplete Applications will not be accepted.

### 3.2 APPLICATION REVIEW PROCESS

HECC will use the following criteria in evaluating applications and making award determinations.

| APPLICATION REVIEW  |        |                   |
|---|--------|-------------------|
| ELIGIBILITY REVIE   | :W     |                   |
| Ensuring concurrence with Section 2.1 of this RFA and to determine whether the Application is complete as described in Section 3.1 of this RFA. |        |                   |
| FULL REVIEW   |        |                   |
| EVALUATION CRITERIA   | POINTS | WEIGHTED<br>TOTAL |
| Evaluation Item 1: Project Design and Rationale   | 0-5    | 35                |
| Evaluation Item 2: Advancing Equitable Opportunities  | 0-5    | 25                |
| Evaluation Item 3: Partnership and Capacity   | 0-5    | 25                |
| Evaluation Item 4: Success Measures   | 0-5    | 15                |
|   |        | 100               |

#### 3.2.1 PHASE ONE – ELIGIBILITY REVIEW

SPC will conduct an eligibility review to ensure compliance with Section 2.1 of this RFA and to determine whether the Application is complete as described in Section 3.1 of this RFA. If the SPC determines that an Application was not timely received, is nonresponsive, or the Applicant is not eligible to receive an award, the Application will be removed from further evaluation.

#### 3.2.2 PHASE TWO – FULL REVIEW

HECC will form a review panel to review, evaluate, and score Applications, and make funding recommendations to the Director of the Office of Workforce Investments. Reviewers will use the following evaluation criteria to review and score proposals. The maximum total score on a single Application is 100 points.

| FULL REVIEW  |        |                   |
|--|--------|-------------------|
| REVIEW CRITERIA                                      | POINTS | WEIGHTED<br>TOTAL |
| Evaluation Item 1: Project Design and Rationale      | 0-5    | 35                |
| Evaluation Item 2: Advancing Equitable Opportunities | 0-5    | 25                |
| Evaluation Item 3: Partnership and Capacity          | 0-5    | 25                |
| Evaluation Item 4: Success Measures                  | 0-5    | 15                |
|  |        | 100               |

### **Evaluation Item 1: Project Design and Rationale (weighted 35%)**

Please address the following prompts:

- Describe your proposed Project.
- Describe how your Project is responsive to regional needs identified by a sector partnership or other consortium comprising employers, workforce/training providers, and community representatives.
- Describe how your Project addresses gaps or barriers to meeting the workforce needs of the selected focus area.
- Identify the specific occupations/skills the related training opportunities that will be the focus of the grant, and how those were identified.
- Describe how your Project aligns with *(cite sources/experience wherever possible):* 
  - o Promising practices/models and/or evidence-based practices/models; and
  - Culturally responsive practices that support the program participants served by the Project.
  - The Behavioral Healtlh Talent Assessment or the Housing Production Workforce Study, depending on which grant being applied to. These Assessments will be available in late January.

### Evaluation Item 2: Advancing Equitable Opportunities (weighted 25%)

Please address the following prompts (500-word limit):

- Identify how your project advances equitable opportunities for program participants in workforce programs.
- Identify barriers to participation and describe how your project reduces identified barriers for your participants.
- Describe how your organization's proposed approach will increase access and remove barriers for wage progression and educational attainment.
- Describe how participants and/or communities are or will be involved in designing, decision making, and evaluation of your project.
- Describe your plan for communicating with communities where English is not their native language. This includes ASL.
- Describe your plan to reach rural Oregonians.
- Describe any considerations for providing additional accessibility supports, alternative formats or language translation.

### **Evaluation Item 3: Partnership and Capacity (weighted 25%)**

Please address the following prompts (500-word limit):

- Describe how the project leverages existing cross-sector collaborations or partnerships.
- Identify the organizations who have committed to be key partners in this project, which must include at least one employer, one education/training provider, and one community-based organization.
- Explain each partner's (including the lead Applicant's) activities, role, and responsibilities within the proposed project; and
- Provide evidence that each partner (including the lead Applicant) can carry out its respective activities, role, and responsibilities (150-word limit).

### **Evaluation Item 4: Success and Sustainability (weighted 15%)**

Please address the following prompts (500-word limit):

- Define "success" in the context of this project.
- Describe any project goals and any potential challenges or barriers your organization may encounter and strategies to address them.
- Describe the metrics you will use to measure the project's success and the project's target outcomes.
- Identify if and how you will braid other funding sources with funds awarded under this opportunity.
- Address future sustainability for this project including identification of opportunities to leverage additional funding (e.g., state, private, philanthropic).

### 3.2.3 NOTICE OF AWARD

HECC will email the Applicant's primary contact listed in the Application to let them know whether their Application was selected for funding. A Notice of Award will be sent to funded Applicants for this RFA. The notice will indicate award amount, performance period, and next steps. Unsuccessful Applicants will be contacted.

### SECTION 4. GRANT AGREEMENTS

Applicants that are selected for an award will be required to execute a grant agreement with HECC prior to beginning any project activities. The grant agreement is a contract between HECC and the Recipient, which describes the contractual relationship and responsibilities of the parties.

No funds will be disbursed until a fully signed grant agreement is in place. All project activities must take place during the Performance Period of the grant (June 14, 2025 – June 30, 2026).

Grant recipients will be required to:

- 1. Comply with insurance and background check requirements (see Attachment G Background Checks and Subgrantee Insurance );
- 2. Comply with all applicable provisions of <u>Title 2 Code of Federal Regulations ("CFR") Part 200</u>, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, including the Cost Principles and Single Audit Act requirements.

### REPORTING REQUIREMENTS

All Grant recipients will be required to provide quarterly, annual, and final reporting to grant administrators at HECC. If these funds provide direct services to participants, those participants need

to meet all the eligibility requirements under WIOA and grantees would need to conduct all the participant-level reporting required under WIOA. There is no requirement that funds be spent on direct services to eligible youth, however any funds that are spent on direct services must be included in the In School Youth (ISY) and/or Out of School Youth (OSY) Expenditure Data, as required by sections 11. d. and e. of DOL's 9130 report.

<u>Local Management Information System.</u> Activity supported by this Grant must be tracked and reported in the local management information system. The data must be recorded in the local MIS following data entry rules of the system and tracked separately. Grantees shall make ongoing entries and keep the local management information system current with enrolled data for accurate reporting to the USDOL.

<u>Program Expenses.</u> Grantee must report ongoing program expenditures with each quarterly Invoice/Details Disbursement request it provides to HECC in the form of the template that will be provided by HECC. An alternative invoicing schedule may be requested to HECC's Grant Administrator in writing; such approval will be at HECC's discretion and will be provided in writing. Any approved alternative invoicing will continue to have the same reporting requirements as required by the Agreement.

<u>Success Stories.</u> Grantee must provide to HECC, three participant success stories per award over the course of the grant period. Grantee must provide to HECC, the success stories by the final report deadline of August 31, 2026 Grantee must ensure that participants, if included in success stories, sign a media and photo release form. Grantee may use locally approved media and photo release forms. Success Stories will be owned by HECC, HECC shall grant the Grantee the unlimited right to publish and use the Success Stories.

<u>Final Report.</u> Grantee shall provide to HECC, no later than August 31, 2026, a final narrative report in addition to any required expenditure reporting. Grantee shall send disbursement requests and detailed reporting by email quarterly, or upon written request to HECC's Grant Administrator. Such approval will be at HECC's discretion and will be provided in writing.

### **SECTION 5. ADDITIONAL TERMS**

Submission of an Application does not constitute an agreement between HECC and the Applicant, nor does it secure or imply that the Applicant will be selected to receive funding.

All costs associated with Applicant's submission of an Application are the sole responsibility of the Applicant and will not be paid or reimbursed by HECC or the State of Oregon.

By applying, Applicant accepts all terms and conditions of this RFA. No Grant Funds will be released prior to all program conditions being met and grant agreements fully-signed.

HECC reserves the right to reopen or extend the RFA as necessary, as it deems in its best interest. HECC reserves the right to amend agreements resulting from this RFA for additional time and/or funds, if it is in HECC's best interest to do so.

Funding Applications through this RFA does not guarantee future funding. When, or if, additional funding becomes available, HECC reserves the right to issue additional awards under this RFA

through the period of performance for the federal Notice of Award for these funds. If additional awards are made, they will not require further competition. Any additional selections will be made in accordance with the terms of this RFA.

#### PUBLIC RECORDS

All information and records submitted to HECC are subject to disclosure under the Public Records Law, Oregon Revised Statute ("ORS") 192.311 to 192.478. If Applicant believes that any information or records it submits to HECC may be a trade secret under ORS 192.345(2), or otherwise is exempt from disclosure under the Oregon Public Records Law, Applicant must identify such information with particularity and include the following statement:

"This data is exempt from disclosure under the Oregon Public Records Law pursuant to ORS chapter 192 and is not to be disclosed except in accordance with the Oregon Public Records Law, ORS 192.311 through 192.478."

If Applicant fails to identify with particularity the portions of such information that Applicant believes are exempt from disclosure, Applicant is deemed to waive any future claim of non-disclosure of that information.

### SECTION 6. ATTACHMENTS

- ATTACHMENT A: WORKFORCE INNOVATION AND OPPORTUNITY ACT GOVERNOR'S RESERVE GRANT APPLICATION FORM SAMPLE
- ATTACHMENT B: PROJECT PLAN TEMPLATE
- ATTACHMENT C: PROJECT BUDGET TEMPLATE
- ATTACHMENT D: APPLICATION CERTIFICATION SHEET
- ATTACHMENT E: HOUSING PRODUCTION WORKFORCE ASSESSMENT
- ATTACHMENT F: OREGON BEHAVIORAL HEALTH TALENT ASSESSMENT REPORT AND BEHAVIORAL HEALTH CAREER PATHWAYS
- ATTACHMENT G: BACKGROUND CHECK REQUIREMENTS AND SAMPLE REQUIRED INSURANCE FOR SUBCONTRACTORS AND/OR SUBGRANTEES

## **ATTACHMENT A**

## Application Form Sample workforce innovation and opportunity act gsa grants

Click the following link to access the web-based Application in Survey Monkey Apply: <a href="https://oregonhecc.smapply.us/prog/governors">https://oregonhecc.smapply.us/prog/governors</a> statewide activities grants request for applications

The questions below are being provided as a preview only so that Applicants know what questions will be asked in the Application package. Applicants MUST submit their information and answers through the above link.

| Item in Application  |  |  |
|--|--|--|
| Applicant Information  |  |  |
| Legal Applicant Name of Applying Organization:   |  |  |
| Alternate Business Name/DBA of Applying Organization, if applicable:                       |  |  |
| Unique Entity Identifier (UEI):  |  |  |
| Are you registered to do business in the State of Oregon?:                                 |  |  |
| Physical Address (Street):   |  |  |
| Physical Address (City):   |  |  |
| Physical Address (State):  |  |  |
| Physical Address (Zip Code):   |  |  |
| Physical Address (COUNTY):   |  |  |
| Are proposed services taking place in the county listed in the previous question?          |  |  |
| Please check all counties where the primary services funded by this grant will take place: |  |  |
| Primary Contact for the Application:   |  |  |
| Email Address:   |  |  |
| Phone:   |  |  |
| Program Manager Contact:   |  |  |
| Email Address:   |  |  |
| Phone:   |  |  |
| Fiscal Manager Contact:  |  |  |
| Email Address:   |  |  |
| Phone:   |  |  |
| Communications Contact:  |  |  |
| Email Address:   |  |  |
| Phone:   |  |  |
| Grant Agreement Signing Authority:   |  |  |
| Title:   |  |  |
| Email Address:   |  |  |
| Phone:   |  |  |
| Evaluation Items   |  |  |

### **Evaluation Item 1: Project Design and Rationale (weighted 35%)**

Please address the following prompts:

- Describe your proposed Project.
- Describe how your Project is responsive to regional needs identified by a sector partnership
  or other consortium comprising employers, workforce/training providers, and community
  representatives.
- Describe how your Project addresses gaps or barriers to meeting the workforce needs of the selected focus area.
- Identify the specific occupations/skills the related training opportunities that will be the focus of the grant, and how those were identified.
- Describe how your Project aligns with (cite sources/experience wherever possible):
  - o Promising practices/models and/or evidence-based practices/models; and
  - Culturally responsive practices that support the program participants served by the Project.
  - The Behavioral Healtlh Talent Assessment or the Housing Production Workforce Study, depending on which grant being applied to. These Assessments will be available in late January.

### **Evaluation Item 2: Advancing Equitable Opportunities (weighted 25%)**

Please address the following prompts (500-word limit):

- Identify how your project advances equitable opportunities for program participants in workforce programs.
- Identify barriers to participation and describe how your project reduces identified barriers for your participants.
- Describe how your organization's proposed approach will increase access and remove barriers for wage progression and educational attainment.
- Describe how participants and/or communities are or will be involved in designing, decision making, and evaluation of your project.
- Describe your plan for communicating with communities where English is not their native language. This includes ASL.
- Describe your plan to reach rural Oregonians.
- Describe any considerations for providing additional accessibility supports, alternative formats or language translation.

### **Evaluation Item 3: Partnership and Capacity (weighted 25%)**

Please address the following prompts (500-word limit):

- Describe how the project leverages existing cross-sector collaborations or partnerships.
- Identify the organizations who have committed to be key partners in this project, which
  must include at least one employer, one education/training provider, and one communitybased organization.
- Explain each partner's (including the lead Applicant's) activities, role, and responsibilities within the proposed project; and
- Provide evidence that each partner (including the lead Applicant) can carry out its respective activities, role, and responsibilities (150-word limit).

### **Evaluation Item 4: Success and Sustainability (weighted 15%)**

Please address the following prompts (500-word limit):

- Define "success" in the context of this project.
- Describe any project goals and any potential challenges or barriers your organization may encounter and strategies to address them.
- Describe the metrics you will use to measure the project's success and the project's target

|   | outcomes.  |
|---|--|
| • | Identify if and how you will braid other funding sources with funds awarded under this opportunity.  |
| • | Address future sustainability for this project including identification of opportunities to leverage additional funding (e.g., state, private, philanthropic). |
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|   | Attachments (CUDMIT with application)  |

| Attachments (SUBMIT with application) |
|---------------------------------------|
| Project Plan                          |
| Project Budget                        |
| Budget Justification                  |
| Certification Sheet                   |
| Letters of Commitment                 |

# ATTACHMENT B PROJECT PLAN

WORKFORCE INNOVATION AND OPPORTUNITY ACT GSA GRANTS

### **Applicant/Organization:**

#### **Instructions:**

Please complete a Project Plan and submit as a part of your application. Your Project Plan should be in a substantially similar format to the one provided. Add additional lines/space or remove as needed, as long as your plan addresses the same project components.

- Your proposed activities must be completed during the performance period of the grant, which is January 1, 2025
   June 30, 2026. Start and end dates should be within this range.
- Include major objectives, key tasks to accomplish each objective, and estimated start/end dates.

### **PROJECT PLAN**

|                  | Start Date | <b>End Date</b> |
|------------------|------------|-----------------|
| Major Objective: |            |                 |
|                  |            |                 |
| Key Task:        |            |                 |
| Major Objective: |            |                 |
|                  |            |                 |
| Key Task:        |            |                 |
| Major Objective: |            |                 |
|                  |            |                 |
| Key Task:        |            |                 |
| Major Objective: |            |                 |
|                  |            |                 |
| Key Task:        |            |                 |
| Major Objective: |            |                 |
|                  |            |                 |
| Key Task:        |            |                 |
| Key Task:        |            |                 |

|   | Key Task:        |  |  |
|---|------------------|--|--|
|   | Key Task:        |  |  |
|   | Key Task:        |  |  |
| M | Major Objective: |  |  |
|   |                  |  |  |
|   | Key Task:        |  |  |

## ATTACHMENT C PROJECT BUDGET

### **Enter Data in Yellow Boxes Only**

Organization Organization Fiscal Contact Prepared by

|  | YEAR 1                       | YEAR 2                  |        |
|--|------------------------------|-------------------------|--------|
|  | July 1, 2024 - June 30, 2025 | July 1, 2025 - June 30, | TOTALS |
|  |                              | 2026                    |        |
| BUDGET CATEGORIES  |                              |                         |        |
| A. PERSONNEL SALARIES & WAGES                                |                              |                         |        |
| Ex. Position/Title - Salary - FTE                            |                              |                         |        |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
| TOTAL SALARIES & WAGES                                       | -                            | -                       | \$ -   |
| B. PERSONNEL FRINGE BENEFITS                                 |                              |                         |        |
| Employer Costs for Taxes/Benefits                            |                              |                         |        |
| Ex. FICA (7.65% of budgeted salary XX)                       |                              |                         |        |
| Ex. Health Insurance   |                              |                         |        |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
| TOTAL FRINGE BENEFITS  |                              | -                       | \$ -   |
| TOTAL PERSONNEL (SALARIES + FRINGE)                          |                              | \$ -                    | \$ -   |
| C. EQUIPMENT & CAPITAL EXPENDITURES                          |                              |                         |        |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
| TOTAL EQUIPMENT & CAP EXPENDITURES                           | 5 \$ -                       | \$ -                    | \$ -   |
| D. MATERIALS & SUPPLIES                                      |                              |                         |        |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
| TOTAL MATERIALS & SUPPLIES                                   | -                            | \$ -                    | \$ -   |
| E. TRAVEL (PERSONNEL) Location - Purpose - Mileage           |                              |                         |        |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
| TOTAL TRAVEI   | - \$                         | \$ -                    | \$ -   |
| F. PARTICIPANT SUPPORT COSTS - Ex. stipends, transportation, |                              |                         |        |
| fees, other wraparound services, etc.                        |                              |                         |        |
| y ,  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |
|  |                              |                         | \$ -   |

## ATTACHMENT D

## **Application Certification Sheet**

| <b>Legal Name of Applicant</b> |  |
|--------------------------------|--|
| Address                        |  |
| City, State, Zip Code          |  |
| State of Incorporation         |  |
| Entity Type                    |  |
| Date Submitted                 |  |
| Contact Name                   |  |
| Telephone                      |  |
| Email                          |  |

## Any individual signing below hereby certifies they are an authorized representative of Applicant and that:

- **1.** If awarded a Grant, Applicant agrees to perform the scope of work and meet the performance standards set forth in the final negotiated scope of work of the Grant.
- 2. I have knowledge regarding Applicant's payment of taxes and by signing below I hereby certify that, to the best of my knowledge, Applicant is not in violation of any tax laws of the state or a political subdivision of the state, including, without limitation, ORS 305.620 and ORS chapters 316, 317 and 318.
- 3. Unless Applicant is exemption under ORS 659A.006, Applicant does not discriminate in its employment practices or service delivery with regard to race, color, creed, age, religious affiliation, political affiliation or belief, gender, disability, sexual orientation, national origin or citizenship status. When awarding subgrants, Applicant does not discriminate against any business certified under ORS 200.055 as a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emerging small business. If applicable, Applicant has, or will have prior to grant agreement execution, a written policy and practice, that meets the requirements described in ORS 279A.112, of preventing sexual harassment, sexual assault and discrimination against employees who are members of a protected class. HECC may not enter into an agreement with an anticipated grant price of \$150,000 or more with an Applicant that does not certify it has such a policy and practice. See <a href="https://www.oregon.gov/DAS/Procurement/Pages/hb3060.aspx">https://www.oregon.gov/DAS/Procurement/Pages/hb3060.aspx</a> for additional information and sample policy template.
- **4.** Applicant and Applicant's employees, agents, and subcontractors are not included on:

- **A.** the "Specially Designated Nationals and Blocked Persons" list maintained by the Office of Foreign Assets Control of the United States Department of the Treasury found at: <a href="https://www.treasury.gov/ofac/downloads/sdnlist.pdf">https://www.treasury.gov/ofac/downloads/sdnlist.pdf</a>, or
- **B.** the government-wide exclusions lists in the System for Award Management found at: <a href="https://www.sam.gov/SAM">https://www.sam.gov/SAM</a>
- **5.** Applicant certifies that, to the best of its knowledge, there exists no actual or potential conflict between the business or economic interests of Applicant, its employees, or its agents, on the one hand, and the business or economic interests of the State, on the other hand, arising out of, or relating in any way to, the subject matter of the RFA. If any changes occur with respect to Applicant's status regarding conflict of interest, Applicant shall promptly notify the State in writing.
- **6.** Applicant certifies that all contents of the Application (including any other forms or documentation, if required under this RFA) and this Application Certification Sheet are truthful and accurate and have been prepared independently from all other Applicants, and without collusion, fraud, or other dishonesty.
- 7. Applicant understands that any statement or representation it makes, in response to this RFA, if determined to be false or fraudulent, a misrepresentation, or inaccurate because of the omission of material information could result in a "claim" (as defined by the Oregon False Claims Act, ORS 180.750(1)), made under Contract being a "false claim" (ORS 180.750(2)) subject to the Oregon False Claims Act, ORS 180.750 to 180.785, and to any liabilities or penalties associated with the making of a false claim under that Act.
- **8.** Applicant certifies it will comply with the Pay Equity law, ORS 652.220, if applicable.

| Authorized Signature     | Date |
|--------------------------|------|
|                          |      |
|                          |      |
|                          |      |
| (Printed Name and Title) |      |



## ATTACHMENT E

FEBRUARY 2025

# Oregon Housing Production Workforce Assessment

Prepared for: Oregon Higher Education Coordinating Commission

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## **Executive Summary**

## Study Background and Purpose

On her first day in office, Governor Tina Kotek signed an executive order establishing a goal for Oregon to produce 36,000 housing units per year for the next 10 years, a large increase relative to recent levels of 20,000 or fewer units per year. A council of experts subsequently developed an action plan to meet the new target, including recommendations on workforce strategies. To build on that work, the Oregon Higher Education Coordinating Commission (HECC) and its Office of Workforce Investments (OWI) sought an assessment of Oregon's housing production workforce. This report summarizes that assessment, combining robust quantitative data analysis with meaningful engagement of industry representatives and training providers. Paired with a companion report by MBCB Consultants, the study supports HECC's goals of fostering a robust, inclusive, and sustainable workforce.

The report includes chapters that (1) define and describe the housing production workforce, including demographic analysis; (2) quantify the workforce needed to reach the goal; (3) summarize the survey, interviews, and focus groups conducted for the study; (4) provide an inventory and summary information about Oregon's current education and training programs relevant to housing construction; and (5) recommend strategies and activities to expand and support Oregon's housing production workforce.

## Oregon's Housing Production Workforce

The housing production sector spans many industries, such as construction of buildings, manufactured home and prefabricated wood building manufacturing, architectural services, building inspection, and land surveying. Within the construction industry, housing production falls primarily to residential building construction and specialty trade contractors. Specialty trade contractors, however, service all manner of construction activity, including remodeling and commercial construction, in addition to residential construction.

In 2023, Oregon's housing production sector employed 92,800 workers, with wide variation in average pay across industries, particularly between non-residential and residential construction (see Exhibit ES-1). Oregon's construction industry grew steadily out of the recessionary trough over the past decade; annual employment increased by approximately 5 percent annually from 2013 to 2023, compared with Oregon's overall annual employment growth of 2 percent.

<sup>&</sup>lt;sup>1</sup> See Executive Order 23-04, https://www.oregon.gov/gov/eo/eo-23-04.pdf. The target was based on the Oregon Housing Needs Analysis (OHNA). The most recent OHNA revised the production target to 29,522 units per year for 10 years. https://www.oregon.gov/das/oea/Documents/OHNA-Methodology-Report-2024.pdf



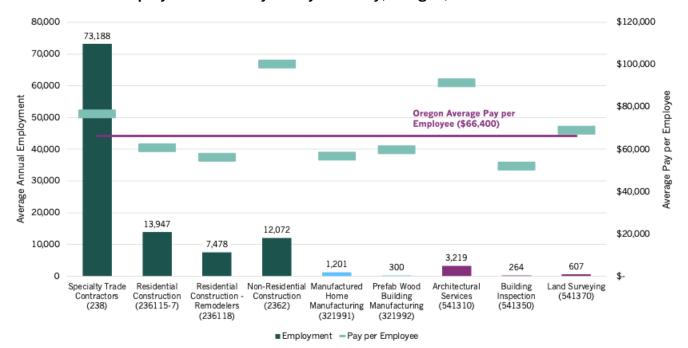


Exhibit ES-1. Employment and Payroll by Industry, Oregon, 2023

Data source: OED QCEW, 2023

Housing construction firms are relatively small compared to firms in the rest of the construction industry, which, in turn, has more smaller firms than the state's economy overall. Nearly half—45 percent—of residential construction firms have five or fewer employees, compared to 10 percent of all firms in the state.

Housing construction employment is somewhat more concentrated in the Clackamas, Mid-Valley, and East Cascades regions than in the Portland Metro and Lane regions. Industry growth has also varied across Oregon over the past decade, with Mid-Valley and Rogue Valley experiencing the greatest annual growth.

Occupations and Workforce Characteristics. The housing construction workforce relies on well over 100 occupations spanning a wide range of skill sets but is highly concentrated in construction-specific occupations. Almost 60 percent of building construction and specialty trade workers are in construction occupations. Business, management, and administrative support occupations each account for between 5 and 10 percent of employment. We identified 28 occupations as key to the industry, due either to prevalence in the industry or importance of role to housing construction. Exhibit ES-2 displays the 15 most common occupations in the industries.

The median wage for construction occupations in Oregon is \$63,100 versus the overall statewide median wage of \$51,600. Among the top occupations, first-line supervisors, electricians, and plumbers earn significantly more than the median wage for all construction occupations. Carpenters earn closer to the median for construction while laborers earn less than even the statewide median for all occupations. Wages vary be region, which has implications for each region's ability to attract workers.



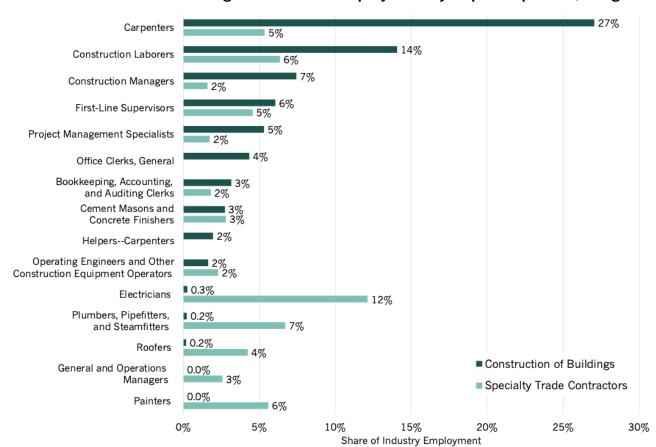


Exhibit ES-2. Share of Building Construction Employment by Top Occupations, Oregon

Data source: Oregon Employment Department, 2022

Housing construction employment is less reliant on lengthy postsecondary pathways, such as bachelor's or master's degrees, than is the economy as a whole—nearly two thirds of Oregon employees in construction and extraction occupations have a high school diploma or equivalent as their highest educational attainment.

The housing construction industry is host to many disparities related to race, ethnicity, gender, and wages. These inequities reflect broader systemic challenges and historical patterns—of exclusion, occupational segregation, and uneven access to training and resources—and highlight the need for targeted interventions to build a more inclusive and equitable construction workforce. Workers from diverse racial and ethnic backgrounds are present in many roles, but systemic barriers often limit their access to or advancement in higher paying positions. Similarly, gender inequities are pronounced, with women underrepresented across most occupations, particularly in skilled trades.

<u>Race/Ethnicity</u>: Hispanic or Latino workers represent 18 percent of the construction industry workforce—with higher shares in construction, installation, maintenance, and repair—compared to 14 percent in the overall Oregon workforce. Management and business and financial occupations have the lowest shares of Black, Indigenous, and People of Color (BIPOC) workers, 14 percent and 20 percent, respectively.



• <u>Sex</u>: Women represent a relatively small proportion of the workforce: 12 percent compared to 47 percent in the overall Oregon workforce. Women are in about 4 percent of construction labor roles and 77 percent of administrative support roles.

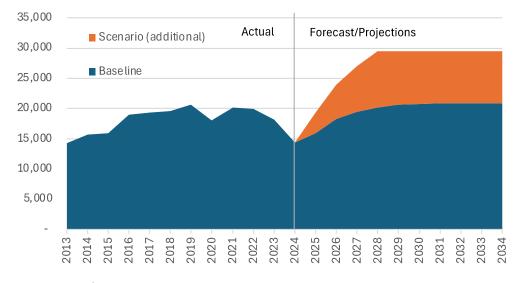
Our analysis shows that lower-wage occupations typically correspond with a higher prevalence of BIPOC workers and that occupations that require higher levels of educational attainment, technical skills, or managerial responsibilities (e.g., construction managers and civil engineers) tend to have lower BIPOC representation, often below 20 percent.

Women are also more strongly represented in lower-paying housing construction occupations. Efforts to recruit and retain women workers, particularly in skilled trades, could improve overall gender diversity and address labor shortages in certain roles. BIPOC and women workers also earn lower wages than their non-Hispanic white and male counterparts, respectively, when working in the same roles.

## **Workforce Demand**

To estimate the number of additional workers the state needs to meet its housing production goal, we assumed a four-year ramp-up period for housing starts and calculated the number of workers needed for this level of construction activity (Exhibit ES-3 displays the housing start baseline and scenario). The analysis suggests the goal will require an average of 12,700 additional workers per year from 2028–34, above and beyond forecasted employment levels, with lower need during the ramp-up period.

Exhibit ES-3. Housing Starts: Actual and Needed to Meet Oregon's Housing Production Goal



Data source: OEA

Under baseline conditions, the state will have about 15,600 residential construction workers and 85,200 specialty trade contractor workers in 2034. To meet the housing production goal, Oregon will need, on average, 5,300 additional residential construction workers and 7,500 additional specialty trade contractor workers per year from 2028–34.



We allocated the additional 12,700 jobs across occupations and calculated the additional employment needed to meet the 2028 goal for selected occupations. Due to retirement and occupation changes, the actual number of individuals needed for these jobs could be somewhat higher.

Exhibit ES-4 displays two measures of additional need, expressed as a share of annual openings projected by OED for each occupation: the number of additional employees needed to meet the production goal (Lower) and a plausible estimate for the number of individuals needed to fill the needed positions (Upper). For many occupations, the additional housing production would likely result in a large increase in job openings. Not included in this chart are building code professionals, including inspectors, as data regarding these positions is sparse. It's estimated that meeting the goal would require about 400 more local government employees in each year the production goal is met.

Carpenters Construction laborers Electricians First-line supervisors of construction workers Plumbers, pipefitters, and steamfitters Painters construction and maintenance Construction managers General and operations managers Project management specialists Bookkeeping, accounting, and auditing derks Cement masons and concrete finishers Secretaries and administrative assistants Office clerks, general Cost estimators Operating engineers and equipment operators Drywall and ceiling tile installers Heavy and tractor-trailer truck drivers Accountants and auditors Maintenance and repair workers, general Insulation workers, floor, ceiling, and wall Civil engineers Construction and building inspectors Upper HVAC and refrigeration mechanics and installers Lower Sheet metal workers 5% 10% 15% 20% 25% 30% 35% 40%

Exhibit ES-4. Additional Annual Need as a Share of Baseline Annual Openings

Data source: OED. Sorted by average annual number of additional openings needed to meet the goal.

On an annual basis, the year-over-year increases in housing starts and employment associated with the scenario are not unprecedented, but the state has not experienced this level of growth over multiple years and residential construction employment has actually declined slightly from a peak in 2022, suggesting the need for extraordinary efforts to meet the housing production goal within the next few years. Proposed tariffs and immigration reform could create additional, strong, headwinds. Once the workforce is in place (2028 in



the scenario described above), however, the additional need for housing production workers would return to levels more consistent with the current status quo.

## **Study Engagement**

The study engagement included a survey of construction firms and interviews and focus groups with representatives from a range of interested parties.

## Survey Findings

More than half of survey respondents—55 percent—reported significant challenges with workforce attraction, hiring, or retention during the past year (see Exhibit ES-5). The main cause of these challenges is a shortage of candidates with the skills employers need, with some variation in responses by geographic location and COBID-certification status.

### Exhibit ES-5. Difficulty with Attracting, Hiring, and Keeping Employees

Survey Question: Please indicate your agreement with this statement: Attracting, hiring, and/or keeping employees has been a significant challenge for my company in the past 12 months.



**Respondent companies reported struggling to fill a variety of hourly and salaried positions**, including carpenters, equipment operators, project managers, mechanics, foremen, estimators, and superintendents. Employers cited work experience and advanced skills as the most lacking among job applicants. Top retention challenges include competition from other industries, reliable transportation for workers, and affordable housing.

Respondents cited employee referrals and apprenticeship programs as the most reliable sources of skilled workers for their companies, indicating a strong reliance on informal networks and on-the-job training.



Three quarters of respondents reported that their companies are actively trying to diversify their workforce. Respondents reported more difficulty achieving gender diversity in their workforce compared to racial or ethnic diversity.

To address labor shortages, the State's improvement efforts should focus on education in elementary, middle, and high school to shift the cultural narrative and communicate to young people the viability of career paths in the trades.

Half of respondents were skeptical that the State's housing production goal would be met. Another quarter expressed neutrality. The relatively low confidence levels signal concerns among respondents about the feasibility of scaling up housing production in the face of workforce shortages, governmental delays, and other development hurdles.

### Interview and Focus Group Findings

We conducted six targeted interviews with workforce boards, labor unions, and construction employers, and three focus groups with representatives from community colleges, apprenticeship programs, and permitting offices.

**Building Code Professionals:** Oregon has a shortage of building code professionals. Only 45–50 individuals graduate annually from the state's three programs in this field, far below the 155 needed. Some students are deterred by program costs and the time commitment. The Oregon Building Officials Association is developing an apprenticeship-style program as an alternative pathway.

**Apprenticeship Programs:** Oregon's union apprenticeship programs can scale to meet workforce demand but depend on consistent construction activity. Training centers in Coos Bay and Newport, for instance, have long waitlists due to limited local jobs. Union programs value the 1:1 apprentice-to-journey-level ratio for quality and safety, while non-union employers, especially in rural areas, make the case for higher ratios.

**Evolving Career Pathways:** Career transitions, such as from trades to building inspector or superintendent roles, are less attractive due to lower wages in office-based roles. Emerging pathways include permit technicians advancing to inspector roles and graduates of four-year construction programs being hired as "field engineers," progressing into supervisory roles.

**Gender Inclusivity in the Workplace:** Women face challenges in the male-dominated construction industry, from proving competence to navigating job site accommodations. Some firms are improving inclusivity through flexible policies and support from programs like COBID, though concerns about broader industry culture persist.

**Perceived Gaps in Current Program Offerings:** Employers noted a disconnect between the skills new hires bring and workplace demands, particularly the balance of technical, practical, and essential skills.



## **Program Inventory**

While the Oregon housing production workforce is not exclusively trained by programs in Oregon, the state's programs and pathways are key to the stability and expansion of the sector's workforce. Each region of the state has at least one construction-related program.

Career and Technical Education (CTE) Programs. In the 2024-25 school year, 100 high schools across Oregon had one or more CTE programs in the Architecture & Construction (A&C) CTE Career Cluster: 86 high schools had general architecture and construction programs, 10 had carpentry programs, and 9 had architectural design programs.

**Apprenticeship and Pre-Apprenticeship Programs.** In 2023, Oregonians completed about 1,500 construction-related apprenticeships, a number well below OED's anticipated annual openings (see Exhibit ES-6).

Exhibit ES-6. Active Apprentices and Completed Apprenticeships, Construction Industry, Oregon

| 0 1 70  | Active (as of | Completed |
|---|---------------|-----------|
| Occupation Title                                  | 9/20/2024)    | (2023)    |
| Electricians                                      | 3,132         | 686       |
| Plumbers, pipefitters, and steamfitters           | 1,498         | 346       |
| Carpenters  | 659           | 167       |
| Sheet metal workers                               | 398           | 66        |
| Drywall and ceiling tile installers               | 327           | 89        |
| Construction laborers                             | 257           | 54        |
| Heating/air cond./refrigeration mech., installers | 211           | 27        |
| Roofers   | 198           | 24        |
| Oper. engineers / construction equip. operators   | 107           | 9         |
| Cement masons and concrete finishers              | 84            | 16        |
| Maintenance and repair workers, general           | 83            | 18        |
| Painters, construction and maintenance            | 67            | 10        |
| Glaziers  | 37            | 12        |
| Insulation workers, floor, ceiling, and wall      | 25            | 7         |
| Tile and stone setters                            | 19            | 4_        |
| Total   | 7,102         | 1,535     |

Data source: Oregon BOLI

Apprenticeship programs can help increase diversity in the sector, as apprentices are more diverse by race/ethnicity than is the current workforce. Apprenticeship program completion rates, however, are lower for people of color and for women than for white individuals and men. Targeted investments designed to diversify recruitment and increase completion rates could help the state increase the size of the sector's workforce.

Nearly 1,000 individuals across Oregon were enrolled in pre-apprenticeship programs in 2024. In recent years, 77 percent of pre-apprenticeship participants graduated from their programs, and 11 percent entered apprenticeship programs. Among 2023 completers of a carpentry apprenticeship, about 20 percent had previously completed a pre-apprenticeship. Pre-apprentices are also more diverse than is the employment in the relevant occupations.



Postsecondary Credential Programs. As with apprenticeships, average annual completions for Oregon's colleges and universities are small in number compared to the need associated with the housing production goal (see Exhibit ES-7). More than half of the credentials are short-term certificates (less than one academic year). Nearly half of the average annual completions are in the construction trades, followed by HVAC and refrigeration maintenance technicians (43 completions); building/home/construction inspectors (19); and building/construction site managers (15).

Exhibit ES-7. Completions in Core Housing Production Programs, by Institution, Oregon

|                    |                     | Annual Average Completions (2019 - 2023) |                            |              | - 2023)    |                    |
|--------------------|---------------------|--|----------------------------|--------------|------------|--------------------|
| Institution        | Region              | Number of<br>Programs                    | Short-Term<br>Certificates | Certificates | Associates | All<br>Completions |
| Portland CC        | Portland-Metro      | 4  | 73                         | 0            | 31         | 105                |
| Mt Hood CC         | Portland-Metro      | 2  | 11                         | 1            | 16         | 29                 |
| Lane CC            | Lane                | 3  | 24                         | 0            | 4          | 29                 |
| Chemeketa CC       | Mid-Valley          | 2  | 0                          | 0            | 11         | 11                 |
| Treasure Valley CC | Eastern Oregon      | 1  | 0                          | 10           | 0          | 10                 |
| Linn-Benton CC     | Mid-Valley          | 1  | 0                          | 4            | 4          | 7                  |
| Columbia Gorge CC  | East Cascades       | 1  | 4                          | 0            | 0          | 4                  |
| Umpqua CC          | Southwestern Oregon | 1  | 0                          | 0            | 2          | 2                  |
| Blue Mountain CC   | Eastern Oregon      | 2  | 2                          | 0            | 0          | 2                  |
| Clackamas CC       | Clackamas           | 1  | 0                          | 0            | 1          | 1                  |
| Inst. of Tech.     | Mid-Valley          | 1  | 0                          | 0            | 0          | 0                  |
| Rogue CC           | SW Oregon           | 1  | 0                          | 0            | 0          | 0                  |
| Total              | _                   |  | 115                        | 16           | 68         | 200                |

Data source: IPEDS. Notes: Rogue Community College had at least one relevant completion in earlier years. Averages are taken over the span of 5 years; some programs may not be operational every year.

## Recommendations

The following recommendations address Oregon's housing production workforce needs, emphasizing the importance of collaboration, diversity, and training/education access. While workforce development is essential, it must occur alongside efforts to ensure consistent residential construction work amid challenges like investor caution, high material costs, limited insurance access, and market uncertainty.

### Encourage collaboration among training programs and employers

- Build strong relationships between training providers and employers to ensure education aligns with industry needs
- Promote and scale existing models and foster regional collaboration to improve training outcomes and address local workforce needs

### Support early and ongoing development of a skilled, diverse workforce

- *K-12 education*: Introduce students to housing production careers through early exposure, project-based learning, CTE, and mobile classrooms
- Pre-apprenticeships and apprenticeships: Expand programs to underserved populations, provide targeted wraparound services to help improve completion rates, and introduce new programs (e.g., for building inspectors)



 Other credentials: Promote four-year degree programs and implement microcredentials and stackable certifications for skill-based training, to provide additional affordable and flexible learning options

### Open more doors to housing production work

- Consider revising licensing policies, introducing a multi-skill construction license, and expanding reciprocity agreements to reduce barriers for out-of-state workers
- Ensure equitable access to training and job opportunities for women and BIPOC workers
- Track wage and training outcomes to help identify and address disparities

### Continue efforts to link CTE, apprenticeship, and employment data

- Coordinate data collection and sharing between agencies like ODE, BOLI, HECC, and OED to continually assess program, investment, and system outcomes
- Further the analysis included in this study to quantify training/credential gaps, program-level contributions, and employment outcomes for housing productionrelated program completers
- Use data analysis to guide decisions on scaling successful programs and targeting resources

### Modify the apprentice-to-journey-level-worker ratio

- Adjust the 1:1 ratio to allow two apprentices per journey-level worker in particular circumstances, such as in rural areas, for selected trades, and/or over a specific time period
- Evaluate the effect of any change on training capacity, workforce growth, and apprentice/journey-level worker experience

## **Next Steps**

A collaborative structure will provide structure in which to implement and evaluate strategic efforts. A working group or coordinating body should include three teams:

- Workforce Entry: Pathways into jobs in the sector
- Ongoing Skill Development: Progressing within the sector and training others
- Innovation/Productivity: Workforce needs of new, innovative, or productivity-focused activities, such as modular and manufactured housing

Industry, training/education, and government representatives must work together to design programs, collect and analyze data, and foster strategies that lead to sustained and equitable workforce growth.



## **Acknowledgments**

ECOnorthwest prepared this report for the Oregon Higher Education Coordinating Commission (HECC). The authors wish to thank staff from HECC and the Office of Governor Tina Kotek as well as the study steering committee members for their guidance and involvement. We also thank the Oregon Bureau of Labor & Industries for providing apprenticeship and pre-apprenticeship data and MBCB Consultants for their insights.

We are especially grateful to all those who participated in the survey, interviews, and focus groups that were part of this study. We greatly value your time and insights.

ECOnorthwest is responsible for the content of this report. Any statements nonfactual in nature constitute the authors' current opinions, which may change as more information becomes available.

Housing Production Workforce Assessment Steering Committee:

- Johnathan Balkema, City of Albany
- Robert Camarillo, Oregon Building Trades
- Heather Ficht, East Cascades Works
- Mark Griffith, Klamath Community College
- Jenn Kovitz, Hayden Homes
- Jason Payton, Oregon Employment Department
- Rana Uzzaman, Portland Youth Builders
- Hayley Watson, Oregon Building Trades



# 1. Oregon's Housing Production Workforce

Oregon's housing production sector consists of several related, interconnected industries, employing individuals with a wide variety of skills and educational and training backgrounds. In this chapter, we first define and describe the housing production sector to provide a sense of scale for the sector's current footprint in Oregon. We then describe the occupational composition of the sector's workforce, focused on the construction subsectors most relevant to housing production, and present a demographic profile of the incumbent workforce. This information serves as a foundational input to subsequent chapters that assess the strength of Oregon's housing-production training pathways and their alignment with current and anticipated needs, in light of Oregon's ambitious housing production goals.<sup>2</sup>

## Housing Production Sector Definition

The housing production sector spans several core industries. These include portions of the broad construction industry, manufactured home manufacturing, prefabricated wood building manufacturing, architectural services, building inspection, and land surveying.

Within the construction industry, housing production falls primarily to residential building construction and specialty trade contractors. Specialty trade contractors, however, service all manner of construction activity, including remodeling and commercial construction, in additional to residential construction. This chapter focuses on the housing and building construction industries, as other industries are relatively small and play specialized roles in the housing production sector. Exhibit 1 details the broad housing production sector as defined for the purposes of this report as well as the narrower definitions used throughout this chapter: "housing construction" where the data allow; otherwise, "building construction."<sup>3</sup>

Residential building construction consists of businesses that build new single-family and multi-family residential structures.<sup>4</sup> These firms oversee all stages of homebuilding, from site preparation and foundation work to roofing, exterior finishing, and interior installations. General contractors and homebuilders are central to the coordination of every phase of a residential construction project, seeking to ensure that homes are completed on time, within budget, and in compliance with local building codes.

<sup>&</sup>lt;sup>4</sup> Residential construction also includes residential remodelers. Wherever possible, residential remodelers (NAICS 236118) are excluded from the analysis as they are not directly involved in housing construction.



<sup>&</sup>lt;sup>2</sup> Statewide Housing Production Goal: https://www.oregon.gov/gov/eo/eo-23-04.pdf

<sup>&</sup>lt;sup>3</sup> Later chapters will address the smaller industries and activities (e.g., local government planning and permitting) that are part of the housing production sector.

Specialty trade contractors include businesses that perform specific tasks, such as electrical work, plumbing, and painting. These contractors often operate as subcontractors under general contractors but may also contract directly with homeowners, especially for smaller renovations and repair work.

The housing production sector also includes manufacturers of pre-assembled homes. Manufactured homes are built in a manufacturing facility and then transported to their destination for final assembly and connection to utilities. Prefabricated wood building manufacturing produces wood sections, panels, and other prefabricated components that are transported to construction sites for final assembly. This approach allows homes to be partially manufactured off-site, contributing to streamlined project timelines and efficient use of resources.

**Exhibit 1. NAICS-Based Definitions of Housing Production and Construction** 

| Industry Name (NAICS)                                    | Description   | 2023 Oregon<br>Employment<br>(1,000s) | Housing<br>Production | Housing<br>Construction | Building<br>Construction |
|--|---|---------------------------------------|-----------------------|-------------------------|--------------------------|
| Construction (23)  | Building construction, engineering projects, site preparation, and land subdivision.  | 124.0                                 |                       |                         |                          |
| Construction of Buildings (236)                          | Construction of residential and nonresidential buildings, including new work, additions, alterations, or maintenance and repairs.     | 34.2                                  |                       |                         | ~                        |
| Residential Building<br>Construction (236115-<br>236117) | Businesses responsible for the entire construction of new single-family or multifamily housing, including for-sale builders.          | 14.0                                  | ~                     | ~                       |                          |
| Residential Remodelers (236118)                          | Businesses remodeling and renovating existing residential buildings.  | 7.5                                   |                       |                         |                          |
| Non-Residential<br>Construction (2362)                   | Businesses responsible for the construction of nonresidential buildings, such as commercial, industrial, and institutional buildings. | 12.8                                  |                       |                         |                          |
| Specialty Trade Contractors<br>(238)                     | Specialties in plumbing, electrical work, and site preparation, rather than managing whole projects                                   | 73.2                                  | ~                     | ~                       | ~                        |
| Manufactured Home Manufacturing (321991)                 | Mobile home manufacturing   | 1.2                                   | ~                     |                         |                          |
| Prefabricated Wood Building<br>Manufacturing (321992)    | Prefabricated wood buildings and components manufacturing, residential and nonresidential   | 0.3                                   | ~                     |                         |                          |
| Architectural Services (541310)                          | Planning and designing residential, commercial, and industrial buildings/structures   | 3.2                                   | ~                     |                         |                          |
| Building Inspection (541350)                             | Businesses providing building inspection services   | 0.3                                   | ~                     |                         |                          |
| Land Surveying (541370)                                  | Surveying and mapping services of the surface of<br>the earth, including the sea floor  | 0.6                                   | ~                     |                         |                          |

Source: ECOnorthwest. NAICS = North American Industry Classification System. Note: Housing Production is the broadest definition used in this report. Housing Construction is the focus of this chapter, however, datasets have

<sup>&</sup>lt;sup>5</sup> These products are used for various purposes, one of which is housing production.



Oregon Housing Production Workforce Assessment

limited industry resolution beyond three-digit NAICS. Thus, where noted, the broader Building Construction or other definitions are used.

## Housing Production Sector Profile

In 2023, Oregon's housing production sector employed 92,800 workers, with roughly 73,200 of these workers in specialty trade contractors, 14,000 in residential construction, 1,500 in manufactured homes, and 4,100 in professional services associated with housing production. Exhibit 2 shows employment and pay per employee for the housing production sector, illustrating both the relative size of each industry and wide variation in average payroll across them, particularly between non-residential and residential construction.

Housing production subsectors with average pay per employee that exceeds the statewide average of \$64,400 include specialty trade contractors, non-residential (commercial) construction, and architectural services. Average pay per employee in residential construction is approximately \$6,000 below the state average and nearly \$30,000 below that of non-residential construction.

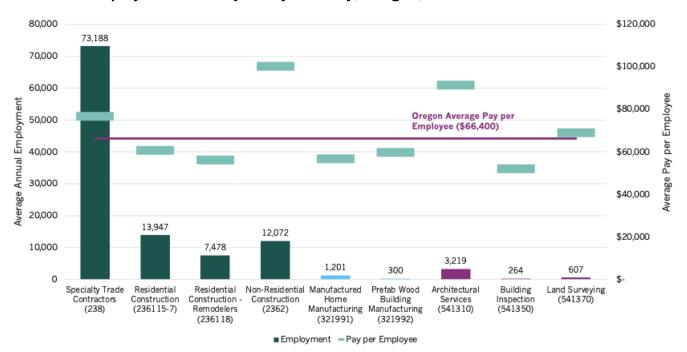


Exhibit 2. Employment and Payroll by Industry, Oregon, 2023

Data source: OED QCEW, 2023

Oregon's construction industry grew steadily out of the recessionary trough over the past decade; annual employment increased by approximately 5 percent annually from 2013 to 2023, compared with Oregon's overall annual employment growth of 2 percent (see Exhibit 3). During the same period, residential construction grew at an average annual rate of 9 percent.<sup>6</sup> The 2008 recession caused a considerable decline in construction employment,

<sup>&</sup>lt;sup>6</sup> Manufactured home and Prefab wood building manufacturing industries grew by 5.3 and 3.4 percent annually from 2013 to 2023 (not shown in Exhibit 3).



Oregon Housing Production Workforce Assessment

particularly residential. The construction industry recovered to pre-2008 employment levels around 2018.

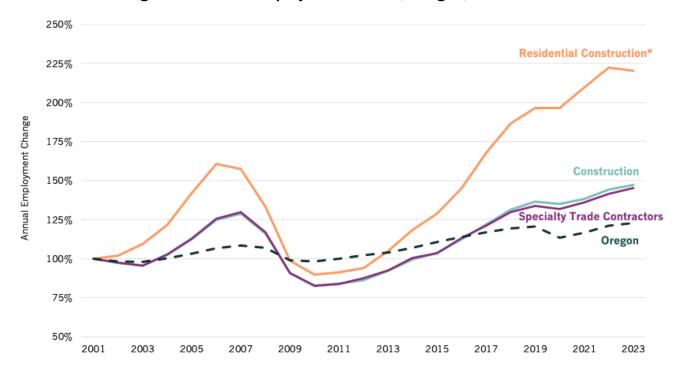


Exhibit 3. Housing Construction Employment Growth, Oregon, 2001-2023

Data source: OED QCEW, 2001-2023. Note: \*Residential construction includes remodelers.

Housing construction firms are relatively small compared to firms in the rest of the construction industry, which, in turn, has more smaller firms than the state's economy overall (see Exhibit 4). Nearly half—45 percent—of residential construction firms have five or fewer employees, compared to 10 percent of all firms in the state.

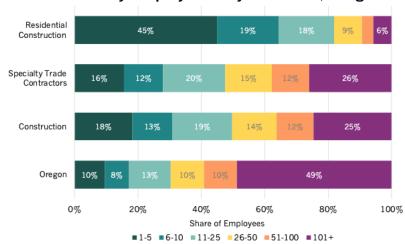
The industry is of course more concentrated in more-populated regions of the state—more than one third (37 percent) of the state's housing construction employment is in the Portland Metro workforce region. Relative to the size of total employment in each region, housing construction employment is somewhat more concentrated in the Clackamas, Mid-Valley, and East Cascades workforce regions than in the Portland Metro and Lane workforce regions (see Exhibit 5). Industry growth has also varied across Oregon over the past decade, with areas such as Mid-Valley and Rogue Valley experiencing the greatest annual growth (11 percent).

Exhibit 6 illustrates the variation in housing construction wages across the state. The Portland Metro region has the highest payroll per employee—\$75,900 for residential construction and \$90,800 for specialty trade contractors—well above the statewide average. The Clackamas region also has relatively high pay per employee, particularly for specialty trade contractors, while the East Cascades region falls at about the statewide average for both industries. Most of the other regions of the state have much lower housing construction



wages. These differentials have important implications for each region's ability to attract the workforce necessary to reach ambitious housing production goals.

Exhibit 4. Industry Employment by Firm Size, Oregon



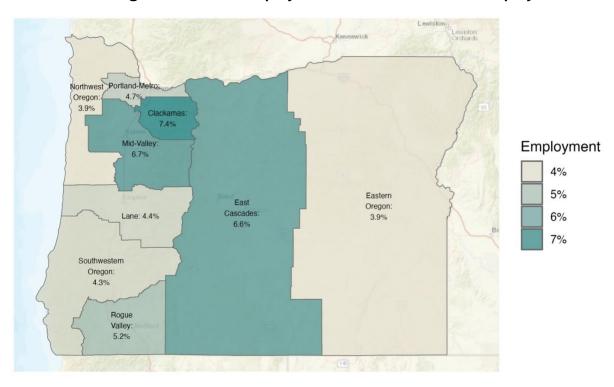
Data source: OED QCEW Data, 2023. Note: Residential construction excludes remodelers.

**BUSINESS SIZE BY REGION** 

Average business size varies by region, with firms in the Portland area having two to three times as many employees than do firms in less populated regions of the state.

| Region                      | Residential Construction | Specialty<br>Contractors |
|-----------------------------|--------------------------|--------------------------|
| Clackamas Area              | 5                        | 13                       |
| East Cascades<br>Area       | 10                       | 15                       |
| Eastern Oregon<br>Area      | 4                        | 6                        |
| Lane Area                   | 3                        | 12                       |
| Northwest<br>Oregon Area    | 5                        | 6                        |
| Rogue Valley<br>Area        | 4                        | 8                        |
| Southwestern<br>Oregon Area | 3                        | 7                        |
| Mid-Valley Area             | 4                        | 12                       |
| Portland-Metro<br>Area      | 8                        | 26                       |
| Oregon                      | 6                        | 15                       |

Exhibit 5. Housing Construction Employment as a Share of Total Employment

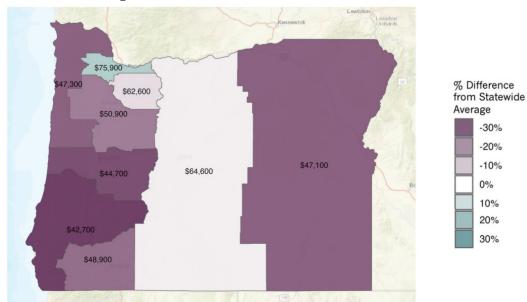


Data sources: OED QCEW Data, 2023

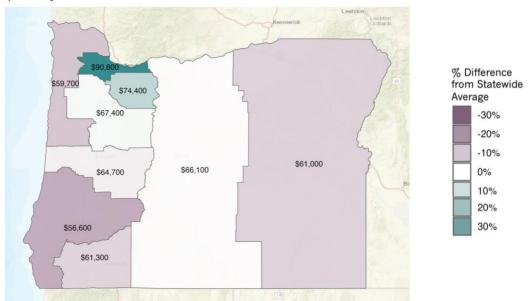


Exhibit 6. Regional Variation in Payroll Per Employee

Residential Building Construction



Specialty Trade Contractors



Data sources: OED QCEW Data, 2023; OED, County Workforce and Economic Research.

## Housing Construction Occupations

The housing construction workforce relies on well over 100 occupations spanning a wide range of skill sets but is highly concentrated in construction-specific occupations (see Exhibit 7).<sup>7</sup> The exhibit displays aggregate employment shares by occupational group in the building construction industry. The majority (almost 60 percent) of workers in these industries are in construction occupations, such as carpenters, laborers, and electricians.

<sup>&</sup>lt;sup>7</sup> Oregon Employment Department, *Industry-Occupation Matrix Data, Oregon, Industries* 236, 238. 2022.



Business, management, and administrative support occupations each account for between 5 and 10 percent of employment, with other occupational groups accounting for much smaller shares of employment.

Due to confidentiality constraints the displayed occupational groups account for only 89 percent of employment in building construction and 80 percent of employment in specialty trade contractors, although unredacted national data leads to similar conclusions. Construction and extraction and management occupations account for the largest shares of the nation's building construction industry employment (54 and 14 percent, respectively).8

Construction and Extraction 58% Business and Financial 9% Management Office and Administrative Support Installation, Maintenance, and Repair Architecture and Engineering Transportation and Material Moving 3% 0.8% Sales and Related 0.1% 0.4% Production 0.4% Building and Grounds 0.2% Cleaning and Maintenance 0.0% ■ Construction of Buildings Computer and 0.1% Mathematical 0.0% Specialty Trade Contractors Life, Physical, and 0.1% Social Science 0.2% 20% 60% 70% 0% 10% 40% 50% Share of Industry Employment

Exhibit 7. Share of Building Construction Employment by Occupational Group, Oregon

Data source: Oregon Employment Department, 2022

Over the past few decades, the share of the overall construction workforce directly involved in building activities has declined, both in the U.S. and in Oregon, while the proportion of management and overhead roles has increased. As measured by the share of the industry's employment within an occupational group in the U.S., management occupations increased from roughly 10 percent to close to 20 percent of industry employment, while the

<sup>&</sup>lt;sup>9</sup> Construction is represented by NAICS 23. Due to U.S. Census Bureau industry classifications, no further disaggregation of the construction industry is possible.



<sup>&</sup>lt;sup>8</sup> U.S. Bureau of Labor Statistics. *Employment Projections: Industry-Occupation Matrix Data, Construction of Buildings (NAICS 236000)*. **2023**.

https://data.bls.gov/projections/nationalMatrix?queryParams=236000&ioType=i

construction occupational group share declined from roughly 70 percent to below 60 percent between 2000 and 2020.<sup>10</sup> In the Oregon construction industry, the share of construction occupations declined by about 4 percentage points while the management share increased by the same amount between 2018 and 2023.<sup>11</sup>

These trends may present headwinds as the state seeks to ramp up housing production in the coming years. Possible explanations include changes in industry consolidation, outsourcing to subcontractors or temporary workers, shifts in project types, and increased regulatory demands.<sup>12</sup> These factors may contribute to a lack of productivity gains and a growing gap between payroll jobs and self-employment, complicating workforce analysis in the construction sector.

Based on the industry employment shares within occupations and input from HECC and other stakeholders, we identified 28 occupations as key to the industry, due either to prevalence in the industry or importance of role to housing. Employment in these occupations accounts for 80 percent of construction of buildings, 73 percent of residential construction, and 66 percent of specialty trade contractors (see Appendix for details):

- Accountants and auditors
- Administrative assistants
- Bookkeeping, accounting, and auditing clerks
- Carpenters
- Cement masons and concrete finishers
- Civil engineers
- Construction and building inspectors
- Construction laborers
- Construction managers
- Cost estimators
- Drywall and ceiling tile installers
- Electricians
- First-line supervisors of construction workers
- General managers
- Glaziers

- Heating, air conditioning, refrigeration installers
- Heavy and tractor-trailer truck drivers
- Insulation workers
- Maintenance and repair workers
- Office clerks, general
- Operating engineers and construction equipment operators
- Painters, construction and maintenance
- Plumbers, pipefitters, and steamfitters
- Project management specialists
- Roofers
- Sheet metal workers
- Surveyors
- Tile and stone setters

<sup>&</sup>lt;sup>12</sup> Oregon Office of Economic Analysis. *Addressing Oregon's Housing Shortage: Examining Supply and Affordability Challenges.* September 2022. https://oregoneconomicanalysis.com/wp-content/uploads/2022/09/addressing-oregons-housing-shortage.pdf



<sup>&</sup>lt;sup>10</sup> Oregon Office of Economic Analysis. *Addressing Oregon's Housing Shortage: Examining Supply and Affordability Challenges.* September 2022. https://oregoneconomicanalysis.com/wp-content/uploads/2022/09/addressing-oregons-housing-shortage.pdf

<sup>&</sup>lt;sup>11</sup> U.S. Census Bureau, American Community Survey 1-year Estimates. 2018-2023.

From this list, Exhibit 8 presents the 15 most common occupations in the construction of buildings industry and among specialty trade contractors. Together, these occupations account for 74 percent of construction of buildings employment and 58 percent of specialty trade contractor employment. Carpenters account for the largest share of employment in construction of buildings in Oregon, representing 27 percent of industry employment.<sup>13</sup> Construction laborers and electricians are also heavily concentrated in one or both of these industries.<sup>14</sup> Similarly, plumbers, pipelayers, and steamfitters, as well as roofers, have a stronger presence in specialty trade contractors, accounting for 7 and 4 percent, respectively.

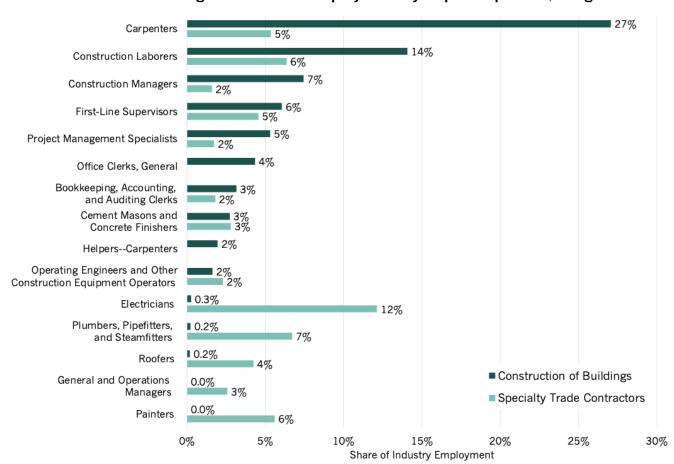


Exhibit 8. Share of Building Construction Employment by Top Occupations, Oregon

Data source: Oregon Employment Department, 2022

Exhibit 9 displays the U.S. share of employment in the residential construction and specialty trade contractors industries and the share of each occupation working within those industries for the top ten most prevalent occupations. <sup>15</sup> The figure illustrates the

<sup>&</sup>lt;sup>15</sup> Oregon's distribution of occupations within the housing construction industries is similar to the distribution seen at the national level. The Bureau of Labor Statistics publishes the national distribution and faces fewer



<sup>&</sup>lt;sup>13</sup> In the residential building construction industry (NAICS code 2361), carpenters make up 31 percent of employment. The Oregon Employment Department cannot report the full breakdown of occupations within the residential construction industry due to confidentiality constraints.

<sup>&</sup>lt;sup>14</sup> At the national level, electricians make up roughly one percent of the construction of buildings industry, as reported by the Bureau of Labor Statistics.

important point that some occupations are more important, in terms of numbers, to the construction industry than the construction industry is to an occupation. For example, electricians are the most common occupation in the national housing construction industry, and about 70 percent of electricians are employed in the industry. General and Operations managers, although less common in housing construction, are still among the ten most common occupations, but well under 10 percent of the occupation is employed in housing construction. These differences are important considerations in assessing the capacity of the state's training capacity and options for improving the state's training pathways to best support the industry.

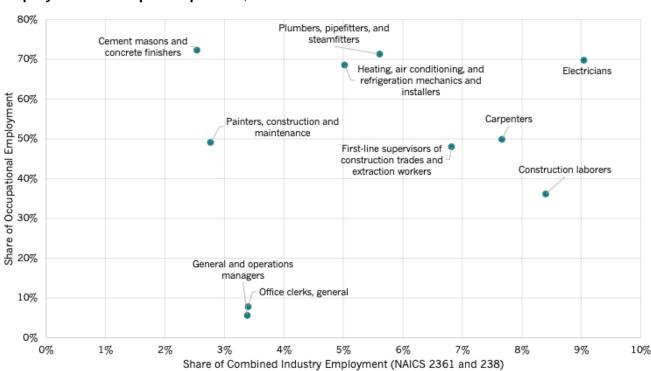


Exhibit 9. Share of Occupational Employment in Housing Construction Industry vs. Industry Employment for Top Occupations, U.S.

Data source: BLS, 2023. Note: Housing construction industry includes residential remodelers.

To provide a sense of scale, Exhibit 10 provides an employment summary for the most common housing construction occupations and occupational groups within the building construction industry. It includes total occupational employment in 2023 and the share of each occupation's/group's total employment that occurs within the construction of buildings and specialty trade contractors industries. Skilled trades such as electricians and plumbers exhibit the highest concentration within these industries, with 77 and 81 percent of their respective employment tied to building construction. Carpenters and first-line supervisors of construction workers also show strong representation (65 and 63 percent,

confidentiality issues. Cross-referencing Oregon-specific data with U.S. data provides a more-detailed understanding of the industry. This comparison allows for a focus specifically on the residential construction industry (NAICS 2361) rather than the broader construction of buildings industry (NAICS 236). Additionally, it incorporates more up-to-date data from 2023 instead of 2022.



respectively). In contrast, broader occupational groups are much less concentrated in construction-related industries.

Exhibit 10. Employment in Top Housing Construction Occupations and Occupational Groups, Oregon

| OCCUPATION/GROUP                                  | BUILDING CONSTRUCTION EMPLOYMENT | SHARE OF TOTAL OCCUPATIONAL EMPLOYMENT |
|---|----------------------------------|--|
| Carpenters  | 14,980                           | 65%                                    |
| Construction laborers                             | 13,090                           | 50%                                    |
| First-line supervisors of construction workers    | 10,160                           | 63%                                    |
| Electricians                                      | 9,260                            | 77%                                    |
| Plumbers, pipefitters, and steamfitters           | 4,830                            | 81%                                    |
| Construction and Extraction Occupations           | 75,854                           | 63%                                    |
| Office and Administrative<br>Support Occupations  | 168,500                          | 4%                                     |
| Management Occupations                            | 107,540                          | 6%                                     |
| Business and Financial Occupations                | 87,490                           | 8%                                     |
| Installation, Maintenance, and Repair Occupations | 38,640                           | 7%                                     |

Data source: Oregon Employment Department, 2023 (employment) and 2022 (shares). Note: Occupational group employment totals do not represent the entire group, rather, they represent employment within specific occupations relevant to housing construction. For instance, "management occupations" includes roles such as construction managers, financial managers, and other managerial positions specifically associated with housing construction industries.

## **Occupational Wages in the Housing Construction Industry**

In Oregon, the median wage for construction occupations is \$63,100, versus the overall statewide median wage of \$51,600 (see Exhibit 11). In the top housing construction occupations, first-line supervisors, electricians, and plumbers earn significantly more than the median wage for all construction occupations, indicating specialized and skill-intensive work conducted by these workers. Carpenters earn closer to the median wage for all construction occupations while construction laborers earn less than even the statewide median wage for all occupations.

At the occupational group level, management and business and financial occupations have the highest median wages, between 1.5 and 2 times higher than the statewide median wage. Installation, maintenance, and repair occupations earn slightly above the statewide median, while office and administrative occupations earn below.



Exhibit 11. Median Wages for Top Housing Construction Occupations and Occupational Groups, Oregon



Data source: Oregon Employment Department, 2024. Note: Median wages are for occupations and occupational groups across all industries.

Comparing wages to the statewide median wage highlights occupation-specific and geographical differences (see Exhibit 12). As is shown in Exhibit 6, significant variation exists in residential construction and specialty trade contractor wages across Oregon.

Construction occupations as a whole consistently exceed the state median wage in all workforce regions, with the largest differences in the Portland-Metro (42 percent) and Clackamas (28 percent) regions. Electricians show relatively large wage differentials, with their wages exceeding the median by 46 to 104 percent depending on the region. Carpenters demonstrate significant regional variability, with their wages surpassing the median by as much as 39 percent in the Clackamas region. Construction laborers tend to earn below the statewide median wage, with the largest differential in the Rogue Valley region, where construction laborers earn 11 percent less than the median wage.



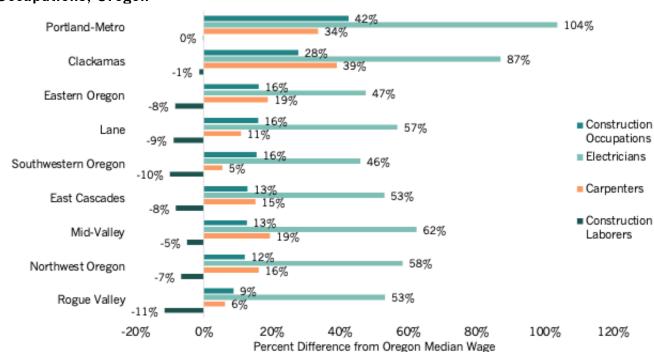


Exhibit 12. Workforce Board Regional Wage Differentials in Housing Construction Occupations, Oregon

Data source: Oregon Employment Department, 2024. Note: Construction Occupations is the construction occupational group. Regions are ordered by the median wage of construction occupations.

## **Occupational Education Requirements**

Exhibit 13 illustrates the competitive educational levels for the 28 selected and all other known housing construction occupations. Less-specialized housing construction occupations have the lowest educational attainment requirements and make up 27 percent of Oregon's housing construction employment, including construction laborers (9 percent of industry employment), painters (4 percent), and roofers (3 percent). Close to 40 percent of industry employment has a competitive education of postsecondary training (non-degree), including apprenticeship training, certificates, and licenses. This education level is critical for skilled trades like carpenters (12 percent), electricians (8 percent), and plumbers (5 percent). Supervisory and technical positions, such as first-line supervisors (5 percent) and operating engineers (2 percent), also benefit from this level of training. This analysis suggests that 67 percent of housing construction employment is in occupations that require high school or postsecondary (non-degree) training, whereas 58 percent of employment across all Oregon industries has similar requirements. In short, employment in the housing construction industry is less reliant on lengthy postsecondary pathways, such as bachelor's or master's degrees, than the economy as a whole.



■ High school diploma or equivalent ■ Postsecondary training (non-degree) ■ Postsecondary degree Postsecondary training (non-degree) High school diploma or equivalent Roofers All Other Concrete Finishers Electricians Carpenters Drywall and Ceiling Construction Laborers Painters Tile Installers Postsecondary degree General Managers Operating All Other Engineers Bookkeeping Clerks Civil Engineers Project Construction Management Specialists Admin Truck Drivers All Other

Exhibit 13. Competitive Education Level for Housing Construction Occupations, Oregon

Data source: Oregon Employment Department, 2023. Note: The size of each rectangle corresponds to the occupation's share of industry employment (construction of buildings and specialty trade contractors industries). Some occupations are missing due to suppressed employment information.

## Housing Construction Workforce Characteristics

The housing construction industry is host to many disparities related to race, ethnicity, gender, and wages. These inequities reflect broader systemic challenges and historical patterns—of exclusion, occupational segregation, and uneven access to training and resources—and highlight the need for targeted interventions to build a more inclusive and equitable construction workforce. Workers from diverse racial and ethnic backgrounds are present in many roles, but systemic barriers often limit their access to or advancement in higher paying positions. Similarly, gender inequities are pronounced, with women underrepresented across most occupations, particularly in skilled trades. This section explores these dynamics.

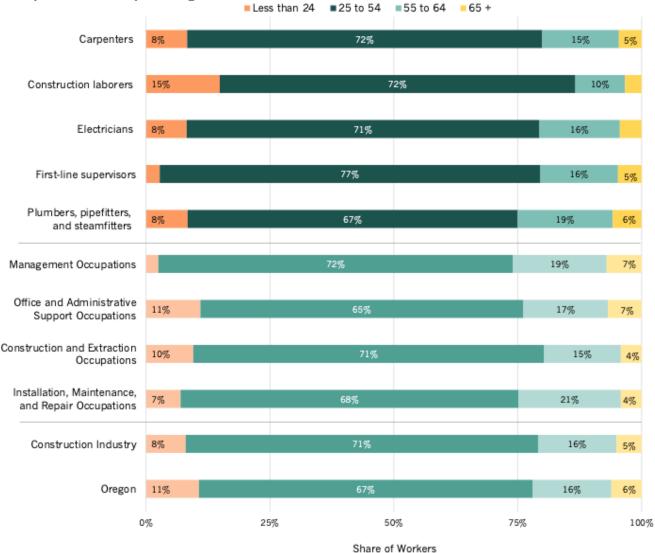
## **Workforce Demographics**

The age distribution of the construction workforce reflects distinct patterns across different roles (see Exhibit 14). Younger workers, those under 24, often work in entry-level positions; they make up a slightly larger share of construction laborers compared to their representation in Oregon's overall workforce (15 percent compared to 11 percent). Other occupations and groups (e.g., plumbers and management roles, installation) have slightly higher-than-average shares of employees aged 55 and above. Overall, the construction



industry will face the challenges presented by an aging workforce similar to those in other industries.

Exhibit 14. Age Distribution of Workers in Housing Construction Occupations and Occupational Groups, Oregon

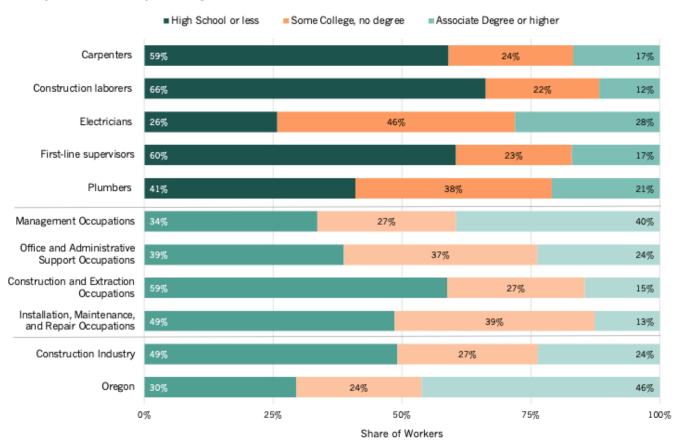


Data source: U.S. Census Bureau (2022) American Community Survey, 5-year Estimates. Note: Shares for occupations are across all industries; shares for occupational groups are within the construction industry.

Educational attainment levels among workers in top housing construction occupations illustrate workforce specialization (see Exhibit 15). More than half (59 percent) of employees in construction and extraction occupations have a high school diploma or equivalent. In contrast, 40 percent of workers in management roles hold postsecondary degrees. Many workers in specialized trades attend some college or technical programs (e.g., 46 percent of electricians and 38 percent of plumbers). This trend underscores the importance of trade-specific training and certifications for many roles, even as the sector increasingly relies on technical expertise in management positions.



Exhibit 15. Educational Attainment of Workers in Housing Construction Occupations and Occupational Groups, Oregon



Data source: U.S. Census Bureau (2022) American Community Survey, 5-year Estimates. Note: Shares for occupations are across all industries; shares for occupational groups are within the construction industry.

Exhibit 16 displays the share of housing construction occupational groups that are Hispanic or Latino (any race); Asian Non-Hispanic; Black, American Indian and Alaska Native (AIAN), Native Hawaiian and Other Pacific Islander (NHPI), or Other Non-Hispanic; and Two or More Races Non-Hispanic. The chart also includes shares for the construction industry and the overall Oregon workforce. The composition of the construction industry in Oregon differs from the overall workforce, in that Hispanic or Latino workers make up a larger share of the workforce and workers that identify as Asian, Black, AIAN, or NHPI account for a smaller share. Hispanic or Latino workers represent 18 percent of the construction industry workforce compared to 14 percent in the overall Oregon workforce.

Across occupational groups, Hispanic or Latino workers represent a higher share of construction and installation, maintenance, and repair occupations, with employment shares of 24 percent and 13 percent respectively. Management and business and financial

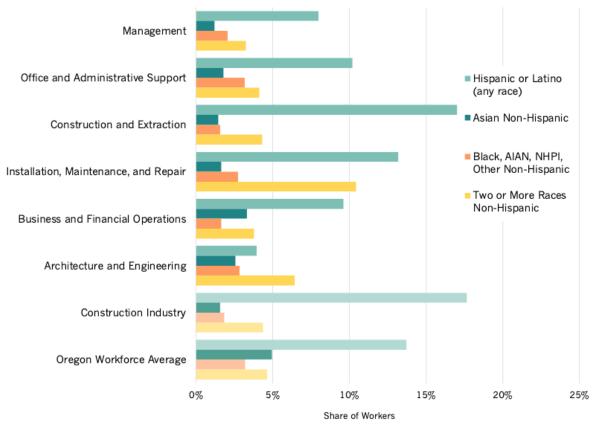
<sup>&</sup>lt;sup>17</sup> In subsequent exhibits these races/ethnicities are grouped together as BIPOC to increase data reliability. These groupings all non-Hispanic.



<sup>&</sup>lt;sup>16</sup> The U.S. Census Bureau American Community Survey publishes worker demographics only for the overall construction industry (NAICS 23), which is used for this analysis.

occupations have the lowest shares of Black, Indigenous, and People of Color (BIPOC) workers, 14 percent and 20 percent, respectively.

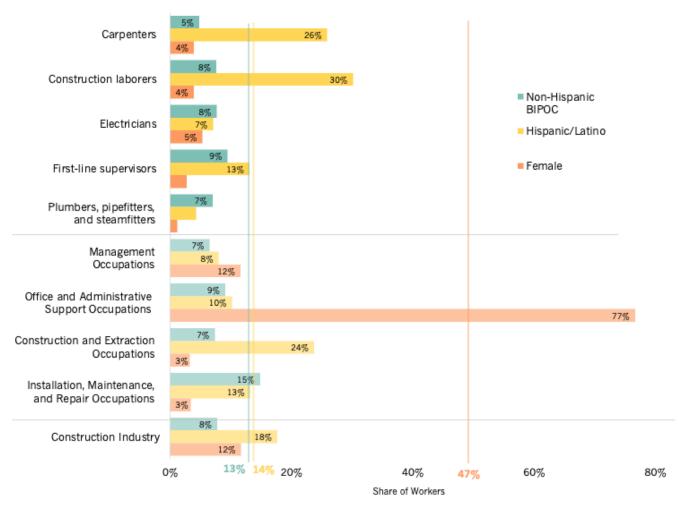
Exhibit 16. Race/Ethnicity of Workers in Occupational Groups in the Construction Industry, Oregon



Data source: U.S. Census Bureau (2022) American Community Survey, 5-year Estimates. AIAN = American Note: Indian and Alaska Native, NHPI = Native Hawaiian and Other Pacific Islander. Shares are calculated within the construction industry.

Exhibit 17 elaborates on this, showing that occupations such as carpenters and construction laborers consist of 26 percent and 30 percent Hispanic/Latino workers respectively, versus the Oregon workforce average of 14 percent. In contrast to racial and ethnic diversity, the housing construction workforce is much less diverse with respect to gender than the overall workforce. As shown in Exhibit 15, female workers represent a relatively small proportion of the workforce (12 percent compared to 47 percent in the overall Oregon workforce). In construction labor roles, women represent approximately 4 percent of the workforce, while in administrative support occupations, their representation is 77 percent.

Exhibit 17. Demographics of Workers in Housing Construction Occupations and Occupational Groups, Oregon



Data source: U.S. Census Bureau (2022) American Community Survey, 5-year Estimates. Note: Shares for occupations are across all industries; shares for occupational groups are within the construction industry. Vertical lines represent statewide shares.

The proportion of BIPOC and Hispanic workers varies widely by region, reflecting local demographic and economic conditions (see Exhibit 18). Less-populated regions such as Southwestern and Northwest Oregon have lower proportions of BIPOC and Hispanic or Latino workers than do more densely populated areas such as the Portland Metro or Mid-Valley areas. These regional disparities suggest the need to tailor workforce diversity initiatives to local conditions to support diversity goals while allowing the state to meet housing production goals.

■ Share BIPOC Share Hispanic or Latino Share White Portland-Metro 11% 23% 66% Mid-Valley 27% 66% Clackamas 85% East Cascades 15% 79% 10% Lane 84% Southwestern 4% 87% Oregon 14% Rogue Valley 78% Northwest 87% Oregon Eastern Oregon 12% 82% Oregon 18% 75% 0% 20% 40% 60% 80% 100%

Exhibit 18. Race/Ethnicity of Workers in the Construction Industry, by Workforce Region

Data sources: U.S. Census Bureau (2022) American Community Survey, 5-year Estimates. Note: Shares are calculated within the construction industry (NAICS 23).

## Wages by Demographic

Examining wages by race and gender is critical to understanding systemic inequities within the housing construction industry. Wage disparities can reveal how structural barriers, access to opportunities, and occupational segregation affect workers' economic outcomes. Highlighting these differences helps identify areas where targeted interventions can promote equity across the industry.

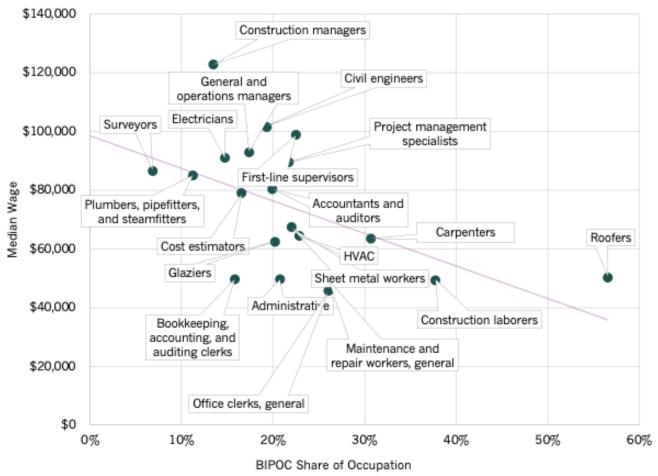
Exhibit 19 displays the median wage for selected housing construction occupations versus the share of workers within each occupation that identify as BIPOC. The trendline shows that lower-wage occupations typically correspond with a higher prevalence of BIPOC workers. Certain roles, such as roofers and construction laborers, exhibit a high concentration of BIPOC workers, with proportions of 57 and 38 percent, respectively. Median wages in these roles are about \$50,000, close to Oregon's median wage of \$51,600. In contrast, occupations that generally require higher levels of educational attainment, technical skills, or managerial responsibilities tend to have lower BIPOC representation, often below 20

<sup>&</sup>lt;sup>18</sup> Oregon Employment Department. "Oregon Wage Information." 2024. https://www.qualityinfo.org/data/



percent (e.g., construction managers and civil engineers). Median wages in these roles are above \$100,000, nearly double the state median wage.

Exhibit 19. Median Wage vs. BIPOC Share of Workers in Housing Construction Occupations, Oregon



Data sources: U.S. Census Bureau (2022). American Community Survey, 5-year Estimates. Oregon Employment Department, 2024. Note: Share of occupation is calculated within all industries. Looking within only the construction industry yields similar results, but estimates are less reliable (see Appendix A).

For BIPOC and Hispanic or Latino workers, wage differences are evident, even within the same roles, when compared to their non-Hispanic white counterparts (see Exhibit 20). In management occupations within the construction industry, for example, non-Hispanic BIPOC workers earn Oregon's overall median wage, whereas Hispanic or Latino worker wages are 51 percent higher and non-Hispanic white worker wages are 64 percent higher than Oregon's median wage. Such differences underscore persistent wage disparities that



may stem from factors such as access to high-paying projects, tenure, or promotional opportunities. 19

Occupational Groups, Oregon ■ Non-Hispanic BIPOC Hispanic or Latino Non-Hispanic White 100% 80% 60%

Exhibit 20. Race/Ethnicity Wage Differentials in Housing Construction Occupations and

% difference between occupational median wage and Oregon overall median wage 40% 20% 0% -20% -40% -60% Carpenters Construction Electricians First-line Plumbers. Management Office and Construction laborers supervisors pipefitters, and Occupations Administrative and Extraction steamfitters Support Occupations 5 4 1 Occupations

Data source: U.S. Census Bureau (2022). American Community Survey, 5-year Estimates. Note: Median wages for occupations are across all industries; median wages for occupational groups are within the construction industry.

Exhibit 21 shows median wages versus female share of workers in housing construction occupations. Female representation in many occupations remains low compared to the statewide rate of 47 percent. Administrative support positions have a relatively high proportion of female workers (91 percent) while construction laborers have a low female share (under 5 percent). Median wages in these roles are similar, slightly below \$50,000. Managerial roles, such as construction managers and first-line supervisors, have 7 percent and 3 percent female workers, respectively, and median wages around \$100,000. Women are more strongly represented in lower-paying housing construction occupations. Such disparities result in part from gender-based occupational segmentation within the industry. Efforts to recruit and retain female workers, particularly in skilled trades, could improve overall gender diversity and address labor shortages in certain roles.

<sup>&</sup>lt;sup>19</sup> Andrew Clarkwest, Tresa Kappil, Deena Schwartz, Marissa Hashizume, and Karin Martinson. "Wage Growth Disparities by Gender and Race/Ethnicity Among Entrants to Mid-Level Occupations in the United States." Department of Labor. 2021.



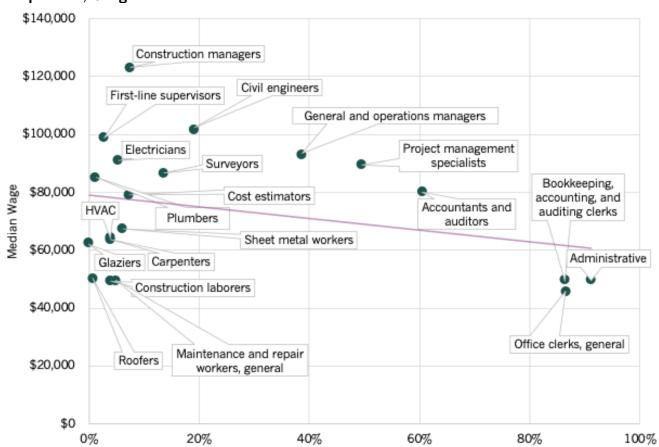


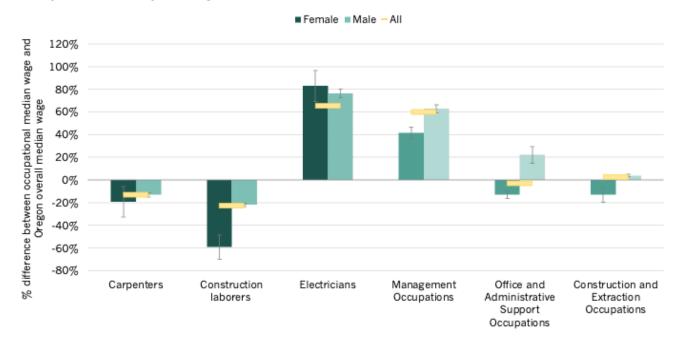
Exhibit 21. Median Wage vs. Female Share of Workers in Housing Construction Occupations, Oregon

Data sources: U.S. Census Bureau (2022). American Community Survey, 5-year Estimates. Oregon Employment Department, 2024. Note: Share of occupation is calculated within all industries. Looking within only the construction industry yields similar results, but estimates are less reliable (see Appendix A).

Female Share of Occupation

Gender-based wage gaps are also pronounced within occupations. In each occupation and group reported in Exhibit 22, women earn median wages that are lower than those of men in the same jobs. For instance, in administrative support occupations where female representation is relatively high, female workers earn approximately 13 percent below Oregon's median wage whereas male workers in the same roles earn 22 percent above the median.

Exhibit 22. Gender Wage Differentials in Housing Construction Occupations and Occupational Groups, Oregon



Source: U.S. Census Bureau (2022). American Community Survey, 5-year Estimates. Note: Median wages for occupations are across all industries; median wages for occupational groups are within the construction industry.

## Conclusion

Oregon's housing construction industries employ individuals with a wide variety of skills and educational and training backgrounds. Key occupations range from carpenters to clerks to engineers. Representation and wage disparities exist by race and ethnicity, and the workforce lacks in gender diversity—only 12 percent of construction industry workers are women.

This chapter serves as a foundational input to subsequent chapters that assess workforce demand and the strength of Oregon's housing-production training pathways. The state's housing production goal will increase demand for key occupations and shifting policy landscapes will have additional effects on the housing production sector.

## 2. Workforce Demand

The pace of housing construction drives demand for the housing production workforce. Through an executive order, Governor Kotek established a goal for Oregon to produce 36,000 housing units per year for the next 10 years, a large increase relative to recent levels of about 20,000 or fewer units per year.<sup>20</sup> The target was based on need estimated in the Oregon Housing Needs Analysis (OHNA), through which the State estimates its housing needs to keep up with population changes and past underproduction. The most recent OHNA revised the production target to 29,522 units per year for 10 years.<sup>21</sup>

## **Housing Starts**

Exhibit 23 depicts housing starts—the number of new residential construction projects that begin in a given time period—annually in Oregon from 2013 through 2024, dipping down to 14,416 in 2024. The December 2024 Oregon Office of Economic Analysis (OEA) economic forecast indicates a rebound in construction, with the number of housing starts per year increasing through 2034, from nearly 16,000 in 2025 to nearly 21,000 by 2034. The exhibit also shows that housing starts need to reach the revised production goal of 29,522 per year by 2028, after a four-year ramp-up period (orange region of chart).

35,000 Actual Forecast/Projections Scenario (additional) 30,000 Baseline 25,000 20,000 15,000 10,000 5,000 2019 2018 2020 2022 2023 2024 2025 2026 2027 2017 2021

Exhibit 23. Housing Starts: Actual and Needed to Meet Oregon's Housing Production Goal

Data source: OEA

<sup>&</sup>lt;sup>21</sup> OHNA Methodology, https://www.oregon.gov/das/oea/Documents/OHNA-Methodology-Report-2024.pdf



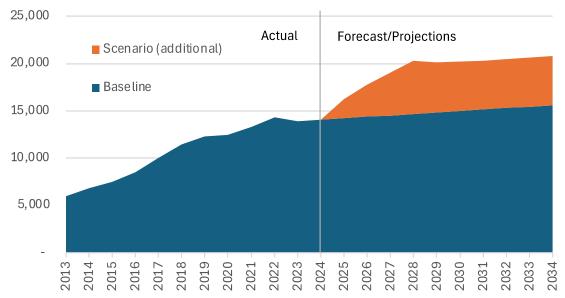
<sup>&</sup>lt;sup>20</sup> Statewide Housing Production Goal: https://www.oregon.gov/gov/eo/eo-23-04.pdf

## **Employment Need**

To estimate the number of additional workers the state needs to meet its housing production goal, we assumed a 4-year ramp-up period to 2028 for housing starts (see previous exhibit). We calculated the number of workers needed for this level of construction activity assuming 1.45 jobs per housing start.<sup>22</sup> We allocated these workers between residential building construction and specialty trade contractors using historical data on housing starts and employment in the two industries. The analysis suggests the goal will require an average of 12,700 additional workers per year from 2028-34, above and beyond employment levels from OEA's December 2024 employment forecast, with lower need during the ramp-up period.

Exhibits 24 and 25 illustrate this scenario for residential construction and specialty trade contractor employment, respectively. Residential construction employment increased steadily from 2013 to 2022 (see also Exhibit 3) and leveled out at about 14,000 workers in 2023. Moving forward, OED projects that residential building construction employment will grow by 11 percent between 2023 and 2033, or 1.0 percent annually. Under these baseline conditions, the state would have about 15,600 residential construction workers in 2034 (excluding remodelers). To meet the housing production goal, Oregon would need, on average, 5,300 additional residential construction workers per year (2028-2034).

Exhibit 24. Residential Construction Employment: Baseline and Additional Needed to Meet Oregon's Housing Production Goal



Data source: OED. Note: Residential construction employment excludes remodelers.

<sup>&</sup>lt;sup>22</sup> OEA developed this assumption based on data from the National Association of Home Builders and analysis of industry spending patterns. See https://oregoneconomicanalysis.com/2022/09/20/addressing-oregons-housing-shortage-workforce-needs/. Note that a housing unit started in one year is not necessarily completed in that year. For simplicity we assume a start is equivalent to a unit completed during that year. In addition, single and multifamily units may require a different level of staffing per unit. The scenario does not address the mix of housing units by type (single or multifamily).



Specialty trade contractors, a much larger industry, had employment of about 47,000 in 2013. Moving forward, OED projects that specialty trade contractor employment will grow by 15 percent between 2023 and 2033, or 1.4 percent annually. Under these baseline conditions, the state would have 85,200 specialty trade contractor workers in 2034. To meet the housing production goal, Oregon would need, on average, 7,500 additional specialty trade contractor workers per year (2028-2034).

100,000 Actual Forecast/Projections 90,000 Scenario (additional) 000,08 70,000 Baseline 60,000 50,000 40,000 30,000 20,000 10,000 2019 2023 2024 2025 2026 2018 2020 2021 2022 2028 2029 2017 2027

Exhibit 25. Specialty Trade Contractor Employment: Baseline and Additional Needed to Meet Oregon's Housing Production Goal

Data source: OED

## Occupation Allocation

We allocated the additional 12,700 residential building construction and specialty trade contractor jobs across occupations using state and national data regarding the prevalence of specific occupations in these two industries.<sup>23</sup> We then calculated the additional annual employment needed to meet the 2028 housing production goal for selected occupations. This calculation provides the number of jobs in these occupations the state would need to add each year through 2028 to meet the goal. Due to retirement and occupation changes, the actual number of individuals needed for these jobs could be somewhat higher.

Exhibit 26 displays for each occupation the number of additional employees needed to meet the production goal and a higher number, based in part on OED's occupational openings projections, that provides a plausible estimate for the number of individuals needed to fill the needed positions. This and the following exhibit are sorted from top to bottom by the average annual number of additional openings needed to meet the goal.

<sup>&</sup>lt;sup>23</sup> OED, Oregon Industry-Occupation Matrix, 2022; U.S. BLS, Industry-Occupation Matrix, 2023.



Exhibit 27 displays both measures of additional need, expressed as a share of annual openings projected by OED for each occupation.

Exhibit 26. Current Employment, Projected Openings, and Additional Annual Openings Needed to Meet the Housing Production Goal

| Occupation Title  | 2023<br>Employment | Annual<br>Openings | Additional<br>Annual<br>Openings | Additional<br>Openings +<br>Churn |
|---|--------------------|--------------------|----------------------------------|-----------------------------------|
| Carpenters  | 19,753             | 1,857              | 348                              | 424                               |
| Construction laborers   | 18,041             | 1,922              | 260                              | 318                               |
| Electricians  | 10,029             | 1,162              | 199                              | 243                               |
| First-line supervisors of construction trades and extraction workers            | 11,128             | 1,065              | 169                              | 206                               |
| Plumbers, pipefitters, and steamfitters   | 5,185              | 543                | 113                              | 138                               |
| Painters, construction and maintenance  | 7,164              | 736                | 105                              | 128                               |
| Construction managers   | 5,622              | 542                | 98                               | 119                               |
| General and operations managers   | 48,582             | 4,537              | 92                               | 112                               |
| Roofers   | 4,498              | 399                | 71                               | 87                                |
| Project management specialists  | 18,384             | 1,573              | 71                               | 86                                |
| Bookkeeping, accounting, and auditing clerks                                    | 27,825             | 3,072              | 54                               | 66                                |
| Cement masons and concrete finishers  | 2,405              | 189                | 53                               | 65                                |
| Secretaries and administrative assistants, except legal, medical, and executive | 24,289             | 2,292              | 49                               | 59                                |
| Office clerks, general  | 27,894             | 3,152              | 47                               | 57                                |
| Cost estimators   | 4,106              | 386                | 47                               | 57                                |
| Operating engineers and other construction equipment operators                  | 4,914              | 490                | 45                               | 55                                |
| Drywall and ceiling tile installers   | 2,335              | 215                | 35                               | 43                                |
| Heavy and tractor-trailer truck drivers   | 27,138             | 3,042              | 30                               | 37                                |
| Accountants and auditors  | 15,157             | 1,297              | 17                               | 21                                |
| Maintenance and repair workers, general   | 17,772             | 1,868              | 13                               | 16                                |
| Insulation workers, floor, ceiling, and wall                                    | 593                | 63                 | 11                               | 13                                |
| Civil engineers   | 4,591              | 369                | 6                                | 7                                 |
| Construction and building inspectors  | 1,331              | 155                | 2                                | 2                                 |
| Heating, air conditioning, and refrigeration mechanics and installers           | 4,373              | 483                | 1                                | 1                                 |
| Sheet metal workers   | 2,592              | 275                | 1                                | 1                                 |

Data source: OED

For many occupations, the additional housing production would likely result in a large increase in job openings, relative to the OED projections baseline, as illustrated in the exhibit. For example, meeting the goal would increase the number of annual openings expected for cement masons and concrete finishers through 2028 by about one-third, and for carpenters, electricians, and plumbers by close to one-fifth or more.

On an annual basis, the year-over-year increases in housing starts and housing production employment associated with the scenario are not unprecedented, but the state has not experienced this level of growth over multiple years in the available historical data, and residential construction employment has declined slightly from a peak in 2022, suggesting the need for extraordinary efforts to develop the workforce needed to meet the production goal within the next few years. Proposed tariffs and immigration reform could create additional, strong, headwinds. Once the workforce is in place (2028 in the scenario described above), however, the additional need for housing production workers would return to levels more consistent with the current status quo.

The exhibits above omit a few critical occupations called out in the recommendations report of the Oregon Housing Production Advisory Council (HPAC) and in our engagement



with employers for this project: building code professionals.<sup>24</sup> The limited availability of building inspectors, local government permitting staff, and other local government employees has been identified as an important barrier to ramping up housing production, regardless of how many carpenters and electricians are ready for work. Data regarding the number and workload of such positions that are associated with housing production is sparse. However, based on OEA analysis, meeting the goal described in the scenario would require about 400 more local government employees in each year the production goal is met, many of whom would be building inspectors.<sup>25</sup>

Carpenters Construction laborers Electricians First-line supervisors of construction workers Plumbers, pipefitters, and steamfitters Painters, construction and maintenance Construction managers General and operations managers Project management specialists Bookkeeping, accounting, and auditing derks Cement masons and concrete finishers Secretaries and administrative assistants Office clerks, general Cost estimators Operating engineers and equipment operators Drywall and ceiling tile installers Heavy and tractor-trailer truck drivers Accountants and auditors Maintenance and repair workers, general Insulation workers, floor, ceiling, and wall Civil engineers Construction and building inspectors Upper HVAC and refrigeration mechanics and installers Lower Sheet metal workers 0% 5% 10% 15% 20% 25% 30% 35% 40%

Exhibit 27. Additional Annual Need as a Share of Baseline Annual Openings

Data source: OED

https://oregoneconomicanalysis.com/2022/09/20/addressing-oregons-housing-shortage-workforce-needs/



<sup>&</sup>lt;sup>24</sup> Housing Production Advisory Council, State of Oregon Housing Production Advisory Council Recommendations Report.

https://www.oregon.gov/gov/policies/Documents/HPAC%20Final%20Report%20February%202024.pdf <sup>25</sup> OEA, Addressing Oregon's Housing Shortage, Workforce Needs.

# 3. Engagement Summary

# **Insights from Industry Professionals**

ECOnorthwest's engagement approach included a survey, interviews, and focus groups. The following sections detail the survey distribution and interview/focus group approach and findings, including participant characteristics.

## Survey

ECOnorthwest designed and administered a survey to gather detailed insights into workforce challenges and opportunities, capturing the perspectives of those actively involved in Oregon's housing construction industry. <sup>26</sup> The survey was distributed through key partners, including the steering committee, Associated General Contractors (Oregon Columbia Chapter), Oregon Construction Contractors Board, Business Oregon's COBID Office (Certification Office for Business Inclusion and Diversity), directors of the Oregon State Regional Home Builders Association, community colleges, apprenticeship programs, the National Association of Minority Contractors, LatinoBuilt, Oregon Tradeswomen, and the Statewide Chamber of Commerce.

The survey was open from October 30th until December 4th and received 83 responses—81 in English (38 through the original survey and 43 through a separate distribution to COBID-certified firms) and two in Spanish (both from the original survey). Twenty percent of respondents were union signatory contractors. <sup>27</sup> When describing the type of construction work they do, respondents selected a mix of residential and commercial construction (see Appendix). Two thirds (65%) of respondents work on single-unit, townhome, or small-plex residential construction, and just over half (54%) work on apartment or other multi-unit buildings. Asked to further describe the nature of their work, the largest individual shares of respondents selected "general contractor" (55%), "other" (51%) (a category encompassing a wide variety of specialized work), and "carpentry" (22%). Most respondents (72%) were presidents/CEOs, vice presidents, COOs, CFOs, or general managers, and most (68%) work for companies employing fewer than 25 people (Exhibit 28). More than half (57 percent) of respondents from COBID-certified companies reported that they employ fewer than 10 employees at their busiest times, compared to 38 percent of those with undetermined certification status.

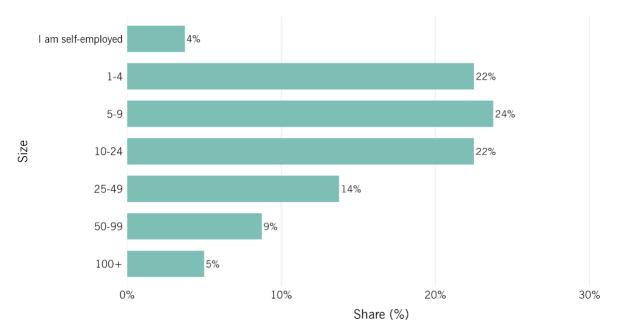
<sup>&</sup>lt;sup>27</sup> Respondents identifying as union signatory contractors indicated involvement in local chapters of the International Union of Painters and Allied Trades; the International Brotherhood of Electrical Workers; the International Association of Bridge, Structural, Ornamental, and Reinforcing Ironworkers; and the Laborers' International Union of North America.



<sup>&</sup>lt;sup>26</sup> This survey is specific to the housing construction industry; interviews and focus groups looked further at topics covered in this survey as well as local government planning and permitting.

#### **Exhibit 28. Respondent Company Size**

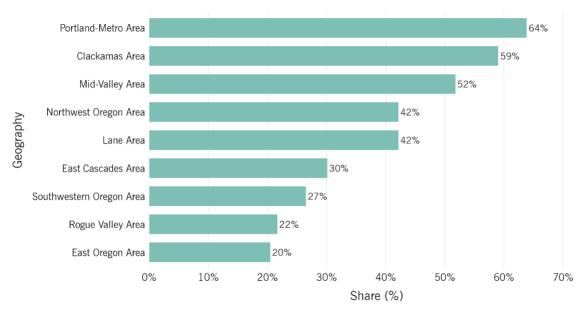
Survey Question: How many people does your company employ at its busiest time? Select one.



Respondents' companies operate across the state, with a significant portion (77%) reporting work in 2 or more regions, and more than half (54%) reporting work in 3 or more regions. The highest share of respondents indicated that their companies operate in the Portland Metro, Clackamas, and Mid-Valley areas, reflecting a concentration of companies working in Oregon's most populous counties (Exhibit 29).

#### **Exhibit 29. Respondent Company Locations**

Survey Question: In which area(s) does your company work? Select all that apply.



Note: Portland-Metro includes Washington and Multnomah counties; Clackamas includes Clackamas County; Mid-Valley includes Yamhill, Polk, Marion, and Linn counties; Northwest Oregon includes Benton, Clatsop, Columbia, Lincoln, and Tillamook counties; Lane includes Lane County; East Cascades includes



Wasco, Hood River, Sherman, Gilliam, Jefferson, Wheeler, Crook, Deschutes, Klamath, and Lake counties; Southwestern Oregon includes Coos, Douglas and Curry counties; Rogue Valley includes Josephine and Jackson counties; and Eastern Oregon includes Baker, Grant, Harney, Malheur, Morrow, Umatilla, Union, and Wallowa counties.

The small sample size of 83 respondents presents limitations that should be considered when interpreting results. A small sample size can introduce variability and reduce the statistical significance of results, making it challenging to generalize findings to the broader housing construction industry. This limitation is especially pronounced when examining cross tabulations by region, company size, or other subcategories, as the number of responses in certain groups may be too small to draw meaningful conclusions. Results should be viewed as indicative rather than definitive, providing valuable insights into the views of this specific pool of respondents rather than providing conclusive evidence of trends at large.

Note that in many survey questions, respondents could select more than one answer. Therefore, the sum of response counts often exceeds the total number of respondents. The cross tabulation charts displayed in this analysis include the number of responses associated with each possible combination of answers (denoted by "n = #" on y-axis labels).

## **Key Survey Findings**

#### **INDUSTRY CHALLENGES**

Construction companies in Oregon face a variety of challenges. Respondents were asked whether their company regularly experiences any one of several issues related to project timelines and financial constraints (Exhibit 30). The most common challenges facing respondents' companies include project halts or redesigns (56%), governmental delays (52%), and high interest rates causing developers to hesitate (48%). Supply chain issues, such as equipment shortages and delivery delays, are each reported by about a quarter of respondents. "Other" responses included long wait times for materials like lumber, increased cost of supplies, a lack of skilled labor, and a lack of available projects. These responses generally highlight regulatory and financial barriers as key factors affecting construction timelines.

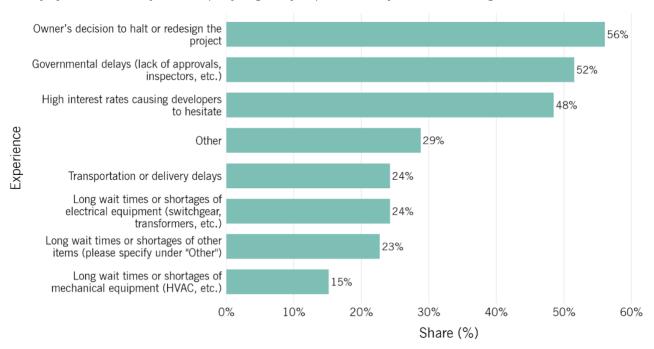
#### **WORKFORCE CHALLENGES**

More than half of respondents experienced challenges with workforce attraction, hiring, or retention during the past year. Fifty-five percent of respondents reported difficulty attracting, hiring, and/or retaining employees in the past 12 months (Exhibit 31). Of those who identified this as an issue, approximately 70 percent cited a shortage of skilled candidates as their primary workforce challenge (Exhibit 32). Smaller shares reported a lack of contracts (14%), factors such as childcare and housing (5%), and other factors (12%), including responses such as people not wanting to work and 1:1 apprentice to journey-level worker ratios.



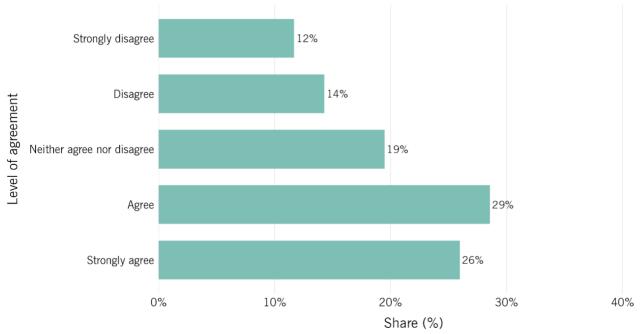
#### **Exhibit 30. Construction Industry Challenges**

Survey Question: Does your company regularly experience any of the following?



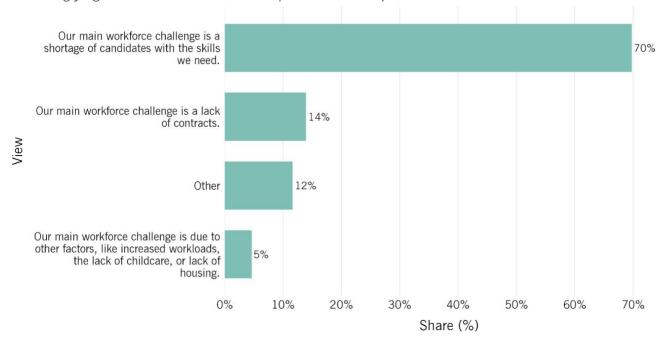
#### Exhibit 31. Difficulty with Attracting, Hiring, and Keeping Employees

Survey Question: Please indicate your agreement with this statement: Attracting, hiring, and/or keeping employees has been a significant challenge for my company in the past 12 months.



#### **Exhibit 32. Main Workforce Challenges**

Survey Question: Which statement best represents your view? (Question asked of those responding "agree" or "strongly agree" to the statement in the previous exhibit.)

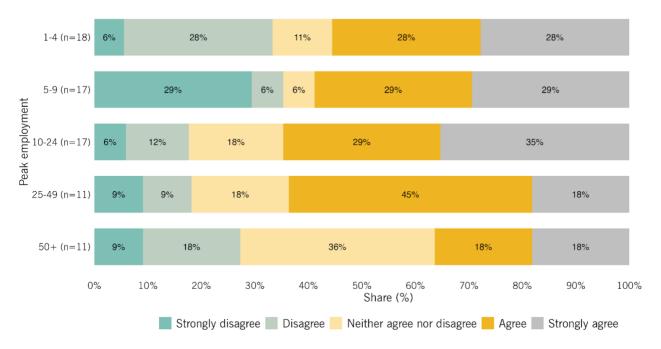


Those who disagreed or neither agreed nor disagreed with the statement "Attracting, hiring, and/or keeping employees has been a significant challenge for my company in the past 12 months" were asked what—if any—workforce challenges they've faced over the past year (open-ended response). Respondents indicated there was not enough work or that they were struggling to acquire government projects. Rising operating and material costs were also mentioned multiple times.

The presence of recruitment, hiring, or retention issues varies somewhat by company size. Respondents from companies with 10–24 employees had the highest levels of agreement about challenges (Exhibit 33). Smaller companies (1–4 and 5–9 employees) show variation, with 29 percent of 5–9 respondents selecting "strongly disagree" compared to 6 percent of 1–4 respondents. Larger companies (50–99 and 100+ employees) exhibit more neutrality or disagreement, though their responses are less generalizable due to limited sample sizes.

#### Exhibit 33. Attraction, Retention, and Hiring Challenges by Company Size

Survey Question: Please indicate your agreement with this statement: Attracting, hiring, and/or keeping employees has been a significant challenge for my company in the past 12 months.



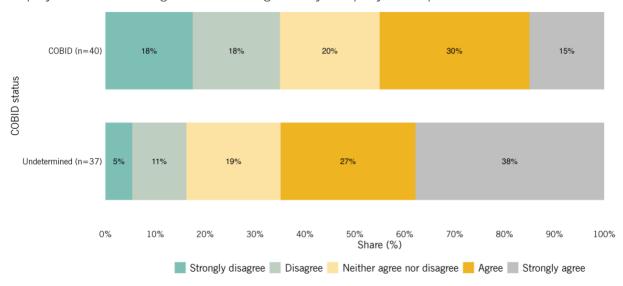
There were few differences in responses to this question by geographic location. About half of respondents in each region agreed or strongly agreed that attracting, hiring, or keeping employees has been a challenge. This distribution of responses could suggest that workforce improvement efforts should be broadly distributed across Oregon rather than limited to any one region. However, responses from firms operating in multiple areas may be obscuring regional variations. Most responses were not specific to one region; a large share of respondents reported operating in at least three regions, and some in up to six regions. Their experiences likely span multiple regions, complicating the interpretation of regional distinctions in the survey results.

Respondents representing COBID-certified companies and those from companies with undetermined COBID certification status expressed differing views on attracting, hiring, and retaining employees. A sizeable share of respondents with undetermined certification status (65 percent) reported that these aspects had been a challenge for their company over the past 12 months, compared to 45 percent of COBID-certified respondents. Conversely, about 36 percent of COBID-certified respondents stated that attracting, hiring, and retaining employees had not been a challenge—nearly twice the share of those with undetermined certification status. Approximately 20 percent of respondents in both cohorts remained neutral on the issue (Exhibit 34).



#### Exhibit 34. Attraction, Retention, and Hiring Challenges, by COBID Status

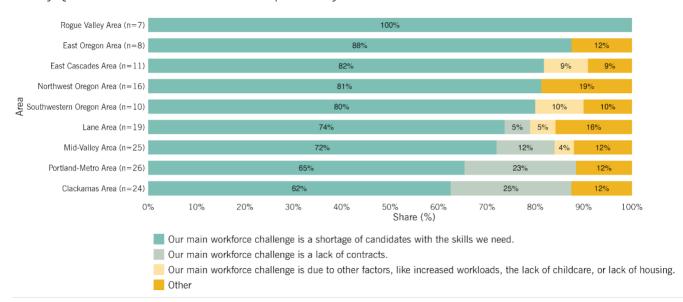
Survey Question: Please indicate your agreement with this statement: Attracting, hiring, and/or keeping employees has been a significant challenge for my company in the past 12 months



There is some variation in the reported causes of workforce challenges by geographic location. As noted above, most respondents who answered this question (70%) identified a shortage of candidates with the necessary skills as their main workforce challenge. Across regions, this share ranged from 62 to 100 percent, with highest-response (and most populous) regions on the lower end of this range (Exhibit 35). About a quarter of respondents in these regions reported a lack of contracts as their main workforce challenge. These variations in responses may or may not reflect actual differences in workforce challenges between urban and rural areas for the reasons noted above. Further outreach would be needed to determine the broader consistency of these trends.

#### Exhibit 35. Main Workforce Challenges by Location

Survey Question: Which statement best represents your view?

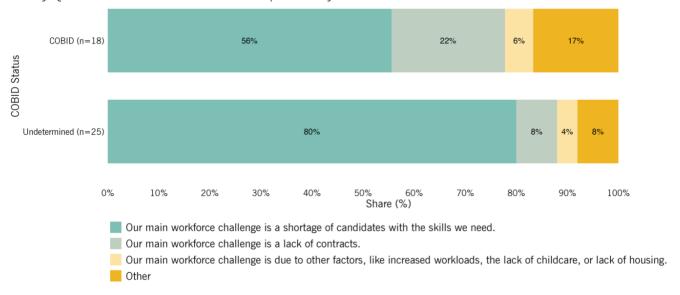




There is variation in the reported causes of workforce challenges by COBID status. Of those with undetermined status, a considerably large share of respondents (80 percent) expressed that their main workforce challenge is a shortage of candidates with the skills they need. Fewer respondents from the COBID-certified cohort—about 56 percent—expressed the same concern, with the next highest share of respondents in this category (22 percent) identifying a lack of contracts as their main workforce challenge. Although a shortage of skilled candidates constituted the most pressing concern among both groups of respondents, it appears to be less of a concern for COBID-certified respondents than for respondents with undetermined certification status. Note, however, that this question received fewer responses from COBID-certified respondents than from respondents with undetermined status.

Exhibit 36. Nature of Workforce Challenge, by COBID status





Respondent companies struggle to fill a variety of hourly and salaried positions. About half of respondents provided responses to the open-ended question "If your company has struggled to fill hourly positions over the past year, what jobs have been the hardest to fill?" Many respondents said general labor positions like carpenters, equipment operators, project managers, mechanics, and foremen. Others had very specific positions they were looking to fill such as low-voltage installation technicians, skilled concrete finishers, or glaziers with a welding specialty. Four respondents said that all positions have been hard to fill.

About a quarter of respondents answered the open-ended question "If your company has struggled to fill salaried positions over the past year, what jobs have been the hardest to fill?" The most common responses were project managers, estimators, and superintendents.

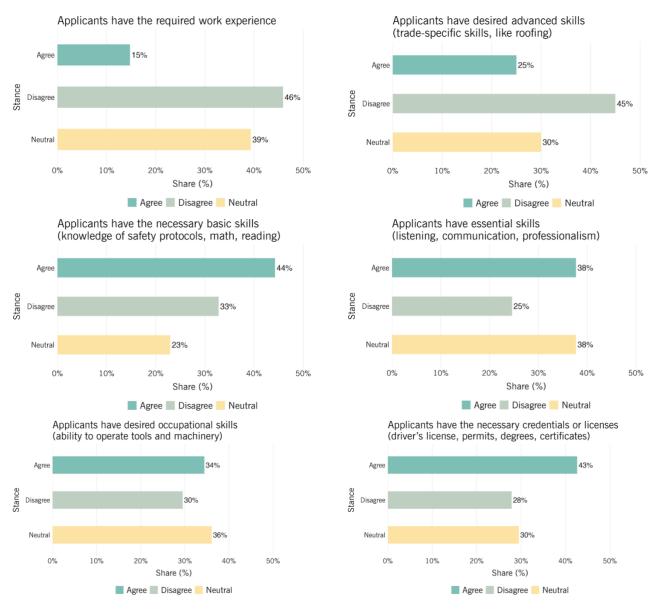
The most lacking applicant characteristics are work experience and advanced skills. Nearly 46 percent of respondents indicated that applicants lack the required work



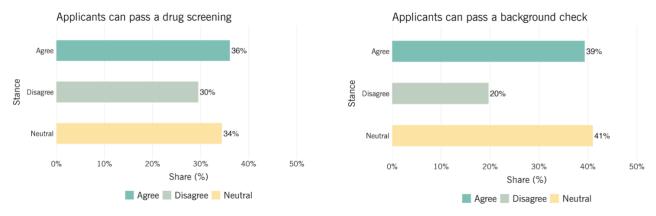
experience to fill open positions over the past 12 months and 45 percent reported that applicants lack the required advanced skills (Exhibit 37). In both cases, the share of respondents with these views exceeded the share who felt that applicants have the required workforce experience (15%) or advanced skills (25%). Relatively more respondents agreed that applicants were qualified in terms of basic skills (44%), essential skills (38%), and occupational skills (34%), as well as having required credentials (43%) and the ability to pass background checks (39%) and drug screenings (36%). However, there remained a persistently high disagree rate of 20 to 33 percent for these skills/characteristics. While work experience and advanced skills were the top concerns, employers found that applicants often lack even basic skills.

#### Exhibit 37. Perceptions of Applicants' Skills/Characteristics

Survey Question: Thinking about open positions at your company over the past 12 months, please indicate your agreement with the following statements.





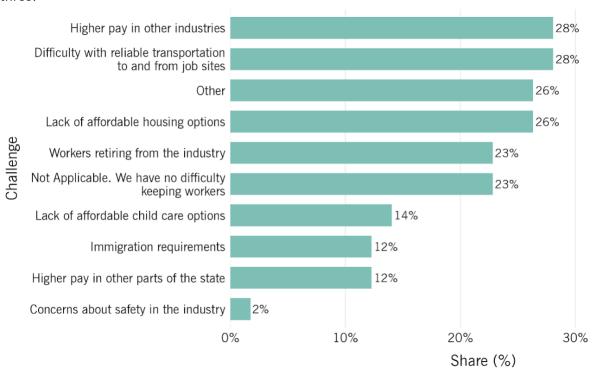


Note: Response options included Strongly Agree and Agree (shown combined as Agree) and Strongly Disagree and Disagree (shown combined as Disagree).

Top retention challenges include competition from other industries, reliable transportation for workers, and affordable housing. Survey respondents report a range of challenges to keeping workers in their company (Exhibit 38). In addition to the top responses of higher pay in other industries (28%), transportation difficulties to and from job sites (28%), and a lack of affordable housing options (26%), top "other" responses (26%) included a lack of demand in the construction industry, leading to layoffs, and a lack of reliable or skilled workers. Many additional factors contribute to employee retention, including workers retiring from the industry (23%), access to affordable child care (14%), immigration requirements (12%), and higher pay in other regions (12%). Just under a quarter of respondents indicated that they have no difficulty keeping workers.

#### **Exhibit 38. Top Retention Challenges**

Survey Question: What are the top three challenges to keeping workers in your company? Select up to three.

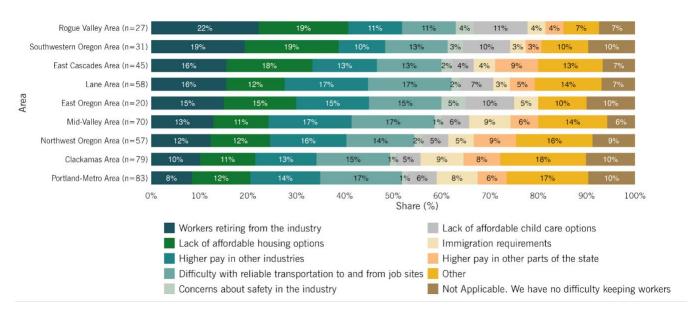




There is some geographic variance in reported causes of workforce retention difficulties, with similar caveats about interpretability as noted above: regional differences may or may not reflect actual differences in workforce challenges, given small sample sizes in some response groups and respondents operating in multiple regions. Respondents with company operations in relatively rural areas reported workers retiring from the industry, lack of affordable housing options, and higher pay in other industries as top challenges. Respondents with company operations in more-urban areas reported difficulty with reliable transportation to and from job sites, higher pay in other industries, and lack of affordable housing options as top challenges (Exhibit 39).

#### **Exhibit 39. Retention Challenges by Location**

Survey Question: What are the top three challenges to keeping workers in your company? Select up to three.



#### **SOURCES OF SKILLED LABOR**

Respondents cited employee referrals (59%) and apprenticeship programs (41%) as the most reliable sources of skilled workers for their companies, indicating a strong reliance on informal networks and on-the-job training (Exhibit 40). Union hiring halls (14%), WorkSource Oregon (11%), and staffing agencies (11%) also contribute, but to a lesser degree. Postsecondary CTE programs and 2-year educational programs are less common sources (2% and 4% respectively). Overall, respondents favor sourcing candidates from existing employee networks. Respondents who selected "Other" indicated sourcing skilled workers through immediate social circles, word of mouth, and websites such as Indeed and ZipRecruiter.

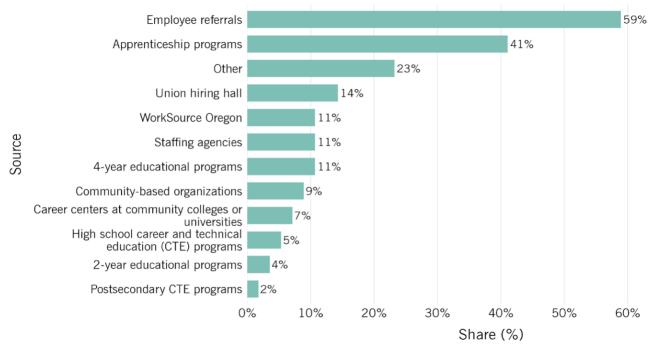
Respondents were also asked to list specific programs or organizations that provide their company with skilled workers. Common responses included referrals, apprenticeship programs, unions, and WorkSource Oregon. Unique organizations mentioned included the



Oregon Association of Minority Entrepreneurs, Alternative Youth Activities, Heart of Oregon, Youth Build, and halfway houses.

#### **Exhibit 40. Sources of Skilled Workers**

Survey Question: Which of the following reliably provide your company with skilled workers? Select all that apply.

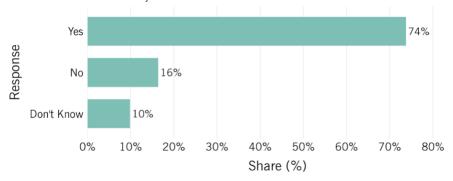


#### WORKFORCE DIVERSIFICATION

Most respondents (74%) reported that their companies are actively trying to diversify their workforce (Exhibit 41). Of those who reported workforce diversification efforts, 77 percent indicated that they are trying to diversify by race/ethnicity and 70 percent indicated that they are trying to diversify by gender (Exhibit 42). Respondents indicating "Other" (30%) mentioned being equal opportunity employers who welcome all backgrounds; a few specified trying to increase the number of Spanish-speaking individuals or veterans among their workforce.

#### **Exhibit 41. Diversification Efforts**

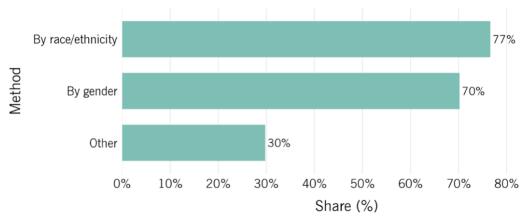
Survey Question: An increasing number of companies are interested in hiring and keeping employees from diverse backgrounds. Is your company actively trying to diversify its workforce (by gender, race/ethnicity, or other characteristic)?





#### **Exhibit 42. Diversification Type**

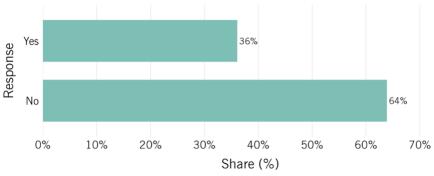
Survey Question: How are you trying to diversify your workforce?



Respondents reported more difficulty achieving gender diversity in their workforce compared to racial or ethnic diversity. Just over one third (36%) of those who are trying to diversify by race/ethnicity note difficulty doing so (Exhibit 43) compared to two thirds (64%) of those who are trying to diversify by gender (Exhibit 44). Nearly half (46%) are having difficulty filling positions with diverse applicants by the other characteristic(s) noted in the previous question (see Appendix).

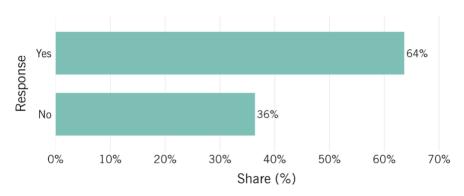
#### Exhibit 43. Difficulty Diversifying by Race/Ethnicity

Survey Question: Are you having difficulty filling positions with diverse applicants by race/ethnicity?



#### Exhibit 44. Difficulty Diversifying by Gender

Survey Question: Are you having difficulty filling positions with diverse applicants by gender?





Survey takers were asked what strategies industry groups, workforce development providers, or schools could use to help them meet their diversity goals (an open-ended question). Many emphasized the need for outreach to underrepresented communities, suggesting approaches such as early exposure to the trades at the middle school and high school level, promotion of apprenticeship application cycles to diverse youth, mentorship programs, and support for affiliate organizations like the National Association of Women in Construction (NAWIC).

#### ADDRESSING LABOR SHORTAGES

An open-ended question about addressing labor shortages ("In your opinion, what is the most effective way for companies or the government to address labor shortages?") elicited responses focused on the importance of education in elementary, middle, and high school to shift the cultural narrative and communicate to young people the viability of career paths in the trades. Multiple respondents also remarked that simplifying immigration processes is important to addressing critical labor shortages. Additionally, respondents discussed the importance of lowering the cost of training and receiving certifications for low-income students or individuals through financial assistance or subsidies.

One respondent, considering non-traditional pathways to the trades, commented on the potential for veterans: "I think military to construction, especially for officers, should be a huge focus. Those folks fit in great in our trade and many others." Another remarked on the potential for stronger return-to-work programs for unemployed individuals or trades employees that were injured on the job.

#### PERSPECTIVES ON THE STATE HOUSING PRODUCTION GOAL

About 40 percent of respondents who answered the open-ended question, "What do you think will be the most important workforce challenge(s) with the expected increase in housing production in response to the State's goal?" mentioned the need for more skilled labor, with one respondent saying that "the current labor shortage would likely get worse with the increased demand [associated with the goal]." There was also recognition that workers' wages need to keep pace with rising costs of living, and that that could help ensure the quality of housing being constructed, which was a concern for multiple respondents

Many discussed the challenges of land availability, getting projects approved, and permitting so that projects can continue to move forward. There was also concern about ensuring that the state would be working with local, small businesses rather than large out-of-state businesses.

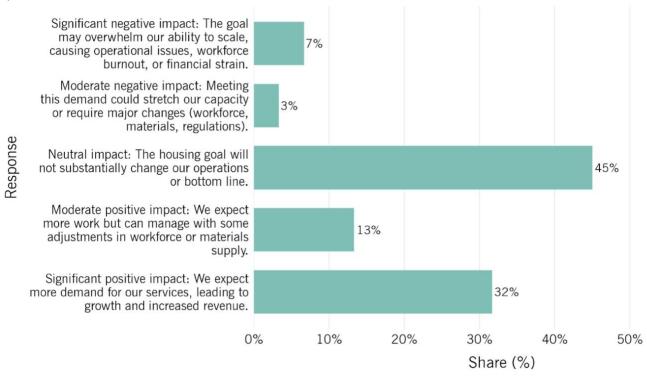
Respondents were next asked to assess the potential impact of the State's housing goal on their company's operations. The largest individual share of respondents (45%) felt that the housing goal would have a neutral impact, affecting neither their operations nor their bottom line (Exhibit 45). Only 10 percent anticipated either a moderate negative or a



significant negative impact, and about 45 percent anticipated a moderate positive or significant positive impact (with 32 percent reporting the latter).

Exhibit 45. Perspectives on Potential Impacts of the State's Housing Goal

Survey Question: What impact do you believe the State's housing goal will have on your company's operations?

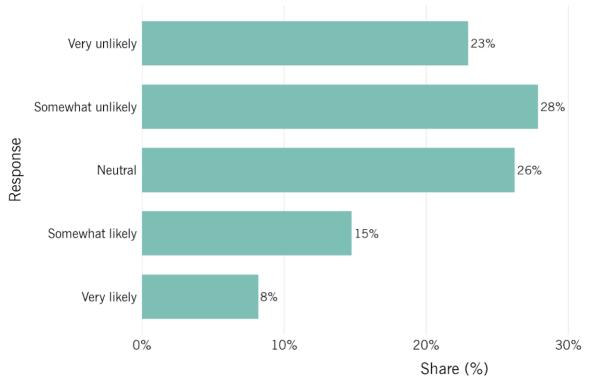


Half of respondents (51%) were skeptical that the State's housing production goal would be met (Exhibit 46). Another quarter (26%) expressed neutrality. The relatively low confidence levels reflected in these findings signal concerns among respondents about the feasibility of scaling up housing production to meet state targets. Such perceptions may reflect underlying challenges identified in earlier survey findings, such as workforce shortages, governmental delays, and other development hurdles, which could impede progress toward meeting the goal within the specified timeline.



#### Exhibit 46. Perspectives on the Likelihood of Meeting the Housing Production Goal

Survey Question: How likely do you think it is that the State's housing goal will be met, given current industry conditions (workforce availability, supply chain issues, permitting, access to funding, regulations)?



The survey's final question was open-ended: "Please share any additional thoughts on the State's annual housing production target." One respondent summed up many of the major challenges emphasized throughout the survey responses: "Achieving this goal under current industry conditions seems unlikely without substantial changes. We need to address and plan for workforce availability, supply chain issues, permitting processes, access to funding, and regulatory hurdles."

Multiple respondents opined that funding levels would be a deciding factor in the state's success: "It's more about the funding than the goal. The state has to partner with lenders to make the process easier and smoother to fund the housing. Currently there are too many hurdles and the timeline is too long."

Two respondents raised the point that companies can be limited by their insurance coverage in terms of the projects they can work on. Companies might be prohibited from working on certain housing types, or the cost to get insurance coverage is unaffordable for them. With multiple respondents wanting to see more small, local businesses supported in the industry, State-backed insurance programs for developers and small builders could be something to consider.

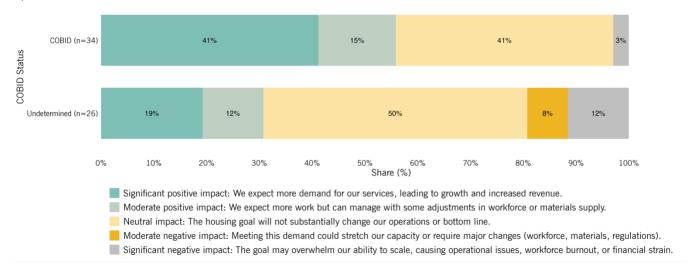
The share of COBID-certified respondents who anticipate a significant positive impact from the State housing goal was more than twice that of those with Undetermined status. Among both cohorts, a sizeable share—41 percent of COBID-certified respondents and 50



percent of respondents with undetermined status—anticipate a neutral impact. Very few COBID-certified respondents expect a negative impact, with none anticipating a moderate negative impact and only 3 percent anticipating a significant negative impact. In comparison, among respondents with undetermined status, approximately 8 percent anticipate a moderate negative impact, and 12 percent anticipate a significant negative impact.

## Exhibit 47. Perspectives on Potential Impacts of the State's Housing Goal by COBID Certification Status

Survey Question: What impact do you believe the State's housing goal will have on your company's operations?



## Interviews and Focus Groups

To gain deeper insights beyond what survey and quantitative data revealed, we conducted six targeted interviews with representatives of key interested parties such as workforce boards, labor unions, and construction employers, to better understand the complexities of the housing production workforce. These conversations provided a nuanced understanding of the challenges and complexities facing Oregon's housing production workforce.

In addition to interviews, we organized three focus group sessions designed as collaborative forums for open dialogue. These sessions brought together diverse perspectives, including community college programs, apprenticeship and pre-apprenticeship programs, union representatives, and planning and permitting offices (e.g., building code inspectors). Each group contributed critical insights that highlighted both common themes and sector-specific challenges.

While outreach efforts were extensive, certain perspectives were ultimately not represented in the engagement activity due to scheduling constraints and the project timeline. Future engagement with additional perspectives could yield additional valuable insights into the housing production workforce.



#### **Housing Production Training Programs and Pathways**

Our engagement with employers suggests variation across Oregon's housing production job training programs in terms of availability and student interest. Building code officials reported the most consistent shortfall in trained staff, despite having available programs with spaces for students. Trades apprenticeship programs demonstrate flexibility but remain constrained by external factors, particularly the consistent availability of construction work by which to train students and in some, typically more rural, geographies, enough journey-level workers to fulfill the required 1:1 ratio of apprentice-to-journey-level-worker.

#### **BUILDING CODE PROFESSIONAL TRAINING PROGRAMS**

Oregon is not producing enough building code professionals to meet current or future demand. The Oregon Employment Department (OED) estimates that the state needs to produce 155 inspectors annually to replace 145 retirees and add 10 new (growth) positions each year.<sup>28</sup> About 45–50 individuals graduated from Oregon's code professional programs annually in 2020–22.<sup>29</sup> This current annual shortfall of approximately 105 inspectors leaves critical gaps in Oregon's capacity to staff permitting and inspection roles, resulting in bottlenecks in permitting and inspections and hindering housing production.<sup>30</sup> Respondents familiar with the program at Chemeketa Community College suggest that students are deterred from its cost and two-year time commitment. Other jobs in the trades rely on an apprenticeship model where apprentices are trained on-the-job and paid during training. In an effort to eliminate these barriers and encourage more students to pursue a career in inspection, the Oregon Building Officials Association (OBOA) is working on putting together a program that functions like an apprenticeship program for residential code inspectors.

Currently, most inspectors complete a two-year program, obtain certification, and are then employed by jurisdictions. While it is possible to do self-study and take the exams without the program, very few individuals take this path as it is technically challenging and time consuming. A proposed alternative to the school-based program would allow jurisdictions to employ apprentices while they simultaneously take classes and progressively obtain certifications. This approach, potentially sponsored by the OBOA and administered through a JATC, would integrate hands-on experience with classroom instruction, providing a pathway that aligns more closely with traditional apprenticeship programs.

https://www.oregon.gov/gov/policies/Documents/HPAC%20Final%20Report%20February%202024.pdf



<sup>&</sup>lt;sup>28</sup> "Construction and Building Inspectors (474011) Oregon (All Counties)." State of Oregon Employment Department.

https://qualityinfo.org/web/guest/oprof?occProfSearchTerm=474011&occProfSearchResults=474011&occProfSearchResult

<sup>&</sup>lt;sup>29</sup> Chemeketa Community College, Portland Community College, and Building Code Division's Oregon Inspector Training. Dan Carlson. "Building Inspection." Chemeketa Community College. https://prezi.com/view/7Ev1XNuRatPksJy0xEQ9/

<sup>&</sup>lt;sup>30</sup> "State of Oregon Housing Production Advisory Council Recommendations Report." Housing Production Advisory Council.

The new model would provide a faster path to employment that is funded and predictable, making it a more viable career path option, while also providing a structured pipeline of trained code professional workers, offering relief to jurisdictions dealing with increased work and workforce shortages.

#### APPRENTICESHIP PROGRAMS

Unlike the persistent workforce gap for building officials, Oregon's union apprenticeship programs for trades have the scalability to meet workforce demand—if and when sufficient construction work is available. This cyclical relationship between program enrollment and job availability shapes the capacity of these programs to respond effectively to workforce needs. For example, International Brotherhood of Electrical Workers (IBEW) training centers in Coos Bay and Newport operate with 30 to 45 apprentices enrolled and report an additional 50

"We need the work now so we can be training people. You have to have work in order to build a workforce." – Workforce Board Participant

"A lot of the training you have to watch, be in the environment, and see how it is working." – Construction Employer

to 60 individuals on their waiting list. The lack of local construction jobs along the Oregon coast prevents the current apprentices from gaining necessary hands-on experience and limits opportunities for those on the program waitlist. Similarly, the Portland metro area's IBEW training center has 1,600 individuals on its apprenticeship waiting list, 60 unemployed apprentices, and 550 journey-level workers on their out-of-work list due to insufficient job opportunities.

Respondents emphasized the hardest part of workforce training in apprenticeship programs is anticipating trends in construction work demand. Overestimating demand risks saturating the labor market, while underestimating it perpetuates shortages in skilled trades. Respondents broadly agree that on-the-job training (OJT) is critical for developing the practical skills necessary in the housing construction industry.

However, opinions diverge around the structure of OJT, particularly regarding apprenticeship programs. Union programs value the strict 1:1 apprentice-to-journey-level-worker ratio for mentorship, safety, and high-quality training. This structure allows apprentices to receive individual attention and hands-on guidance, ensuring they build a strong foundation of skills. Unions also argue this ratio is critical for maintaining safety on construction sites—for both apprentices and the journey-level workers supervising them.



"The purpose of an apprenticeship program is to get a strong foundation and you can only get that with singular mentorship. The quality of training will suffer if there are multiple apprentices to one journeyman." – Union Representative

"[Ratios] are there for the safety of the building being constructed, the journeyman, and apprentice. They can get good training and adequate, safe installations." –

Union Representative

Non-union employers and other respondents challenged the 1:1 ratio during our conversations, arguing that it limits flexibility, especially in rural areas where there is already a shortage of journey-level worker. Without sufficient journey-level workers to mentor apprentices, rural employers struggle to expand their workforce. In addition, rural employers struggle to attract new talent because their compensation packages are not as competitive as those in urban regions. Both factors have contributed to making it harder for small, rural construction businesses to stay afloat.

"In rural Oregon, there is limited workforce and only so many journeymen. New electricians can't ever level up because they're bound by this restriction. Once they journeyman out, they find other opportunities with higher pay and unions. The mom and pop shop struggles from this. Most of my subs can't handle that loss."

— Construction Employer

Non-union employers also argue that increasing the ratio of apprentices to journey-level workers could help address workforce shortages by training more workers simultaneously. Union representatives refute this argument by expressing concern that increasing ratios prioritizes cost-saving over training quality.

"The impetus to increase ratios is only to have a cheaper workforce to increase workforce to build houses. Apprentices make only a percentage of the journeyman wage." – Union Representative

Unions argue that increasing ratios would dilute the quality of mentorship, leaving apprentices inadequately trained and jeopardizing the safety and integrity of the work. They also stress that training more apprentices without a corresponding increase in available jobs risks creating an oversaturated labor market, leaving apprentices and journey-level workers unemployed or underutilized.

#### **EVOLVING CAREER PATHWAYS**

Several significant transformations are underway in the pathways from trades to supervisory or office-based roles. Historically, roles such as building inspectors or superintendents were filled by tradespeople transitioning due to injury, age, or desire for



career changes. But with wages for office-based roles often less competitive than those in the trades, this career pathway has become less appealing to many trades workers who, despite having the desire for change, can't afford to make the change.

Respondents spoke of several emerging pathways that are new to the industry. First is the growth in the advancement of permit technicians—a role traditionally held by women—into building inspector positions, which offers opportunities to diversify the workforce. Building inspector professionals noted this career path as a promising strategy to address gender representation gaps. Similarly, graduates of four-year construction programs bring to employers a great set of business/office/blueprint skills but are less trained in on-site construction skills. Construction companies have increasingly hired such graduates as "field engineers" (an emerging term) with potential to progress into superintendent roles as they grow their construction skills.

Unlike apprenticeship programs with on-the-job training and pay, four-year construction programs have out-of-pocket school costs similar to other four-year degrees. However, a recent graduate we spoke with was comfortable with that debt, given the many job opportunities she found after graduation and their pay level, which allowed her to reduce her debt, live comfortably, and save. She also commented on the growth opportunities she saw in her future in sales, management, or the wide range of careers in the industry. Compared to her friends who graduated with other majors, she considers herself lucky. She described the broader opportunities provided by a construction degree compared to traditional apprenticeship programs:

"Apprenticeships are known to be hands-on. With a construction degree, you can see so much more like project management, bidding, costs, maintenance, etc. A lot of people don't understand the opportunities you have in project management."

- Recent Union Apprenticeship Graduate

These evolving pathways underscore the growing complexity of the housing construction industry and the need to adapt educational and training programs to align with changing career dynamics and industry trends.

#### GENDER INCLUSIVITY IN THE WORKPLACE

Company work culture plays a pivotal role in shaping women's ability to enter and advance in the historically male-dominated industry of construction. Women employees shared a range of experiences, from positive accommodations to persistent challenges.

A woman building official recounted how her authority and expertise are often questioned by contractors, requiring her to go above and beyond to prove her competence.



"I feel like I have to know 50 percent more than my male counterparts. I will put my first initial instead of my name when signing plans so people won't know I'm a woman." - Building Official, Woman

Some companies described making concerted efforts to create safer, more accommodating environments for women. This includes policies such as flex hours and lactation accommodations as well as on-site accommodations like women-only lockable port-a-potties and increased lighting for safety during early or late hours on job sites.

"I know that I'm a number on the job site and that ups our COBID points." - Construction Employee, Woman

Programs like COBID (Certification Office for Business Inclusion and Diversity) also support workforce diversity by encouraging the employment and retention of underrepresented groups. One woman explained that she feels job security at her place of employment because of these COBID supports.

Another woman business owner spoke of the commitment she is making to ensuring a safe and inclusive environment for women in her firm, but as a small subcontractor, her team is in regular contact with other firms on larger projects and she worries about the "larger construction culture" and how much control she can have on those projects for her crew. Overall, we observed that gender inclusivity was on people's minds and that efforts, slow as they are, are being made.

#### PERCEIVED GAPS IN CURRENT PROGRAM OFFERINGS

Some employers expressed frustration with the disconnect between the skills new hires bring and the demands of the workplace. They shared the perspective that, while a balance of practical experience and technical expertise is essential, current programs often fail to adequately address both. Employers then feel responsible for bridging the gap through additional OJT.

"Reading blueprints in a college setting is a good base layer. But they still need to see how things get stuck together, there's less of the trades education. We have to do one or the other. If they are coming from the trades, they need to learn technical, Excel stuff. But if they are coming from the other side, then they need to know how to put a nail into wood." – Non-Union Construction Employer

For building inspectors, the level of technical expertise required can vary significantly depending on specialization. Inspections related to energy codes, for example, demand a higher level of technological understanding than do more-traditional plan examination roles. As energy standards evolve, the gap between workforce training and industry needs widens. On the other hand, union apprenticeship programs and community colleges view preapprenticeship programs as vital for focusing on essential skills, which apprenticeship



programs may be lacking, and introducing diverse candidates to the industry. These programs cultivate essential skills like communication and teamwork while introducing basic construction practices.

A recurring theme among respondents is the need for holistic programs that integrate practical, technical, and essential skills. Current offerings tend to specialize in one area at the expense of others, forcing employers to choose between candidates with technical knowledge but limited field experience, or those with hands-on expertise but insufficient familiarity with modern tools or processes. We did speak to some successful partnerships between community colleges and industry partners who were working together to build tailored programs to address specific industry needs. Ongoing open communication, OJT training opportunities, and flexible curriculum seem like important factors in ensuring upto-date worker training.



## 4. Program Inventory

This chapter includes inventories of three types of education and training programs relevant to Oregon's housing production sector: career and technical education (CTE) in the K12 system, apprenticeship and pre-apprenticeship programs, and postsecondary credential programs. While the Oregon housing production workforce is not exclusively trained by programs in Oregon, the state's programs and pathways are key to the stability and expansion of the sector's workforce.

Importantly, the data and analysis included in this chapter do not identify whether individual program completers work or are available for employment in the state, nor do they definitively determine an individual's occupation, industry, or specific role as an employee.

## **Career and Technical Education Programs**

In the 2024-25 school year, 100 high schools across Oregon had one or more CTE programs in the Architecture & Construction (A&C) CTE Career Cluster: 86 high schools had general architecture and construction programs, 10 had carpentry programs, and 9 had architectural design programs. Exhibits 48 through 51 provide tabulations of these CTE offerings by region, program type, and program skill level. Nearly all programs have tracks at all three skill levels (advanced, intermediate, and introductory). Program enrollment data were not available at the time of writing.

Exhibit 48. Number of High Schools in Oregon with a CTE Program in the Architecture & Construction Career Cluster, 2024-25

| Workforce Area           | High School | Number of Schools with Skill-Level Program |              |              |  |  |
|--------------------------|-------------|--|--------------|--------------|--|--|
| Workloice Area           | Count       | Advanced                                   | Intermediate | Introductory |  |  |
| Clackamas Area           | 5           | 4  | 4            | 4            |  |  |
| East Cascades Area       | 14          | 12   | 14           | 14           |  |  |
| Eastern Oregon Area      | 5           | 5  | 5            | 5            |  |  |
| Lane Area                | 14          | 14   | 14           | 14           |  |  |
| Mid-Valley Area          | 14          | 13   | 11           | 14           |  |  |
| Northwest Oregon Area    | 9           | 6  | 7            | 7            |  |  |
| Portland-Metro Area      | 25          | 23   | 24           | 24           |  |  |
| Rogue Valley Area        | 5           | 4  | 4            | 4            |  |  |
| Southwestern Oregon Area | 9           | 8  | 8            | 9            |  |  |
| Total                    | 100         | 89   | 91           | 95           |  |  |

Data source: ODE. Note: Includes Architecture & Construction, Architectural Design, and Carpentry programs.

<sup>&</sup>lt;sup>31</sup> ODE Approved CTE Programs (Detail), https://www.ode.state.or.us/apps/CTEReports/ApprovedPrograms/Details



Exhibit 49. Number of High Schools in Oregon with a CTE Program in General Architecture & Construction, 2024-25

| Workforce Area           | High School | Number of Schools with Skill-Level Program |              |              |  |  |
|--------------------------|-------------|--|--------------|--------------|--|--|
| Workloice Alea           | Count       | Advanced                                   | Intermediate | Introductory |  |  |
| Clackamas Area           | 5           | 4  | 4            | 3            |  |  |
| East Cascades Area       | 13          | 11   | 13           | 13           |  |  |
| Eastern Oregon Area      | 5           | 5  | 5            | 5            |  |  |
| Lane Area                | 13          | 13   | 13           | 13           |  |  |
| Mid-Valley Area          | 9           | 8  | 7            | 9            |  |  |
| Northwest Oregon Area    | 5           | 4  | 3            | 5            |  |  |
| Portland-Metro Area      | 23          | 22   | 23           | 23           |  |  |
| Rogue Valley Area        | 4           | 4  | 4            | 4            |  |  |
| Southwestern Oregon Area | 9           | 7  | 8            | 9            |  |  |
| Total                    | 86          | 78   | 80           | 84           |  |  |

Data source: ODE

Exhibit 50. Number of High Schools in Oregon with a CTE Program in Carpentry, 2024-25

| Workforce Area           | High School | Number of Sc             | hools with Skill- | Level Program |
|--------------------------|-------------|--------------------------|-------------------|---------------|
| Workloice Area           | Count       | Advanced Intermediate In |                   | Introductory  |
| Clackamas Area           |             |                          |                   |               |
| East Cascades Area       | 1           | 1                        | 1                 | 1             |
| Eastern Oregon Area      |             |                          |                   |               |
| Lane Area                |             |                          |                   |               |
| Mid-Valley Area          | 4           | 4                        | . 3               | 4             |
| Northwest Oregon Area    | 4           | 2                        | 3                 | 2             |
| Portland-Metro Area      |             |                          |                   |               |
| Rogue Valley Area        | 1           | 0                        | 0                 | 0             |
| Southwestern Oregon Area |             |                          |                   |               |
| Total                    | 10          | 7                        | 7                 | 7             |

Data source: ODE

Exhibit 51. Number of High Schools in Oregon with a CTE Program in Architectural Design, 2024-25

| Workforce Area           | High School | Number of Schools with Skill-Level Program |              |              |  |  |
|--------------------------|-------------|--|--------------|--------------|--|--|
| Workloice Alea           | Count       | Advanced                                   | Intermediate | Introductory |  |  |
| Clackamas Area           | 1           | 1  | 1            | 1            |  |  |
| East Cascades Area       |             |  |              |              |  |  |
| Eastern Oregon Area      |             |  |              |              |  |  |
| Lane Area                | 1           | 1  | 1            | 1            |  |  |
| Mid-Valley Area          | 2           | 2  | 1            | 2            |  |  |
| Northwest Oregon Area    | 1           | 1  | 1            | 1            |  |  |
| Portland-Metro Area      | 3           | 2  | 2            | 2            |  |  |
| Rogue Valley Area        |             |  |              |              |  |  |
| Southwestern Oregon Area | 1           | 1  | 1            | 1            |  |  |
| Total                    | 9           | 8  | 7            | 8            |  |  |

Data source: ODE



Exhibit 52 displays the number of high schools in each county with an A&C CTE program. Multnomah and Lane counties have the highest number of high schools with programs. Several counties have no high schools with programs. Additional analysis is required to understand the pathways CTE students take after participating in a program. Mobile classrooms such as those employed in Central Oregon Construction Sector Partnership could help extend the reach of CTE programming.

Exhibit 52. Number of High Schools with CTE Programs in the Architecture & Construction Career Cluster, 2024-25

Data source: ODE. Note: Includes Architecture & Construction, Architectural Design, and Carpentry programs.

# Apprenticeship and Pre-Apprenticeship Programs

Apprenticeship and pre-apprenticeship programs are a key aspect of the housing production training ecosystem. The data used in this section's analysis were provided by Oregon's Bureau of Labor and Industries (BOLI). We quantify the potential flow into the labor force of individuals who are formally trained apprentices.



### Apprenticeship Programs

The tables in this section include apprenticeships registered in 2018 or later and so provide only a partial picture of the apprenticeship pipeline, as many programs require multiple years to complete and most apprentices who began their programs in recent years will require more time to complete. Moreover, the COVID-19 pandemic affected completions and starts in 2020 and subsequent years, making recent changes in trends less informative than they might otherwise have been.

Exhibit 53 provides counts of active apprentices and completed apprenticeships in programs associated with housing construction. The largest category is electricians, with more than 3,000 active apprentices in Oregon as of September 2024, followed by plumbers, pipefitters, and steamfitters. A total of 7,100 apprentices were active in Oregon in late 2024. The column on the right provides a sense of completions per year—in 2023, Oregonians completed about 1,500 construction-related apprenticeships.

Exhibit 53. Number of Active Apprentices and Completed Apprenticeships, Construction Industry, Oregon

| Occupation Title                                  | Active (as of 9/20/2024) | Completed<br>(2023) |
|---|--------------------------|---------------------|
| Electricians                                      | 3,132                    | 686                 |
| Plumbers, pipefitters, and steamfitters           | 1,498                    | 346                 |
| Carpenters  | 659                      | 167                 |
| Sheet metal workers                               | 398                      | 66                  |
| Drywall and ceiling tile installers               | 327                      | 89                  |
| Construction laborers                             | 257                      | 54                  |
| Heating/air cond./refrigeration mech., installers | 211                      | 27                  |
| Roofers   | 198                      | 24                  |
| Oper. engineers / construction equip. operators   | 107                      | 9                   |
| Cement masons and concrete finishers              | 84                       | 16                  |
| Maintenance and repair workers, general           | 83                       | 18                  |
| Painters, construction and maintenance            | 67                       | 10                  |
| Glaziers  | 37                       | 12                  |
| Insulation workers, floor, ceiling, and wall      | 25                       | 7                   |
| Tile and stone setters                            | 19                       | 4                   |
| Total   | 7,102                    | 1,535               |

Data source: Oregon BOLI

Exhibit 54 disaggregates the 1,535 completions in 2023 by workforce region and occupation. Each region had completions, and the largest regions (by population) each had completions in all but one or two of the construction occupations.



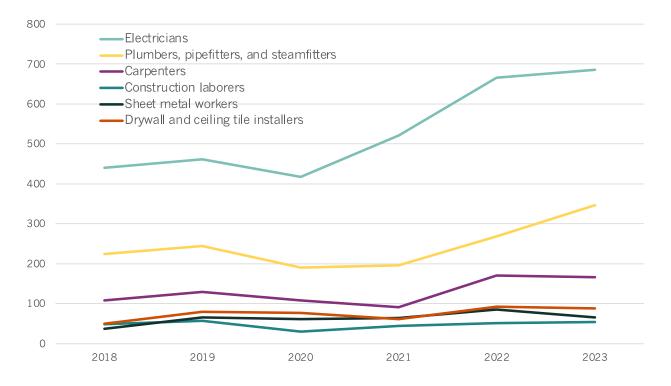
Exhibit 54. Completed Apprenticeships by Workforce Region, Construction Industry, Oregon, 2023

| Occupation Title                         | Clack-<br>amas | East<br>Cascades | Eastern<br>Oregon | Lane | Mid-<br>Valley | NW<br>Oregon | Portland-<br>Metro | Rogue<br>Valley | SW<br>Oregon | Total |
|--|----------------|------------------|-------------------|------|----------------|--------------|--------------------|-----------------|--------------|-------|
| Electricians                             | 94             | 85               | 16                | 57   | 129            | 50           | 209                | 30              | 16           | 686   |
| Plumbers, pipefitters, and steamfitters  | 54             | 34               | 8                 | 33   | 68             | 28           | 96                 | 17              | 8            | 346   |
| Carpenters                               | 16             | 7                | 1                 | 16   | 42             | 6            | 75                 | 2               | 2            | 167   |
| Construction laborers                    | 11             | 6                | 4                 | 3    | 3              | 2            | 23                 | 2               | -            | 54    |
| Sheet metal workers                      | 12             | 3                | _                 | 8    | 18             | 3            | 16                 | 4               | 2            | 66    |
| Drywall and ceiling tile installers      | 15             | 3                | -                 | 8    | 38             | 4            | 21                 | -               | -            | 89    |
| Roofers                                  | -              | -                | -                 | 1    | 3              | -            | 20                 | -               | -            | 24    |
| HVAC mechanics and installers            | 2              | -                | -                 | 3    | 2              | 3            | 14                 | 3               | -            | 27    |
| Cement masons and concrete finishers     | 3              | 1                | _                 | 4    | 3              | _            | 5                  | -               | -            | 16    |
| Oper. engineers / equipment operators    | 5              | =                | =                 | _    | _              | 1            | 3                  | -               | -            | 9     |
| Painters, construction / maintenance     | 1              | =                | =                 | _    | 3              | 1            | 5                  | -               | -            | 10    |
| Maintenance and repair workers           | 7              | 1                | -                 | 1    | 2              | _            | 7                  | -               | -            | 18    |
| Glaziers                                 | 3              | =                | -                 | 1    | 2              | 3            | 3                  | -               | -            | 12    |
| Insulation workers, floor, ceiling, wall | 2              | =                | =                 | _    | 1              | _            | 4                  | -               | -            | 7     |
| Tile and stone setters                   | 1              | -                | -                 | -    | -              | _            | 3                  | -               | -            | 4     |
| Total                                    | 226            | 140              | 29                | 135  | 314            | 101          | 504                | 58              | 28           | 1,535 |

Data source: Oregon BOLI

Exhibit 55 shows trends in completed apprenticeships from 2018 through 2023 for the occupations with the most completions statewide. Completions for most occupations dipped slightly in 2020 then began to increase in 2021, with nearly 700 electrician completions statewide in 2023.

Exhibit 55. Completed Apprenticeships, Construction Industry, Oregon



Data source: Oregon BOLI. Note: Showing occupations with the most completions statewide.

The final four exhibits depict apprentice demographics. Women are underrepresented across apprenticeship program participants—they represent just 4 percent of roofer apprentices and below 10 percent for half of the key occupations (see Exhibit 56). Women



make up between 15 and 18 percent of the other half of construction apprenticeships, and 26 percent of tile and stone setters. These figures are somewhat higher than estimates in Exhibit 17 for female representation in construction occupations and occupational groups, an indication of relatively more diversity in the training pathways leading to the occupations. Regardless, there remains much room for growth in female representation in construction occupations in Oregon.

Tile and stone setters 26% Painters, construction and maintenance 18% Construction laborers 18% Oper. engineers / other construction equip. operators l 17% Insulation workers, floor, ceiling, and wall 16% Cement masons and concrete finishers 15% Carpenters 15% Drywall and ceiling tile installers 10% Electricians 9% Sheet metal workers 8% Plumbers, pipefitters, and steamfitters 8% Heating/air cond./refrigeration mech. and installers Maintenance and repair workers, general Glaziers 5% Roofers

Exhibit 56. Share of Apprentices Who are Women, Oregon, 2024

Data source: Oregon BOLI. Note: Active apprentices as of September 2024.

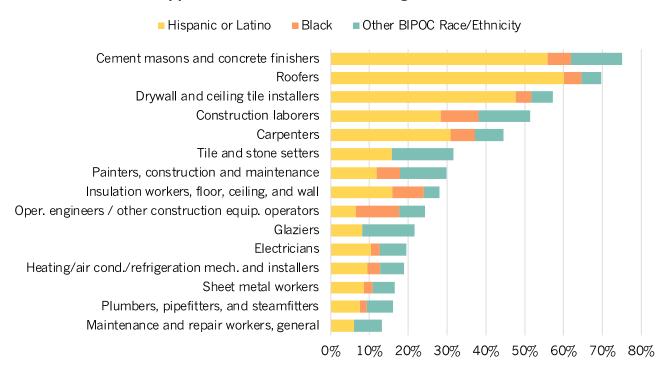
Likewise, Exhibit 57 displays the race and ethnicity of active apprentices, and active apprentices are more diverse than the current workforce in each occupation (see Exhibit 17). For example, 31 percent of carpenters in Oregon are BIPOC, compared to 44 percent of apprentices. As noted elsewhere in this report, occupational and wage differentials by race/ethnicity are important to track, to ensure opportunities across occupation types are available to people from all backgrounds.

The data also allow analysis of completion and termination rates. 32 The two subsequent exhibits provide the status of apprenticeships that began in 2018, 2020, 2022, and 2024, further broken down by sex (Exhibit 58) and race/ethnicity (Exhibit 59). Nearly all apprenticeships that began in 2018 are complete or terminated, with a lower completion rate for women (48%) than for men (58%). This pattern also holds for apprenticeships starting in 2020. Disaggregation by race/ethnicity (Exhibit 59) reveals similar trends and discrepancies. A relatively high share of apprenticeships end in termination, particularly among Hispanic and Black apprentices.

<sup>&</sup>lt;sup>32</sup> "Termination of an apprentice may be voluntary or involuntary. Voluntary termination is non-disciplinary. Involuntary termination is disciplinary (for post-probationary apprentices, a reason is required; for probationary apprentices, no reason is required)." Source: BOLI.

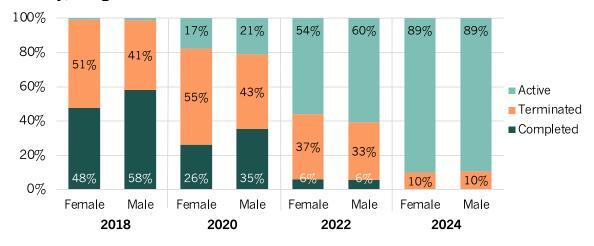


Exhibit 57. Share of Apprentices Who are BIPOC, Oregon, 2024



Data source: Oregon BOLI. Note: Active apprentices as of September 2024. BIPOC=Black, Indigenous, or People of Color.

Exhibit 58. Apprenticeship Status as of 9/20/24, by Sex and Starting Year, Construction Industry, Oregon



Data source: Oregon BOLI. Note: Active is as of 9/20/2024.

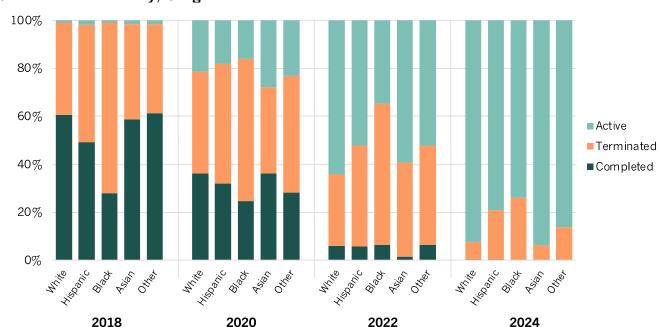


Exhibit 59. Apprenticeship Status as of 9/20/24, by Race/Ethnicity and Starting Year, Construction Industry, Oregon

Data source: Oregon BOLI. Note: Active is as of 9/20/2024.

The numbers of completed apprenticeships shown in Exhibit 53 are smaller than the numbers of annual openings anticipated by OED (see Exhibit 26). This suggests potentially broader labor market pressures—because the annual number of newly trained workers falls short of anticipated new job openings.<sup>33</sup> At the same time, while availability of fully trained workers may be constrained, apprentices provide capacity for housing construction and will gain relevant skills as they progress. In addition, an apprenticeship is not necessarily a requirement for employment.

### Pre-apprenticeship Programs

Pre-apprenticeship programs are typically 6-8 weeks long and designed for individuals with little to no experience in construction trades or who experience barriers to employment. Pre-apprenticeships are an important pathway into construction occupations. Among 2023 completers of a carpentry apprenticeship, for example, more than 20 percent had previously completed a pre-apprenticeship.

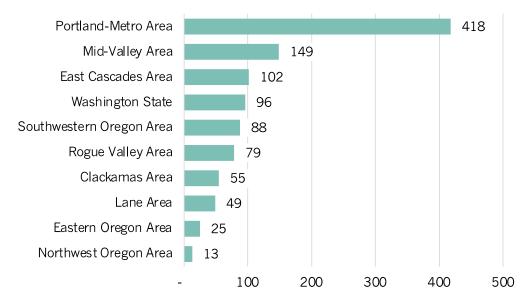
Pre-apprenticeship data were not available at the occupation level; thus, the following exhibits include data for all pre-apprenticeship programs in Oregon. However, most programs are relevant to the construction trades. Exhibit 60 shows 2024 pre-apprenticeship enrollment numbers by workforce area. About 43 percent of enrollment is in the Portland Metro Area, followed by 14 percent in Mid-Valley and 10 percent in the East Cascades. Nearly 1,000 individuals across Oregon were enrolled in pre-apprenticeship

<sup>&</sup>lt;sup>33</sup> Due to career changes, migration, and retirement, newly completed apprenticeships do not necessarily represent net new trained workers for the state.



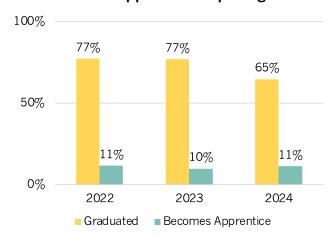
programs in 2024. In recent years, 77 percent of pre-apprenticeship participants graduated from their programs, and 11 percent entered apprenticeship programs (Exhibit 61).

Exhibit 60. Enrollment in Pre-apprenticeship Programs, Oregon, 2024



Data source: Oregon BOLI. Note: Includes all pre-apprenticeship programs, not just construction.

Exhibit 61. Pre-apprenticeship Program Outcomes, by Apprenticeship Start Year, Oregon



Data source: Oregon BOLI. Note: Includes all pre-apprenticeship programs, not just construction.

Pre-apprenticeship and apprenticeship pathways are in many cases more diverse than employment in the relevant occupations. Targeted investments designed to diversify recruitment and increase completions by diverse candidates could help the state increase the size of the sector's workforce.

## **Postsecondary Credential Programs**

Although apprenticeships in the construction trades provide occupation-specific training to a larger share of housing construction workers than do programs provided by Oregon's colleges and universities, these entities nonetheless provide important training pathways into the industry, and opportunities for incumbent workers to increase their skills. Below, we provide an overview of existing programs most relevant to the industry. These programs provide a valuable foundation for expanding Oregon's housing production workforce, whether through improved recruitment, expanded capacity, or additional programs.

The data in this section are from the Integrated Postsecondary Education Data System (IPEDS) and include Oregon institutions only.<sup>34</sup> We used ten Classification of Instructional Programs (CIP) codes to identify core housing construction programs in the following categories:

- Building/Construction Site Management/Manager
- Building Construction Technology/Technician
- Building/Home/Construction Inspection/Inspector
- Carpentry/Carpenter
- Construction Trades, General
- Electrician
- Glazier
- HVAC and Refrigeration Engineering Technology/Tech.
- HVAC and Refrigeration Maintenance Technology/Tech.
- Pipefitting/Pipefitter and Sprinkler Fitter

IPEDS data identify 20 programs associated with these housing production CIP codes. The associated programs award certificates and associate degrees (no bachelor's, master's or doctoral degrees). IPEDS data do not identify whether individual completers reside in or are available for employment in the region, nor do they identify an individual's occupation, industry, or specific role as an employee.

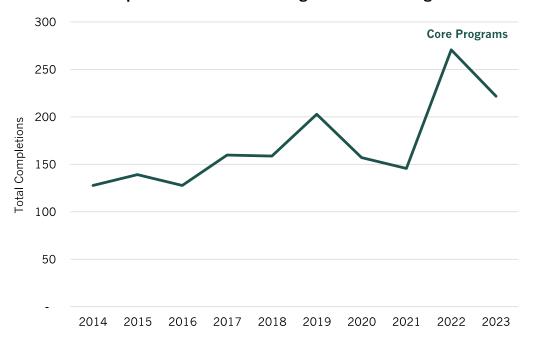
We quantified the number of completers of relevant postsecondary programs at local colleges and universities. Exhibit 62 displays the count of completions in core housing production programs each year since 2014. In 2023 there were 222 completions; the average over the period was 171. As with apprenticeships, these numbers are far below the estimated number of housing production worker openings annually (see Exhibit 26).

Exhibit 63 provides program and credential counts by institution and credential type. The credential counts represent an annual average from 2019–2023. The most completions occur at Portland Community College, followed by Lane and Mt. Hood community colleges. More than half of the credentials are short-term certificates (less than one academic year).

<sup>&</sup>lt;sup>34</sup> IPEDS is a set of annual surveys administered by the National Center for Education Statistics. The surveys gather data from every college, university, and technical and vocational institution that participates in the federal student financial aid programs.



Exhibit 62. Completions in Core Housing Production Programs Over Time, Oregon



Data source: IPEDS. Note: Includes short-term certificates, certificates, and associate degrees. Average over the period=171 credentials per year.

Exhibit 63. Completions in Core Housing Production Programs, by Institution, Oregon

|                    |                     |                       | Annual .                   | Average Compl | etions (2019 | - 2023)            |
|--------------------|---------------------|-----------------------|----------------------------|---------------|--------------|--------------------|
| Institution        | Region              | Number of<br>Programs | Short-Term<br>Certificates | Certificates  | Associates   | All<br>Completions |
| Portland CC        | Portland-Metro      | 4                     | 73                         | 0             | 31           | 105                |
| Mt Hood CC         | Portland-Metro      | 2                     | 11                         | 1             | 16           | 29                 |
| Lane CC            | Lane                | 3                     | 24                         | 0             | 4            | 29                 |
| Chemeketa CC       | Mid-Valley          | 2                     | 0                          | 0             | 11           | 11                 |
| Treasure Valley CC | Eastern Oregon      | 1                     | 0                          | 10            | 0            | 10                 |
| Linn-Benton CC     | Mid-Valley          | 1                     | 0                          | 4             | 4            | 7                  |
| Columbia Gorge CC  | East Cascades       | 1                     | 4                          | 0             | 0            | 4                  |
| Umpqua CC          | Southwestern Oregon | 1                     | 0                          | 0             | 2            | 2                  |
| Blue Mountain CC   | Eastern Oregon      | 2                     | 2                          | 0             | 0            | 2                  |
| Clackamas CC       | Clackamas           | 1                     | 0                          | 0             | 1            | 1                  |
| Inst. of Tech.     | Mid-Valley          | 1                     | 0                          | 0             | 0            | 0                  |
| Rogue CC           | SW Oregon           | 1                     | 0                          | 0             | 0            | 0                  |
| Total              | -                   |                       | 115                        | 16            | 68           | 200                |

Data source: IPEDS. Notes: Rogue Community College had at least one relevant completion in earlier years. Averages are taken over the span of 5 years; some programs may not be operational every year.

The following exhibit presents the data by CIP designation, an approximation of occupation. Nearly half of the average annual completions are in the general construction trades, followed by HVAC and refrigeration maintenance technicians.



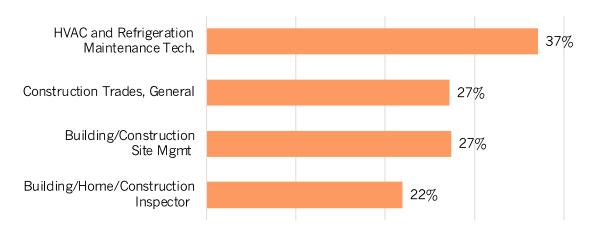
Exhibit 64. Completions in Core Housing Production Programs, by CIP Designation, Oregon

|   | Average Annual Completions (2019-2023) |              |            |                    |  |
|---|--|--------------|------------|--------------------|--|
| CIP Name                                    | Short-Term<br>Certificates             | Certificates | Associates | All<br>Completions |  |
| Construction Trades, General                | 74                                     | 2            | 19         | 95                 |  |
| HVAC and Refrigeration Maintenance Tech.    | 34                                     | 0            | 8          | 43                 |  |
| Building/Home/Construction Inspector        | 2                                      | 0            | 17         | 19                 |  |
| Building/Construction Site Mgmt/Manager     | 0                                      | 0            | 15         | 15                 |  |
| Carpentry/Carpenter                         | 0                                      | 10           | 0          | 10                 |  |
| Pipefitting/Pipefitter and Sprinkler Fitter | 0                                      | 4            | 4          | 7                  |  |
| Building Construction Technology/Technician | 4                                      | 0            | 0          | 4                  |  |
| HVAC and Refrigeration Engineering Tech.    | 0                                      | 0            | 4          | 4                  |  |
| Electrician                                 | 1                                      | 0            | 2          | 3                  |  |
| <b>Total Core Completions</b>               | 115                                    | 16           | 68         | 200                |  |

Data source: IPEDS. Note: Averages are taken over the span of 5 years; some programs may not be operational every year.

The data also allow disaggregation by race/ethnicity and sex. Among the four CIP designations with the most completions, the share of credentials completed by BIPOC individuals ranges from 22 percent (building/home/construction inspector) to 37 percent (HVAC and refrigeration maintenance technician) (see Exhibit 65). These shares are somewhat lower than those in the apprenticeship programs and may be more aligned with current workforce demographics.

Exhibit 65. Share of Credentials Completed by BIPOC Individuals, Core Housing Production Programs, 2019–2023, Oregon

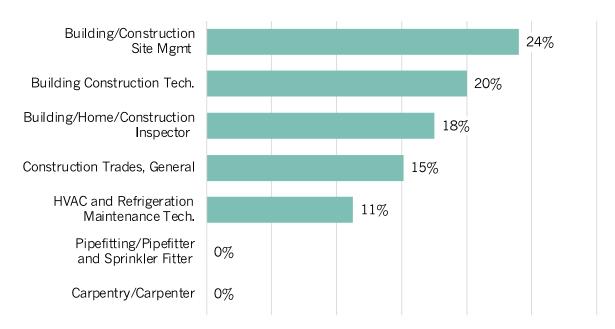


Data source: IPEDS. Notes: Shares are calculated as an average from 2019–2023. Includes CIP designations with 15 or more average annual completions.

Women complete relatively small shares of housing production credentials (see Exhibit 66). In two CIP designations (pipefitting and carpentry), no completions were by women. Women are currently more likely to receive training in management or office-based roles, such as building/construction site management and inspection occupations.



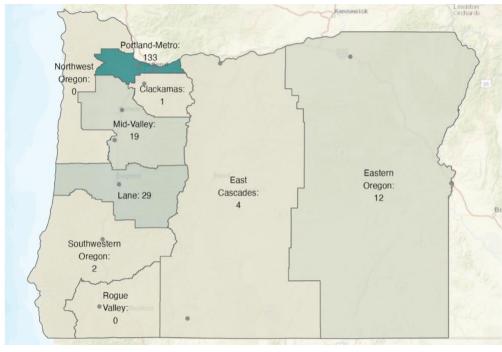
Exhibit 66. Share of Credentials Completed by Women, Core Housing Production Programs, 2019–2023, Oregon



Data source: IPEDS. Note: Shares are calculated as an average from 2019–2023. Includes CIP designations with 10 or more average annual completions.

Credential completions are taking place across the state (see Exhibit 67). However, again, average annual completions are small in number compared to the need associated with the housing production goal.

Exhibit 67. Annual Average Core Completions by Workforce Area, 2019–2023



Data source: IPEDS. Note: Each dot is an institution.



## Conclusion

All regions of the state have construction-related training pathways, from high school CTE programs to apprenticeships and community college and university programs. The current capacities of these programs are small compared to anticipated need associated with meeting the State's housing production goal. In addition, the housing production sector will compete with the rest of the market for these credentialed workers.

A possible and logical next step would be the completion of a gap analysis to connect the completion counts included in this chapter with the workforce demand figures in Chapter 3.



## 5. Recommendations

This chapter first summarizes some best practices research and then offers a set of recommendations based on the findings of this study.

## Selected Research and Best Practices

As detailed in Chapter 4, many construction training and education programs are accessible to Oregonians beginning in high school. Researchers in Oregon have studied many of these programs; selected findings and recommendations are highlighted below. The section also includes information about the emerging field of micro-credentials and stackable credentials.

## Pre-Apprenticeship and Apprenticeship Programs

Pre-apprenticeship and apprenticeship programs are growing in popularity, provide essential pathways into the construction workforce, and increase diversity within the industry. A study from the University of Oregon Labor Education and Research Center (LERC) found that from 2011 to 2019, enrollment in construction apprenticeships in the greater Portland area more than doubled. Fre-apprenticeship programs have also grown substantially. A 2017 study of 94 pre-apprentices in Oregon construction found that up to 27 percent of program completers entered an apprenticeship within one year. A 2022 PSU study, of programs associated with highway construction, found that individuals who complete pre-apprenticeship programs are more likely to complete an apprenticeship. Financial and non-financial supports had a positive effect on apprenticeship completion.

The same study found that pre-apprenticeship and apprenticeship programs, especially union-based programs, increase diversity in the workforce. A 2021 LERC study found that union apprenticeship programs recruited a higher proportion of women and BIPOC workers and had higher graduation rates than did non-union apprenticeship programs. About half of women and BIPOC graduates entered construction jobs with an average hourly wage of \$40 or higher.<sup>38</sup>

38 Larissa Petrucci. "Constructing a Diverse Workforce."



<sup>&</sup>lt;sup>35</sup> Petrucci, Larissa. 2021. "Constructing a Diverse Workforce." University of Oregon, Labor Education and Research Center. https://bpb-

use1.wpmucdn.com/blogs.uoregon.edu/dist/a/13513/files/2021/11/Constructing\_A\_Diverse\_Workforce.pdf <sup>36</sup> Wilkinson, Lindsey, and Maura Kelly. 2017. "Evaluation of Pre-Apprenticeship and Retention Services in the Construction Trades in Oregon." Final report submitted to Oregon Tradeswomen, Inc., and Constructing Hope.

<sup>&</sup>lt;sup>37</sup> Maura Kelly. 2022. Evaluation of the Highway Construction Workforce Development Program. *Portland State University*. https://www.oregon.gov/odot/Business/OCR/SiteAssets/Pages/Workforce-Development/Program\_Evaluation\_November\_22\_FINAL.pdf

## Increasing Program Accessibility and Diversity

Many programs in Oregon work to support students from diverse backgrounds entering the residential construction industry. For example, Mt. Hood Community College debuted a Construction Pathway program for English Language Learners in 2024, a 12-week, full-time program that fosters a direct pipeline to apprenticeships and jobs. <sup>39</sup> The Portland Opportunities Industrialization Center (POIC) also runs a 12-week paid construction apprenticeship program for post-high school workers, stating that 95 percent of graduates have been placed in jobs. <sup>40</sup> And the Oregon Residential Construction Career Hub has compiled an extensive list of residential construction training and apprenticeship programs at entry, mid, and advanced levels. <sup>41</sup>

The following best practices derive from the 2022 PSU review of BOLI-funded preapprenticeship programs and the 2021 LERC report examining construction workforce diversity. These practices primarily center around improving access to pre-apprenticeship and apprenticeship programs and improving construction workforce diversity.

#### IMPROVING PROGRAM ACCESSIBILITY

- Expand Comprehensive Support Service: Provide financial and non-financial aid through a coordinated system with a single point of contact. This could include hardship funds to address emergencies like rent, car repairs, travel subsidies, and tools.
- Enhance Mentorship and Support Systems: Encourage apprenticeship programs to pair apprentices with trained mentors who provide guidance and support, particularly for underrepresented groups. Assign an ombudsperson to handle workplace equity and harassment concerns.
- Improve Childcare and Family Policies: Offer onsite childcare, subsidies, and schedules that accommodate single parents. Include maternity and paternity leave options to support workers balancing family responsibilities. Take steps to reduce childcare costs to less than 7 percent of household income.

#### IMPROVING DIVERSITY AND FAIRNESS

 Broaden Pre-Apprenticeship Opportunities: Studies show that pre-apprenticeship programs can improve workplace diversity and apprenticeship completion rates.
 Expand pre-apprenticeship programs that effectively recruit and retain women and BIPOC individuals.

<sup>&</sup>lt;sup>41</sup> Residential Career Hub. "Training & Credentials." https://residentialcareerhub.org/training-credentials/



<sup>&</sup>lt;sup>39</sup> Keizur, Christopher. "Mt. Hood Community College Debuts New Construction Program for Diverse Students." The Outlook. April 3, 2024. https://www.theoutlookonline.com/business/mt-hood-community-college-debuts-new-construction-program-for-diverse-students/article\_52f0dc46-f130-11ee-ac8c-bf19d4eca95c.html#:~:text=Mt.%20Hood%20Community%20College%20debuted%20a%20newly,more%20diverse%20employees%20going%20into%20the%20workforce

<sup>&</sup>lt;sup>40</sup> Portland Opportunities Industrialization Center. "Construction Pre-Apprenticeship." POIC Employment & Training. https://www.portlandoic.org/employment-training/programs/construction

- Ensure Equitable Work Hour Distribution: Set clear thresholds for contractors to fairly allocate work hours to women and BIPOC journey- and apprentice-level workers. The Construction Career Pathways Project suggests the following minimums: 14 percent of total work hours for women and 25 percent for people of color. 42 Include flexible scheduling to accommodate family needs and reduce burnout.
- Foster a Respectful Workplace Culture: Implement anti-harassment training for all staff and apprentices. Introduce robust reporting systems and enforce policies to ensure a safe and inclusive work environment.
- Diversify Recruitment Practices: Review outreach methods to ensure they are inclusive, using gender-neutral language and emphasizing diversity in job postings. Include diverse representatives in recruitment teams to attract a broader applicant pool.

## Micro-credentials, Stackable Credentials, and Micropathways

Micro-credentials and stackable credential pathways have promising potential as newer pathway types. Virginia's G3 program is an example of a stackable pathway program where students can stack certifications on a pathway toward an associate degree while also gaining skills with each certificate that are immediately applicable to the job market. Each of Virginia's 23 community colleges has a set of G3 programs, each with stackable credits that align with the local business landscape. A student could graduate from a program, for example, with two certificates and an associate degree. According to the Virginia Community College System, students who completed a G3/stackable credits program earned 60 percent more, on average, in wages.

The Education Design Lab (EDL), a national non-profit that co-designs and tests education-to-workforce models, worked with a group of some of the country's largest community colleges to launch micro-pathways, a new design for stackable micro-credentials. More than 100 employer-validated micro-pathways have been developed since 2021.<sup>43</sup> EDL defines micro-pathways as two or more stackable credentials that can be completed within a year and lead to a job or higher wage once completed. The aim is to provide students greater flexibility to move in and out of training, increase education access for those with greater barriers to four-year universities, and provide more-efficient pathways toward better-paying jobs.

## Manufactured Housing Workforce

Workforce training programs are particularly useful when they incorporate industry-specific skill-building initiatives. For example, the Training Manufactured Construction (TRAMCON)

<sup>&</sup>lt;sup>43</sup> Education Design Lab, Micro-pathways. https://eddesignlab.org/micro-pathways/



<sup>&</sup>lt;sup>42</sup> Larissa Petrucci. "Constructing a Diverse Workforce."

program developed at the University of Florida focuses on improving workforce skills in the housing prefabrication industry. The TRAMCON program is composed of four levels of training where a participant can earn eight industry-recognized certificates. Researchers conducted a program evaluation of TRAMCON between 2016 and 2018 and found that the program is most useful in areas with manufacturing housing plants.<sup>44</sup>

## Recommendations

The recommendations below, based on the findings of this study, focus on meeting the housing production sector's workforce needs and increasing opportunities for Oregonians from all backgrounds and communities to gain employment in the sector. Improved access to education, training, and employment opportunities is essential to increasing the diversity in the sector's workforce and to meeting the Governor's ambitious housing production goal. Success will require large investments and long-term tracking of workforce and talent metrics.

While a well-trained workforce is necessary, it is not sufficient to guarantee housing units will be built. In Oregon, and elsewhere, the housing production sector faces several headwinds not directly related to workforce. These challenges are not the focus of this study but are essential context in which to consider any housing production workforce strategies—efforts to increase the size of the workforce must occur alongside other efforts that ensure a steady pipeline of residential construction work and within the context of conditions that are harder to address through state and local policy. <sup>45</sup> The engagement results presented in Chapter 3 make clear that workforce issues are not the only prominent factor contributing to housing production delays and challenges—some employers report having a ready workforce while lacking enough work to fill their time.

Additional headwinds, many of which interact in complex ways, include investor caution, high interest rates, tight lending standards, high material costs, market uncertainty, and limited access to insurance. Residential infrastructure—the public services and facilities necessary to support residential development—can also slow down development due to extended timelines and high costs. Each of these headwinds is the subject of extensive research and consideration already in Oregon, and the State is addressing a number of challenges through legislation, new or renewed investment, and an overhaul of how local cities and counties plan for housing in a manner that results in more affordable, fair, and equitable housing outcomes. <sup>46</sup> Efforts to address these challenges must continue, simultaneous with workforce development strategies, if the housing production goal is to be met.

<sup>&</sup>lt;sup>46</sup> Oregon Housing Needs Analysis Recommendations, https://www.oregon.gov/lcd/Housing/Pages/OHNA.aspx



<sup>&</sup>lt;sup>44</sup> Ahmadzade Razkenari, Mohamad, Andriel Evandro Fenner, Hamed Hakim, and Charles J. Kibert. 2018. "Training for Manufactured Construction (TRAMCON)." Modular and Offsite Construction (MOC) Summit Proceedings. https://doi.org/10.29173/mocs42

<sup>&</sup>lt;sup>45</sup> See, for example, IPRE (2022). *Barriers to Housing Production in Oregon: Summary Report*. Prepared for the Oregon Department of Land Conservation and Development. https://bpb-us-e1.wpmucdn.com/blogs.uoregon.edu/dist/3/17202/files/2022/11/UO-IPRE-Barriers-to-Housing-Production-Summary-Report\_Oct-2022.pdf

Finally, two federal policy areas with direct effects on residential construction are at particular points of uncertainty at the time of writing: tariffs and immigration.<sup>47</sup> Oregon and the U.S. could face substantial increases in material costs and declines in available workforce if the current administration successfully implements proposed changes in these areas.

A well-functioning workforce system should enable individuals to enter the housing production sector early, gain essential skills, and receive income. This is possible through many pathway types, all of which should be presented as options for potential workers: career and technical education, pre-apprenticeship, apprenticeship, vocational, certificate, associate degree, and bachelor's degree programs. The following recommendations provide possible ways to increase workforce participation and, thereby, employment in the sector.

## Encourage collaboration among training programs and employers

The foundation of effective talent development is collaborative relationships between training/education providers and employers. Fuller and Raman (2022) describe "a growing gulf between those who teach and those who hire," particularly in the middle-skills environment, that "underserv[es] the needs of aspiring workers, employers, and ultimately, communities." They recommend the following framework to overcome this disequilibrium:

- 1. Partner with each other [community colleges and employers] to offer training and education that is aligned with industry needs.
- 2. Establish relationships with each other that result in the recruitment and hiring of students and graduates.
- 3. Make supply and demand decisions that are informed by the latest data and trends.

Various initiatives and partnerships throughout the state are examples of this work and could potentially be scaled. Two examples: a long-Central Oregon partnership brings employers and training programs together regularly, has pre-apprenticeship through apprenticeship pathways in place for multiple trades, and uses a mobile classroom. And Klamath Community College partners with high schools in Lake, Douglas, and Josephine counties to run a pre-apprenticeship program, partners with local employers on multiple

https://www.oregon.gov/gov/policies/Documents/HPAC%20Final%20Report%20February%202024.pdf



<sup>&</sup>lt;sup>47</sup> 14 percent of Oregon's construction labor force is foreign born. https://www.nahb.org/advocacy/industry-issues/labor-and-employment/immigration-reform-is-key-to-building-a-skilled-workforce/geographic-concentration-of-immigrants-in-construction

<sup>&</sup>lt;sup>48</sup> Joseph Fuller and Manjari Raman (Dec 2022). *The Partnership Imperative: Community Colleges, Employers, and America's Chronic Skills Gap*, https://www.hbs.edu/managing-the-future-of-work/Documents/research/The%20Partnership%20Imperative\_Executive%20Summary\_12.12.2022.pdf

<sup>&</sup>lt;sup>49</sup> Housing Production Advisory Council, State of Oregon Housing Production Advisory Council Recommendations Report.

apprenticeship programs, and helps student connect with employers as they move from pre-apprenticeship to apprenticeship programs.<sup>50</sup>

The State can encourage collaboration by promoting existing successful practices and examples and creating a coordinating structure (see Next Steps below) designed around regional collaboration. An increase in collaboration could result in local training that better meets local employers' needs and more-reliable provision of up-to-date and well-balanced training across skill types (e.g., technical, occupational, essential).

## Support early and ongoing development of a skilled, diverse workforce

Potential workers often do not know what opportunities employment in housing production provides to them. To meet the sector's present and future needs, public and private actors within it must think strategically about how to recruit, train, and retain a diverse range of workers in terms of age, language, race, ethnicity, gender, and other characteristics. And programs—vocational, apprenticeship, community college, and university—must be affordable to allow access to the broadest pool of potential workers as possible.

#### K12 education

Exposure to the sector in the K12 system is key for students to learn about industries and occupations that are open to them. Positive messaging about housing production work could help close awareness gaps and promote the sector. Efforts to strengthen project-based learning and essential workforce skills can begin in early grades and increase in later grades and the CTE programs discussed in the previous chapter. Mobile classrooms can extend the reach of CTE and other training programs.

#### **Apprenticeships**

Apprenticeship programs in Oregon play a critical role in developing the state's workforce, particularly for many of the trades central to the housing production sector. National best practices support the expansion of apprenticeship and pre-apprenticeship programs to fill local talent pathways and help disadvantaged populations overcome longstanding barriers to entry in well-paying careers. The State should consider developing apprenticeship programs for occupations that don't yet have one and could benefit from another pathway into the housing production sector.

To help address inspection bottlenecks and the ongoing decline in permitting across the state, Oregon should implement the apprenticeship-style program the Oregon Building Officials Association is developing, ensuring flexibility that addresses local jurisdictions' range of needs (e.g., not all jurisdictions need building code staff to be certified in every

<sup>&</sup>lt;sup>50</sup> KCC Apprenticeship Partners, https://www.klamathcc.edu/en-US/academics/academic-programs/transport-industry-engineering-agriculture/apprenticeship-related-training/apprenticeship-partners.html



area) and recognizes that not all jurisdictions have the capacity to participate in an apprenticeship program.

#### Other postsecondary credentials

Given the evolution of pathways to management and local government positions (see Chapter 3), Oregon should continue to promote the benefits of existing four-year degree programs in the state and consider the creation of new programs, perhaps for building code professionals, which would open a pathway into those occupations for students who want to complete a four-year degree.

While not specifically addressed in this study, micro-credentials and stackable credentials have promising potential as newer pathway types that are well-suited to help address barriers to economic mobility experienced by "learner-earners." Micro-credentials are often-accelerated certification programs that require a year or less and provide skill-based training for specific jobs or fields. Some programs feature stackable credentials, in which each credential holds a stand-alone value and can lead to a higher-level credential.

Other strategies to consider include expanding wraparound services to support students from diverse backgrounds working to complete training and education programs, creating pathways for seasoned professionals to participate in training future workforce, and investing in a well-designed marketing campaign to attract potential trainees and workers to the sector. <sup>52</sup>

## Open more doors to housing production work

Even absent an ambitious housing production goal, the housing production sector would benefit from efforts to increase the accessibility of employment in the sector. The details matter, and the State can play a key role in opening doors to more individuals in a way that safely and effectively supports this workforce, including through data collection and analysis that monitor progress toward the production goal and program effectiveness.

Licensing: Oregon should consider specific changes to its licensing policies to widen the pool of eligible workers (e.g., provide a multi-skill construction license, to allow performance of multiple trades under one license). One study indicates "more-consistent employment" as a primary reason for multiskilling among craft professionals.53

https://www.salemreporter.com/2025/01/22/shortage-building-inspectors-oregons-housing-goals/
The National Center for Construction Education and Research (NCCER), *Multiskilling Among Craft Professionals*. https://www.nccer.org/media/2023/03/multiskilling-among-craft-professionals-2.pdf



<sup>&</sup>lt;sup>51</sup> Learner-earners are parent learners, students of color, first-generation students, low-income students, and communities long underinvested in. See Education Design Lab, "Micro-pathways: A Gateway to Community College Transformation." https://eddesignlab.org/wp-content/uploads/2022/01/CCGEF\_Insights\_Brief\_01.14.22.pdf

<sup>&</sup>lt;sup>52</sup> To help address, for example, underenrolled community college programs.

- Reciprocity: Oregon has relatively few reciprocity agreements in construction, stemming from contractor licensing requirements, protection of local jobs and consumers, and administrative/legal challenges associated with such agreements. If workforce supply in particular occupations remains a concern, the State should examine the details of its current agreements and analyze the costs and benefits of adding agreements.54
- Workforce Diversity: The analysis in this study confirms that disproportionate shares of BIPOC and women workers are in relatively lower-paid occupations such as construction laborers, carpenters, and office support workers compared with higher-paid occupations requiring more training, such as electricians, plumbers, and supervisors. Ensuring equitable access for women and people of color to opportunities in housing production requires tracking wage and occupation differentials, equity and affordability within training pathways, and job quality (including job-site culture). Ensuring equity in apprenticeship pathways in particular can help drive diversity of the housing production sector.

## Continue efforts to link CTE, apprenticeship, and employment data

Understanding outcomes for CTE, vocational, and apprenticeship program participants is key to improving and scaling programs. Oregon should commit to a data-oriented framework for assessing alignment of training and education offerings with housing production workforce needs. This practice can improve allocation of resources, improve transparency, and lead to programs that better support program participants and industry needs. The approach should compile detailed analysis of labor market information, occupational trends, and potentials gaps in supply relative to demand.

Oregon agencies and researchers regularly work with data from ODE, BOLI, HECC, and OED to create point-in-time looks at training and education pathways and outcomes. Individual studies and recommendations can lead to incremental changes in data collection and data sharing processes, whereas a concerted effort in this area could lead to system-level improvements and analysis that better and more-easily answers the State's questions about program, investment, and system outcomes.

We recommend furthering the analysis included in this study to quantify training/credential gaps for individual occupations, quantify the contributions of specific programs, and analyze employment outcomes (in housing production and in other industries) for core housing production-related program completers.

## Modify the apprentice-to-journey-level-worker ratio

One of the most widely discussed—and contested—issues in this study's interviews and focus groups was the current statewide apprentice-to-journey-level-worker ratio of 1:1.

<sup>&</sup>lt;sup>54</sup> NCCER tracks each state's reciprocity agreements. https://www.nccer.org/programs-crafts/reciprocity-map/



Union representatives felt strongly that this ratio is critical to upholding worker safety and maintaining adequate pay and benefits for workers. Non-union representatives felt stymied by this strict ratio, arguing that high standards of safety, pay, and benefits can be met outside of these ratios and that these ratios are hard to abide by and are detrimental to their ability to grow their workforce. Our resulting recommendation, which is generally aligned with that of the Housing Production Advisory Council, is intended to offer some relief to employers for whom the ratios pose a burden to growth while also maintaining the important role that one-to-one or small-group mentorship provides in construction settings.<sup>55</sup>

Rural employers were most concerned about the ratio and described struggles to find enough journey-level workers to train new apprentices. The trade union representatives described a waiting list of to-be apprentices wanting program placement. Increasing the ratio to two apprentices per journey-level worker would give more apprentices an opportunity for training. We recommend increasing the allowable ratio to two apprentices per journey-level worker under conditions to be determined along the following dimensions:

- Geography: The change could be limited to rural counties only, where effects might be most pronounced.<sup>56</sup>
- <u>Trade/Occupation</u>: The change could be limited to selected trades or occupations (e.g., Limited Residential Plumber and Limited Residential Electrician) to target specific needs connected to housing production.
- <u>Time</u>: The change could be time limited. A change could be piloted for two biennia to ease the current stress in the system. The State should continue to analyze enrollments, terminations, completions, and other metrics that measure the success of apprenticeship programs and collect feedback on the change from employers and apprentices.

## **Next Steps**

Public-private partnerships are key to advancing the recommendations described above. We recommend the creation of a working group or coordinating body to continue researching and addressing housing production workforce questions and needs in Oregon, followed by a permanent coordinating body or intermediary organization to support sector organization and growth and strengthen the housing production talent pool. The organization could initially be a loose structure around existing programs, expanding and formalizing over time, with governance and accountability as crucial considerations. Much of the coordinating work should take place at the regional level, within public/private partnerships, with periodic statewide gatherings to discuss initiatives and assessment.

https://www.oregon.gov/gov/policies/Documents/HPAC%20Final%20Report%20February%202024.pdf <sup>56</sup> One engagement participant recommended a population threshold of less than 35,000 residents or the USDA definition of rural.



<sup>&</sup>lt;sup>55</sup> HPAC, State of Oregon Housing Production Advisory Council Recommendations Report.

A working group or coordinating body with three teams—Workforce Entry, Ongoing Skill Development, and Innovation/Productivity—each with representatives from three groups—Industry, Training/Education, and Government—would provide space for holistic and successful initiatives based on the recommendations above. The three teams would focus on different aspects of the workforce ecosystem: pathways into jobs in the sector (Workforce Entry); opportunities to progress within the sector and train others (Ongoing Skill Development); and workforce needs for new, innovative, or productivity-focused activities, such as modular and manufactured housing (Innovation/Productivity).

|                    | Workforce<br>Entry | Ongoing Skill<br>Development | Innovation/<br>Productivity |
|--------------------|--------------------|------------------------------|-----------------------------|
| Industry           |                    |                              |                             |
| Training/Education | Team 1             | Team 2                       | Team 3                      |
| Government         |                    |                              |                             |

Business and industry, including business organizations that represent and support minority-owned construction firms, must play a major role in this structure, to ensure employer needs and perspectives are central to the work. Each of the three groups could potentially contribute to the working group or coordinating body in many ways, including, but not limited to, the following:

#### **Industry**

- Actively participate in the location, design, and implementation of educational and training programs to best address emergent workforce needs
- Offer real-world experiences, internships, and apprenticeships to bridge the gap between education/training and industry needs
- Serve as a conduit for communicating new or innovative approaches to housing production emerging from within the industry

#### **Training/Education**

- Develop and deliver relevant and effective training and curricula that align with the needs of housing production employers and the sector's emerging workforce
- Foster research and innovation that can contribute to housing production advancements and productivity
- Establish partnerships and coordinate with employers to facilitate practical learning experiences for individuals with limited exposure or who are new to the industry, such as high school students

#### Government

Collect data and conduct analysis that informs program development and improvement



- Provide supportive policies, regulations, incentives, and funding for workforce development and training programs
- Ensure equal access to opportunities for all individuals, regardless of background

This organizational structure will allow for deep discussion of the needs in each of the three areas: workforce entry, ongoing skill development, and innovation/productivity. The group or body could use this study's findings and recommendations as a starting place for their discussions and work.

A collaborative approach will be instrumental in tracking metrics and other approaches to measure the success of ongoing initiatives. Regular assessments and data collection can ensure the continuous improvement and adaptability of programs, fostering innovation, workforce diversity, and sustained growth in the housing production sector.



# Appendix A: Occupation Selection and Supplementary Exhibits

The selection of occupations most relevant to the housing production sector was guided by data from the Oregon Employment Department's industry-occupation matrix for the broad construction industry (NAICS 23), construction of buildings (NAICS 236), residential building construction (NAICS 2361), and specialty trade contractors (NAICS 238). National data from the Bureau of Labor Statistics' industry-occupation matrix provided additional context and comparisons. Input from committee members and industry stakeholders helped to refine the list of occupations. This approach ensured the inclusion of occupations considered essential to the broader housing production ecosystem, even if their employment numbers are less prominent in the state-level data.

Exhibit A1. Selected Occupations' Share of Employment, by Industry, Oregon, 2022

| OCCUPATION   | CONSTRUCTION | CONSTRUCTION<br>OF BUILDINGS | RESIDENTIAL CONSTRUCTION | SPECIALTY<br>TRADE<br>CONTRACTORS |
|--|--------------|------------------------------|--------------------------|-----------------------------------|
| Carpenters   | 11.4%        | 27.1%                        | 30.9%                    | 5.4%                              |
| Construction laborers                                    | 9.3%         | 14.1%                        | 14.9%                    | 6.3%                              |
| Electricians   | 7.6%         | 0.3%                         | Not Reported             | 12.1%                             |
| First-line supervisors of construction workers           | 5.2%         | 6.1%                         | 5.3%                     | 4.6%                              |
| Plumbers, pipefitters, and<br>steamfitters               | 4.2%         | 0.2%                         | Not Reported             | 6.7%                              |
| Painters, construction and maintenance                   | 4.0%         | Not Reported                 | 1.7%                     | 5.6%                              |
| Office clerks, general                                   | 3.7%         | 4.3%                         | Not Reported             | Not Reported                      |
| Construction managers                                    | 3.4%         | 7.4%                         | 6.5%                     | 1.6%                              |
| Operating engineers and construction equipment operators | 3.0%         | 1.6%                         | Not Reported             | 2.3%                              |
| Project management specialists                           | 2.9%         | 5.3%                         | 3.2%                     | 1.7%                              |
| Cement masons and concrete finishers                     | 2.7%         | 2.7%                         | 2.9%                     | 2.8%                              |
| Roofers  | 2.7%         | 0.2%                         | Not Reported             | 4.2%                              |
| Heating, air conditioning, refrigeration installers      | 2.6%         | Not Reported                 | Not Reported             | Not Reported                      |
| General managers   | 2.5%         | Not Reported                 | 2.0%                     | 2.6%                              |
| Sheet metal workers                                      | 2.4%         | Not Reported                 | Not Reported             | Not Reported                      |

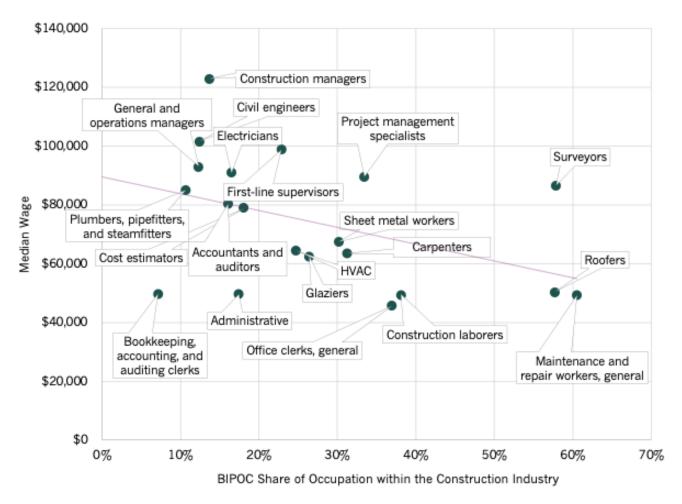


| Bookkeeping, accounting, and auditing clerks         | 2.2%    | 3.2%         | 3.8%         | 1.8%         |
|--|---------|--------------|--------------|--------------|
| Heavy and tractor-trailer<br>truck drivers           | 2.0%    | 1.1%         | Not Reported | 1.6%         |
| Cost estimators                                      | 1.8%    | 1.6%         | 1.3%         | 1.8%         |
| Drywall and ceiling tile installers                  | 1.5%    | 1.5%         | Not Reported | 1.7%         |
| Admin. assistants                                    | 1.5%    | Not Reported | Not Reported | 1.6%         |
| Glaziers   | 0.9%    | Not Reported | Not Reported | Not Reported |
| Tile and stone setters                               | 0.7%    | Not Reported | Not Reported | Not Reported |
| Civil engineers                                      | 0.6%    | 1.4%         | Not Reported | 0.2%         |
| Accountants and auditors                             | 0.6%    | 0.8%         | Not Reported | 0.4%         |
| Maintenance and repair workers                       | 0.6%    | 1.5%         | Not Reported | 0.1%         |
| Insulation workers                                   | 0.4%    | Not Reported | Not Reported | 0.6%         |
| Construction and building inspectors                 | 0.05%   | Not Reported | Not Reported | 0.03%        |
| Surveyors  | 0.01%   | Not Reported | Not Reported | Not Reported |
| Total Industry Employment<br>(2022)                  | 114,601 | 33,466       | 21,195       | 70,690       |
| Share of Industry Employment in Selected Occupations | 80.5%   | 80.3%        | 73.1%        | 65.9%        |

Data source: Oregon Employment Department, 2022



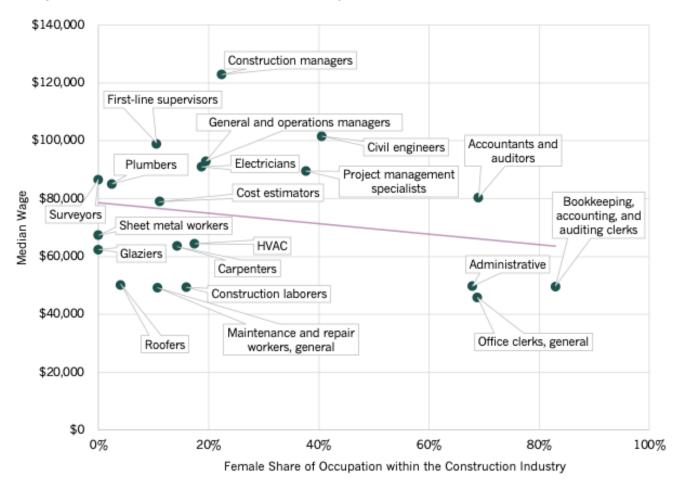
Exhibit A2. Median Wage vs. BIPOC Share of Workers in Housing Construction Occupations, within the Construction Industry



Data sources: U.S. Census Bureau (2022). American Community Survey, 5-year Estimates. Oregon Employment Department, 2024. Note: Share of occupation is calculated within the construction industry (NAICS 23).



Exhibit A3. Median Wage vs. Female Share of Workers in Housing Construction Occupations, within the Construction Industry



Data sources: U.S. Census Bureau (2022). American Community Survey, 5-year Estimates. Oregon Employment Department, 2024. Note: Share of occupation is calculated within the construction industry (NAICS 23).

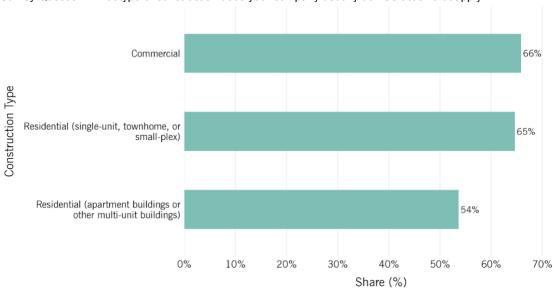


# Appendix B: Survey Instrument and Supplementary Exhibits

Survey result charts supplementary to those included in the main narrative

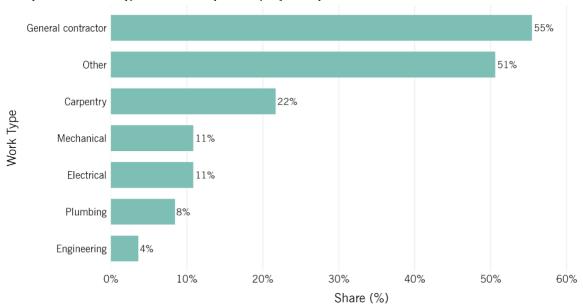
Exhibit B1. Type of Construction Work

Survey Question: What type of construction does your company usually do? Select all that apply.



# Exhibit B2. Type of Work

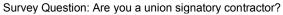
Survey Question: What type of work does your company usually do?

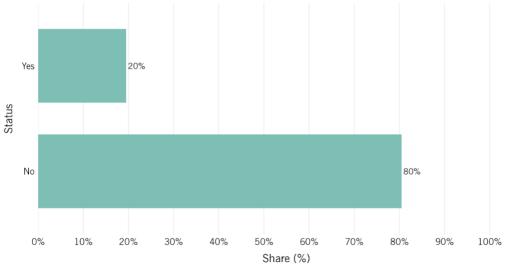


Note: "Other" responses included painting, demolition, excavation, insulation, glass, asphalt, and concrete.



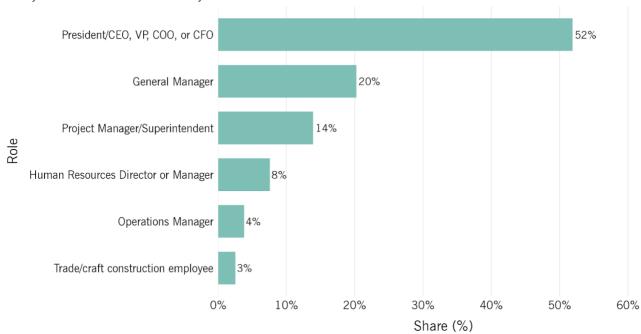
# Exhibit B3. Union Status





# Exhibit B4. Respondent Role

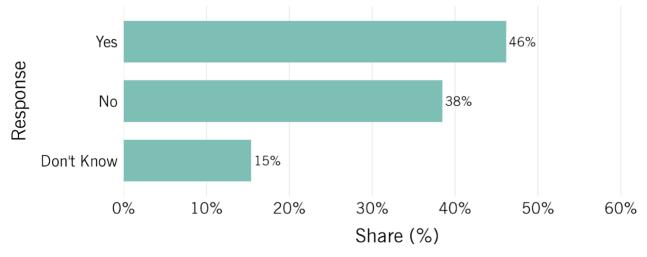
Survey Question: What best describes your role? Select one.





# Exhibit B5. Difficulty Diversifying by Other Characteristics

Survey Question: Are you having difficulty filling positions with diverse applicants by the other characteristic(s) you described?



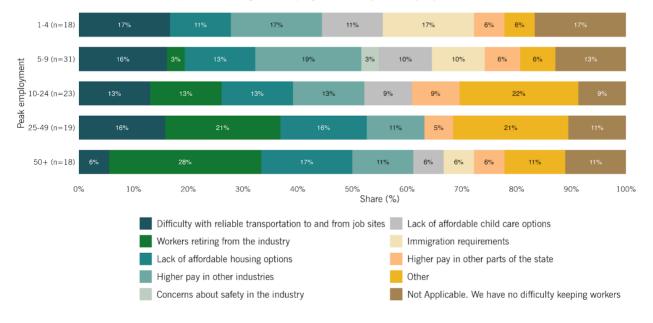
# Company Size Cross-tabulations

# Exhibit B6. Challenges by Company Size

Survey Question: What are the top three challenges to keeping workers in your company? Select up to three.

Q7: How many people does your company employ at its busiest time?

Q16:What are the top three challenges to keeping workers in your company? Select up to three



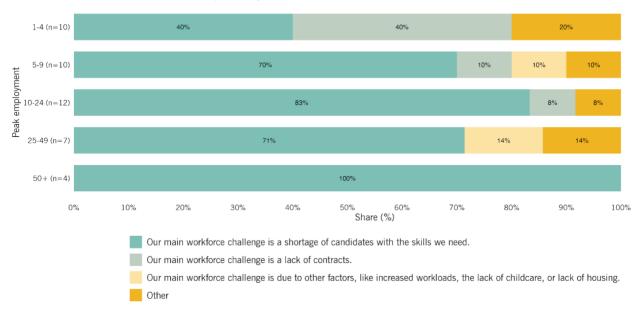


### Exhibit B7. Workforce challenges by company size

#### Survey Question: Which statement best represents your view?

Q7: How many people does your company employ at its busiest time?

Q11:Which statement best represents your view?



## Exhibit B8. Anticipated State Housing Goal Impacts by Company Size

### Survey Question: What impact do you believe the State's housing goal will have on your company's operations?

Q7: How many people does your company employ at its busiest time?

Q27: What impact do you believe the State's housing goal will have on your company's operations?







# **Oregon Housing Production Workforce Assessment Survey**

Your participation in this survey will provide important business and industry perspective on Oregon's housing construction workforce and opportunities for improvement. This survey is part of a Housing Production Workforce Assessment being conducted on behalf of Oregon's Workforce and Talent Development Board and Higher Education Coordinating Commission.

In 2023, Governor Kotek set a goal to build **36,000 homes per year for the next ten years**—an 80% increase over current construction trends—with half of them being affordable for households earning less than 80% of the area's median income. <u>Click here</u> for the full text of the order.

Oregon estimates that it needs 12,000 new construction industry workers (net) over the next ten years to meet this goal. About two thirds of these need to work in the trades, the other third in other occupations (installation/maintenance, office and administrative staff, management, cost estimators, permitting, etc.). Workforce needs will differ across the state, based on differences in regional housing needs and current workforce conditions.

This survey is specific to the housing construction industry; interviews and focus groups to follow will look further at topics covered in this survey as well as local government planning and permitting.

Survey questions are asked as they relate to your company; by company we mean your firm or organization. **All responses will be confidential, and all questions are optional.** We expect the survey to take \_\_\_\_\_ minutes.

Thank you in advance for your contribution to the Oregon Housing Production Workforce Assessment.

- - -

**Draft Survey Questions** 

- 1. What type of construction does your company usually do? Select all that apply.
  - Residential (single-unit, townhome, or small-plex)
  - Residential (apartment buildings)
  - Commercial
- 2. What type of work does your company usually do? Select all that apply.
  - General contractor
  - Carpentry
  - Electrical



- Mechanical
- Plumbing
- Engineering
- Other (please specify):

# 3. Are you a union signatory contractor?

- Yes
- No

### If yes,

## 4. What unions or crafts are you signed with? [Open ended response]

# 5. In which area(s) does your company work? Select all that apply.

- Baker, Grant, Harney, Malheur, Morrow, Umatilla, Union, and Wallowa counties
- Wasco, Hood River, Sherman, Gilliam, Jefferson, Wheeler, Crook, Deschutes, Klamath, and Lake counties
- Benton, Clatsop, Columbia, Lincoln, and Tillamook counties
- Washington and Multnomah counties
- Clackamas County
- Yamhill, Polk, Marion, and Linn counties
- Lane County
- Coos, Douglas and Curry counties
- Josephine and Jackson counties

### 6. What best describes your role? Select one.

- General Manager
- Project Manager/Superintendent
- Human Resources Director or Manager
- Operations Manager
- Training Director
- President/CEO, VP, COO, or CFO
- Trade/craft construction employee



| 7.    | . How many people does your company employ at its busiest time? Select one.  |   |
|-------|--|---|
|       | I am self-employed   |   |
|       | • 1-4  |   |
|       | • 5-9  |   |
|       | • 10-24  |   |
|       | • 25-49  |   |
|       | • 50-99  |   |
|       | • 100+   |   |
| 8.    | . Would you like to be interviewed or join a focus group about the housing production workforce in Oregon? If so, please provide your contact information: | n |
|       | • Name:  |   |
|       | • Company:   |   |
|       | Email address:   |   |
|       |  |   |
| [Page | e break]   |   |
| 9.    | . Does your company regularly experience any of the following? Select all that apply.  |   |

- Long wait times or shortages of electrical equipment (switchgear, transformers, etc.)
- Long wait times or shortages of mechanical equipment (HVAC, etc.)
- Long wait times or shortages of other items (please specify):
- Transportation or delivery delays
- Governmental delays (lack of approvals, inspectors, etc.)
- Owner's decision to halt or redesign the project
- High interest rates causing developers to hesitate
- 10. Please indicate your agreement with this statement: Attracting, hiring, and/or keeping employees has been a significant challenge for my company in the past 12 months.
  - Strongly disagree



- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

# If Agree or Strongly Agree:

## 11. Which statement best represents your view?

- Our main workforce challenge is a shortage of candidates with the skills we need.
- Our main workforce challenge is due to other factors, like increased workloads, the lack of childcare, or lack of housing.
- Our main workforce challenge is a lack of contracts.
- Other (please specify):

# If Neither, Disagree, or Strongly Disagree:

- 12. What workforce challenges—if any—has your company faced over the past year? (Open Ended Response)
- 13. If your company has struggled to fill <u>hourly</u> positions over the past year, what jobs have been the hardest to fill? [Open ended with five rows]
- 14. If your company has struggled to fill <u>salaried</u> positions over the past year, what jobs have been the hardest to fill? [Open ended with five rows]
- 15. Thinking about open positions at your company over the past 12 months, please indicate your agreement with the following statements. [Strongly disagree, Disagree, Neutral, Agree, Strongly agree]
  - Applicants have the necessary basic skills (knowledge of safety protocols, math, reading)
  - Applicants have essential skills (listening, communication, professionalism)
  - Applicants have desired advanced skills (trade-specific skills, like roofing)
  - Applicants have desired occupational skills (ability to operate tools and machinery
  - Applicants have the necessary credentials or licenses (driver's license, permits, degrees, certificates)



- Applicants have the required work experience
- Applicants can pass a background check
- Applicants can pass a drug screening

# 16. What are the top three challenges to keeping workers in your company? Select up to three.

- Not Applicable. We have no difficulty keeping workers
- Immigration requirements
- Concerns about safety in the industry
- Higher pay in other industries
- Higher pay in other parts of the state
- Workers retiring from the industry
- Lack of affordable housing options
- Lack of affordable child care options
- Difficulty with reliable transportation to and from job sites
- Other (please specify):

# 17. Which of the following reliably provide your company with skilled workers? Select all that apply.

- Apprenticeship programs
- Career centers at community colleges or universities
- Community-based organizations
- Employee referrals
- High school career and technical education (CTE) programs
- Postsecondary CTE programs
- Staffing agencies
- Union hiring hall
- WorkSource Oregon
- 2-year educational programs
- 4-year educational programs
- Other (please specify):



If any response to Q21 is checked,

18. In the previous question, you selected these sources of skilled workers: [list]

Please list up to three specific programs or organizations that provide your company with skilled workers. [Open ended with three rows]

| 19. An increasing number of companies are interested in hiring and keeping employees from diverse backgrounds. Is your company actively trying to diversify its workforce (by gender, race/ethnicity, or other characteristic)? |
|---|
| () Yes () No () Don't Know  |
| If yes,   |
| 20. How are you trying to diversify your workforce? Select all that apply.  |
| [] By gender [] By race/ethnicity [] Other (please specify):  |
| If by gender,   |
| 21. Are you having difficulty filling positions with diverse applicants by gender?  ( ) Yes ( ) No ( ) Don't Know   |
| If by race,   |
| 22. Are you having difficulty filling positions with diverse applicants by race/ethnicity?  |
| () Yes () No () Don't Know  |
| If other,   |
| 23. Are you having difficulty filling positions with diverse applicants by the other characteristic(s) you described?   |
| () Yes () No () Don't Know  |
| 24. What strategies could industry groups, workforce development providers, or schools use to help you meet your diversity goals? (Open ended)  |
| [Page break]  |

25. In your opinion, what is the most effective way for companies or the government to address labor shortages? [Open ended response]

# [Page break]

In 2023, Governor Kotek set a goal to build **36,000 homes per year for the next ten years**, with half of them being affordable for households earning less than 80% of the area's median income. <u>Click here</u> for the full text of the order.

26. What do you think will be the most important workforce challenges with the expected increase in housing production in response to the State's goal? [Open Ended Response]

# 27. What impact do you believe the State's housing goal will have on your company's operations?

- Significant positive impact: We expect more demand for our services, leading to growth and increased revenue.
- Moderate positive impact: We expect more work but can manage with some adjustments in workforce or materials supply.
- Neutral impact: The housing goal will not substantially change our operations or bottom line.
- Moderate negative impact: Meeting this demand could stretch our capacity or require major changes (workforce, materials, regulations).
- Significant negative impact: The goal may overwhelm our ability to scale, causing operational issues, workforce burnout, or financial strain.
- 28. How likely do you think it is that the State's housing goal will be met, given current industry conditions (workforce availability, supply chain issues, permitting, access to funding, regulations)?
  - Very likely
  - Somewhat likely
  - Neutral
  - Somewhat unlikely
  - Very unlikely
- 29. Please share any additional thoughts on the State's annual housing production target. [Open Ended Response]



# Appendix C: Interview and Focus Group Questions

ECOnorthwest conducted six semi-structured interviews, each lasting 45 minutes, and three semi-structured focus groups, each lasting one hour. Outreach was conducted to engage the following groups:

- Community college programs
- Joint Apprenticeship and Training Committees (JATCs)
- Apprenticeship and pre-apprenticeship programs
- Union representatives
- Trade organizations
- K12 Career and Technical Education (CTE) partners
- Vocational rehabilitation providers
- Construction employers
- Construction staffing agencies
- Nonprofit builders
- Manufactured and modular home builders
- Permitting offices (e.g., building code inspectors)

The interviews were guided by a core set of questions while focus-group-specific questions were tailored to the unique perspectives of each group. For example, we developed questions specific to building inspectors to address their experiences with permitting processes. Additional questions were incorporated as needed, based on insights that emerged during the discussions.

# Interview Questions

- Has attracting, hiring, and/or keeping employees has been a significant challenge for your company recently?
  - Follow up: What positions are hardest to fill? What is the biggest challenge? What are you doing about it? How do you see this changing over time? How could the State help this problem?
- Why do you think students in school/workers decide to go into the field of construction?
- Generally, what are some challenges that you have seen new construction workers face in being successful in working in construction?
- What are some instances you know of where schools/construction industry are promoting educational initiatives within the construction industry? How successful have they been?
- Why do students/workers specifically not want to enter or decide to leave the field?



- What would the perfect construction education program look like to you? Why?
- Is your firm a union signatory contractor? Why or why not?
- How important is diversifying your workforce to you? What unique challenges come with efforts to diversify?
  - Follow up: What strategies could industry groups, workforce development providers, or schools use to help you meet your diversity goals?
- How likely do you think it is that the State's housing goal will be met, given current industry conditions (workforce availability, supply chain issues, permitting, access to funding, regulations.
  - Follow up: If not likely, what would need to change to make this goal possible?

# Focus Group Questions

# Community Colleges, Apprenticeships, and Pre-apprenticeships

- How do you decide what programs are best to start next?
- What would help make your programs more successful, to offer a wider range of programming or recruit more students?
- Are employers getting what they need? What would they like to see?

# **Building Inspectors**

- In 2014 the International Code Council and the National Institute of Building Science (NIBS) partnered on a study to understand what the future of the code profession looked like. During this study it was discovered that about 85 percent of the current code professional workforce was over the age of 45 and many were on the verge of retirement.
  - Is this your experience in Oregon as well?
  - If not, what has drawn younger people into this profession?
  - If so, what is keeping younger people from joining this profession?

# **Union Representatives**

- Do we have a labor shortage or not in Oregon? Is there a lack of folks coming into the trades or is that not a major issue?
- We have also been talking to folks at community colleges and non-union programs. What is your perception of the need for those?
- Code inspectors have told us they are understaffed how does this affect your work?



# **Appendix D: Program Inventory Supplementary Exhibits**

Exhibit D1. Apprenticeship Completion Rates by Sex as of 9/20/24, Construction Industry, Oregon

| Completed  |        |      | Termi  | nated | Act    | ive  |
|------------|--------|------|--------|-------|--------|------|
| Start Year | Female | Male | Female | Male  | Female | Male |
| 2018       | 48%    | 58%  | 51%    | 41%   | 1%     | 1%   |
| 2019       | 35%    | 55%  | 55%    | 40%   | 9%     | 5%   |
| 2020       | 26%    | 35%  | 55%    | 43%   | 17%    | 21%  |
| 2021       | 10%    | 14%  | 42%    | 37%   | 47%    | 48%  |
| 2022       | 6%     | 6%   | 37%    | 33%   | 54%    | 60%  |
| 2023       | 1%     | 2%   | 35%    | 25%   | 63%    | 72%  |
| 2024       | 0%     | 0%   | 10%    | 10%   | 89%    | 89%  |

Data source: BOLI

Exhibit D2. Apprenticeship Status as of 9/20/24, by Race/Ethnicity, Construction Industry, Oregon

| Completed  |       |          |       |       |       |       |          | Terminated |       |       |       | Activ    | е     |       |       |
|------------|-------|----------|-------|-------|-------|-------|----------|------------|-------|-------|-------|----------|-------|-------|-------|
| Start Year | White | Hispanic | Black | Asian | Other | White | Hispanic | Black      | Asian | Other | White | Hispanic | Black | Asian | Other |
| 2018       | 61%   | 49%      | 28%   | 59%   | 61%   | 38%   | 49%      | 71%        | 40%   | 37%   | 1%    | 2%       | 1%    | 2%    | 2%    |
| 2019       | 56%   | 48%      | 29%   | 63%   | 42%   | 38%   | 47%      | 65%        | 33%   | 53%   | 6%    | 5%       | 6%    | 5%    | 5%    |
| 2020       | 36%   | 32%      | 25%   | 36%   | 28%   | 42%   | 50%      | 59%        | 36%   | 49%   | 21%   | 18%      | 16%   | 28%   | 23%   |
| 2021       | 14%   | 14%      | 12%   | 8%    | 16%   | 34%   | 47%      | 55%        | 34%   | 49%   | 51%   | 39%      | 32%   | 56%   | 31%   |
| 2022       | 6%    | 6%       | 7%    | 2%    | 6%    | 29%   | 41%      | 59%        | 38%   | 41%   | 64%   | 52%      | 35%   | 58%   | 51%   |
| 2023       | 2%    | 1%       | 1%    | 2%    | 4%    | 22%   | 33%      | 50%        | 29%   | 28%   | 75%   | 64%      | 48%   | 68%   | 65%   |
| 2024       | 0%    | 0%       | 0%    | 0%    | 0%    | 7%    | 20%      | 26%        | 6%    | 13%   | 92%   | 78%      | 73%   | 94%   | 84%   |

Data source: BOLI

Exhibit D3. Pre-apprenticeship Enrollment and Share of Statewide Total, Oregon, 2024

| Workforce Area       | Count | <b>Share of Total</b> |
|----------------------|-------|-----------------------|
| Portland-Metro Area  | 418   | 39%                   |
| Mid-Valley Area      | 149   | 14%                   |
| East Cascades Area   | 102   | 9%                    |
| Washington State     | 96    | 9%                    |
| Southwestern Oregon  | 88    | 8%                    |
| Rogue Valley Area    | 79    | 7%                    |
| Clackamas Area       | 55    | 5%                    |
| Lane Area            | 49    | 5%                    |
| Eastern Oregon Area  | 25    | 2%                    |
| Northwest Oregon Are | 13    | 1%                    |
| California           | 5     | 0%                    |
| Total                | 1,079 | 100%                  |

Data source: BOLI

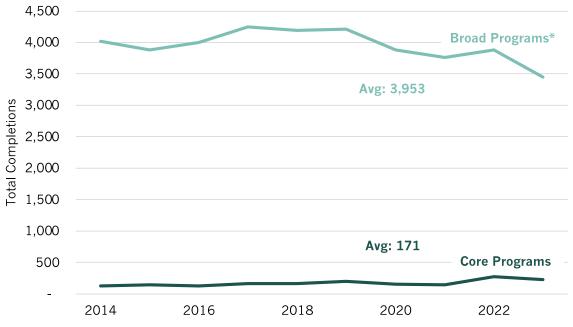


Exhibit D4. Designation of Core and Broad CIP Codes

| CIP-Occupation  | Group |
|---|-------|
| 15.0501-HVAC and Refrigeration Engineering Technology/Tech. | Core  |
| 46.0000-Construction Trades, General                        | Core  |
| 46.0201-Carpentry/Carpenter                                 | Core  |
| 46.0302-Electrician   | Core  |
| 46.0403-Building/Home/Construction Inspection/Inspector     | Core  |
| 46.0406-Glazier   | Core  |
| 46.0412-Building/Construction Site Management/Manager       | Core  |
| 46.0415-Building Construction Technology/Technician         | Core  |
| 46.0502-Pipefitting/Pipefitter and Sprinkler Fitter         | Core  |
| 47.0201-HVAC and Refrigeration Maintenance Technology/Tech. | Core  |
| 14.0801-Civil Engineering, General                          | Broad |
| 14.0805-Water Resources Engineering                         | Broad |
| 14.1801-Materials Engineering                               | Broad |
| 14.1901-Mechanical Engineering                              | Broad |
| 14.3601-Manufacturing Engineering                           | Broad |
| 52.0101-Business/Commerce, General                          | Broad |
| 52.0201-Business Administration and Management, General     | Broad |
| 52.0205-Operations Management and Supervision               | Broad |

Data source: IPEDS

Exhibit D5. Completions in Core and Broad Housing Production Programs Over Time, Oregon



\* Broad programs are inclusive of core programs

Data source: IPEDS

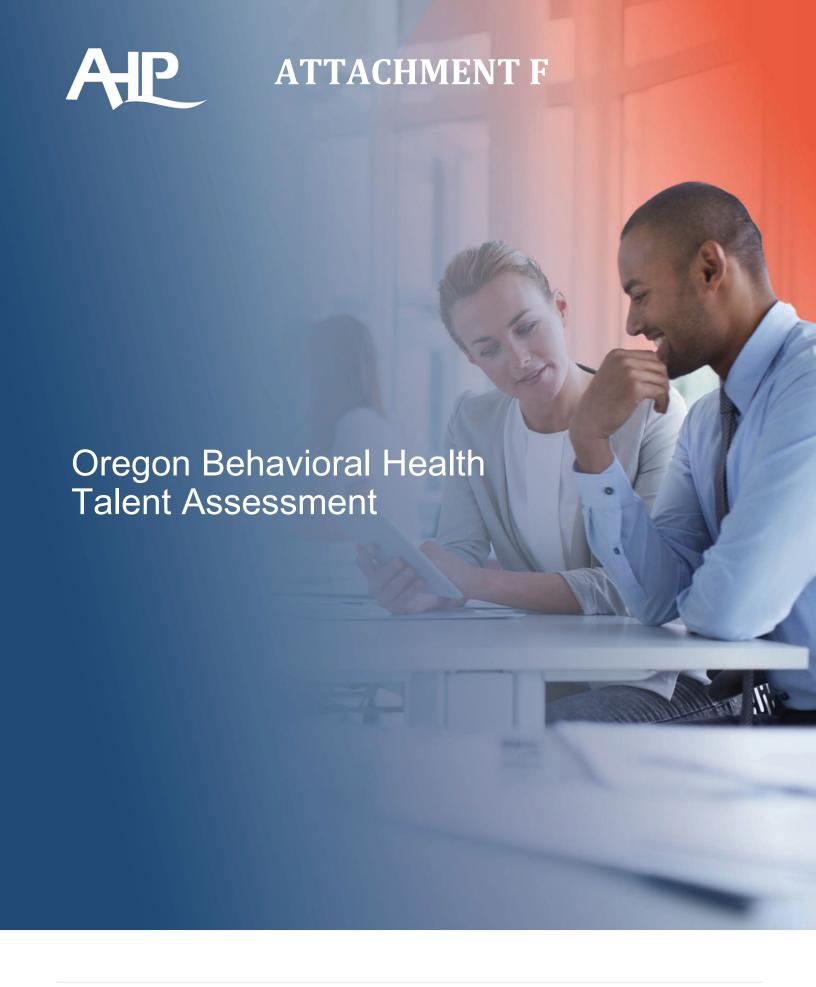


Exhibit D6. Completions in Broad Housing Production Programs, by Institution, Oregon

|  |                     |             |              | - 2023)    |            |          |             |
|--|---------------------|-------------|--------------|------------|------------|----------|-------------|
|  |                     | Number of   | AII          |            |            | Advanced | All         |
| Institution                                | Region              | Programs    | Certificates | Associates | Bachelor's | Degrees  | Completions |
| Community Colleges                         |                     |             |              |            |            |          |             |
| Rogue Community College                    | Rogue Valley        | 3           | 63           | 38         | -          | -        | 101         |
| Clackamas Community College                | Clackamas           | 3           | 21           | 37         | -          | -        | 58          |
| Linn-Benton Community College              | Mid-Valley          | 1           | -            | 41         | -          | -        | 41          |
| Central Oregon Community College           | East Cascades       | 1           | -            | 57         | -          | -        | 57          |
| Portland Community College                 | Portland-Metro      | 1           | -            | 54         | -          | -        | 54          |
| Lane Community College                     | Lane                | 2           | -            | 45         | -          | -        | 45          |
| Chemeketa Community College                | Mid-Valley          | 1           | 3            | 14         | -          | -        | 17          |
| Klamath Community College                  | East Cascades       | 1           | -            | 17         | -          | -        | 17          |
| Mt Hood Community College                  | Portland-Metro      | 2           | -            | 79         | -          | -        | 79          |
| Blue Mountain Community College            | Eastern Oregon      | 2           | 3            | 12         | -          | -        | 15          |
| Southwestern Oregon Community College      | Southwestern Oregon | 1           | -            | 8          | -          | -        | 8           |
| Clatsop Community College                  | Northwest Oregon    | 1           | 2            | 4          | -          | -        | 6           |
| Umpqua Community College                   | Southwestern Oregon | 2           | -            | 3          | -          | -        | 3           |
| Oregon Coast Community College             | Northwest Oregon    | 2           | -            | 2          | -          | -        | 2           |
| Tillamook Bay Community College            | Northwest Oregon    | 1           | -            | 4          | -          | -        | 4           |
| Columbia Gorge Community College           | East Cascades       | 1           | -            | 1          | -          | -        | 1           |
| Treasure Valley Community College          | Eastern Oregon      | 1           | -            | 0.2        | _          | _        | 0           |
| Community College Total                    |                     |             | 93           | 415        | -          | -        | 508         |
| Four-Year Institutions                     |                     |             |              |            |            |          |             |
| Oregon State University                    | Northwest Oregon    | 6           | 7            | _          | 845        | 221      | 1.072       |
| University of Oregon                       | Lane                | 2           | _            | -          | 521        | 174      | 695         |
| Portland State University                  | Portland-Metro      | 4           | 15           | _          | 330        | 125      | 469         |
| Southern Oregon University                 | Rogue Valley        | 2           | -            | _          | 117        | 73       | 190         |
| George Fox University                      | Mid-Valley          | 3           | _            | _          | 102        | 62       | 165         |
| University of Portland                     | Portland-Metro      | 3           | _            | _          | 80         | 41       | 122         |
| Willamette University                      | Mid-Valley          | 1           | _            | _          | _          | 100      | 100         |
| Oregon Institute of Technology             | East Cascades       | 3           | _            | _          | 95         | 5        | 100         |
| Western Oregon University                  | Mid-Valley          | 1           | -            | -          | 102        | _        | 102         |
| Pacific University                         | Portland-Metro      | 1           | -            | -          | 42         | 21       | 63          |
| Corban University                          | Mid-Valley          | 2           | 1            | -          | 44         | 28       | 73          |
| Eastern Oregon University                  | Eastern Oregon      | 2           | _            | _          | 3          | 30       | 34          |
| Bushnell University                        | Lane                | 2           | _            | _          | 22         | 11       | 32          |
| Warner Pacific University Professional and |                     |             |              |            |            |          |             |
| Graduate Studies                           | Portland-Metro      | 1           | _            | _          | 39         | 14       | 53          |
| Linfield University                        | Mid-Valley          | 1           | -            | -          | 18         |          | 18          |
| Warner Pacific University                  | Portland-Metro      | 1           | _            | 1          | 11         | -        | 12          |
| Multnomah University                       | Portland-Metro      | 1           | _            | _          | 7          |          | 7           |
| Four Year Institution Total                | 1 ordana wictio     | 1           | 23           | 1          | 2,377      | 905      | 3,306       |
| Overall Total                              | +                   | <del></del> | 115          | 416        | 2,377      | 905      | 3,813       |

Data source: IPEDS





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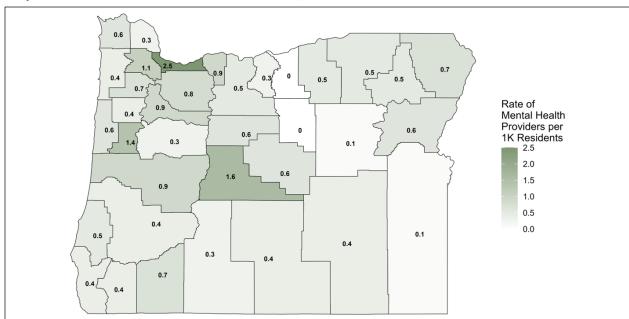


# **Executive Summary and Key Findings**

Working collaboratively with Oregon's Higher Education Coordinating Commission (HECC) and guided by discussions with and feedback from a multistakeholder steering committee representing a diverse coalition of behavioral health experts, leaders, state partners, and cross-sector stakeholders dedicated to advancing and supporting the behavioral health workforce, Advocates for Human Potential, Inc. (AHP) produced this report characterizing the state's behavioral health (BH) talent pipeline. This effort involved a robust literature review and summary of recent workforce studies and evaluations, key informant interviews (KIIs) and focus groups with stakeholders directly involved with the BH talent pipeline, and a tailored survey focused on understanding people's path into the BH profession.

The voices informing this report, from researchers to direct service providers, look to transform the idea of health equity reflected in a full range of mental health and substance use disorder (SUD) services informed by a client-centered approach from an agreed-upon principle into an intentional statewide practice. As this is a workforce issue defined by a matrix of challenges, the path to fostering a reinvigorated and sustainable talent pipeline will need to be multifaceted, flexible and responsive, and clear in its directives yet nuanced in its implementation; it will require a long-term commitment to change.

Oregon is in the midst of a staffing crisis in BH. The map below underscores the critical shortage of mental health providers in Oregon's rural and frontier counties, with 32 of 36 lacking even one provider per 1,000 residents.



Graphic 1: Rate of Mental Health Providers Per 1,000 Residents



### Factors contributing to this shortage include

- Deficiencies in the educational system (e.g., lack of career exposure, lack of BH programs in rural areas, low graduation rates in Oregon bachelor's programs among BH-related majors),
- Burnout resulting from high caseloads and the trauma and emotional exhaustion associated with working under difficult conditions (e.g., high-acuity patients, demand consistently exceeding capacity),
- Low pay and limited advancement opportunities, and
- Other systemic issues such as high administrative burdens, lack of resources, complicated career pathways, unmanageable expectations, and bureaucratic inefficiencies.

In terms of the talent pipeline, solutions are twofold: recruitment into the BH field and access to educational pathways that fully prepare participants to work in such a demanding field. Recruitment initiatives should span stigma reduction, early career exploration at the high school level, and expanded outreach to a broader audience (e.g., immigrants and refugees, returning citizens, older adults, those embarking on a second career). Educational access and support initiatives should include expanding BH educational opportunities in rural areas and for populations that are underserved and underrepresented, as well as progressive financial and career support (e.g., tuition reimbursement/loan forgiveness, childcare, transportation, paid internships/apprenticeships, mentorships, clearly articulated pathways for career advancement). The benefits from some initiatives, such as stigma reduction and early career exploration, can be seen in the short term. Other initiatives, such as expanding BH programming in rural areas, require long-term planning and financial commitment.

Changes need to be made in order to meet the demands of clients. We need to educate more diverse practitioners. The United States is changing. Oregon is changing. We need practitioners who are bi- or multilingual. We need practitioners that can match our populations.

Community college educator

In the course of our research and discussions, the historically bifurcated nature of Oregon's administrative dynamic, in which a centralized government must negotiate with autonomous regionalized authorities, emerges as an additional defining factor. In setting benchmarks for access and quality, whether in terms of education, workforce, and career development or quality of care and services, some uniformity and consistency are necessary. This is not about "one size fits all" but how best to offer a range of opportunities, access, and support to pursue a career in BH in equal measure to all who seek it.



# **AHP's Approach**

AHP began its work with HECC with a review and clarification of the assessment's primary audience(s), scope, and purpose. During this planning period, HECC coordinated access to existing state-specific BH data and reports and convened a steering committee composed of BH workforce stakeholders from across the state. This committee provided a collaborative and enthusiastic infusion of feedback and context that spoke to their investment in fostering BH workforce development. The committee provided individual and collective expertise to help articulate key priorities and outcomes and inform a shared vision for how the state will use the findings and recommendations.

With a collaborative foundation set, AHP's team of researchers, including two senior scientists and an economist, reviewed and developed a summary of existing BH workforce reports. This summary served as a baseline to inform how best to identify appropriate resources, focus, and further assessment in subsequent tasks. AHP looked to highlight points of alignment of existing research and recommendations with the findings from this baseline summary as well as to identify gaps in research and expanded recommendations in light of the findings.

Informed by this summary and guidance and input from HECC staff and the steering committee, the AHP team turned to its assessment with two aims: (1) to characterize Oregon's current workforce and demand analyses informed by demographics, geography, current demand, shortages, projected demand, high-value credentialing, pathways into BH, mapping career opportunities and ladders, and an inventory of postsecondary BH education and training programming and (2) to analyze supply trends informed by Integrated Postsecondary Education Data System (IPEDS) data and identify the academic pathways leading to employment in the BH sector.

In collaboration with HECC staff and employer representatives, AHP designed a survey to address key issues related to pipeline inequity, career advancement, and retention in the BH sector. The web-based survey aimed to understand and compare the career trajectories of underrepresented minority BH professionals with those of other groups. Additionally, AHP developed predictive analytics to present data that highlight and explore challenges faced along academic pathways to employment in the BH sector. AHP then identified opportunities to enhance success, such as loan forgiveness, effective onboarding, and supported career paths through educational and early professional experiences. Our hope is that this compilation of data can be used to inform next steps and any comprehensive action plan for Oregon.

The final task was to draft this report, summarizing the findings and analysis and proposing a set of recommendations for how the information gleaned can be used to inform strategic planning to expand the BH workforce in Oregon, especially focused on the goal of fostering an environment where people with BH needs will have access to a full range of innovative, effective, and culturally competent services. As a capstone to the data brief, AHP hosted a videoconference for Oregon and other identified stakeholders to discuss the arc of the project, the methodology, key findings, and recommendations. A PowerPoint offered the framework for this presentation and is available to the state for future use in presenting the findings to BH stakeholder groups.



# Supply and Demand in Oregon's Behavioral Health Talent Pipeline

#### Introduction

To provide baseline context for characterizing current challenges and interpreting survey results to inform recommendations, AHP combined a review of recent reports that focused on health care writ large, reports that help define critical shortages specific to the BH workforce, and interviews with key stakeholders to provide immediate, firsthand perspectives and narratives.

# **Summary of Existing Reports**

A review of nine reports put forward by HECC that examined Oregon's health care workforce landscape provided the content for this summary (see <a href="Appendix A">Appendix A</a>). The goal of this summary is to identify and highlight points of alignment across existing research and recommendations. The gaps and needs reflect an interconnected matrix of conditions creating staffing shortages in the areas needed to manage the post-COVID-19 increase in demand for health care and BH services. The recommendations seek to address multiple factors including wages, reimbursement rates, expanded educational opportunities and supports, and systemic barriers.

## **Gaps and Needs**

The gaps and needs analysis presented a collection of factors generalized into seven categories detailed in the table below. While the categories are not prioritized, the numerous points of overlap are noteworthy. Persistent shortages consistently reflect challenges around low pay, lack of cultural responsiveness, educational constraints (funding and access), clear career pathways, and workplace pressures impacting retention.

Table 1: Categories and Components of Oregon's Health Care Workforce Gaps and Needs

| Category                          | Components  |
|-----------------------------------|---|
| Workforce Shortages<br>and Demand | <ul> <li>Shortage of health care graduates (e.g., surplus of applications for nursing programs but not enough graduates)</li> <li>Post-COVID-19 staffing shortages and hiring challenges, particularly in rural areas; clinical and nonclinical (e.g., personal care aides, nursing assistants, registered nurses, certified prevention specialists, certified alcohol and drug counselors, recovery mentors, and qualified mental health professionals); exacerbated by persistent low wages, burnout, and turnover</li> </ul> |
|                                   | <ul> <li>Unmet statewide need with mental health treatment; lack of multilingual<br/>and multicultural providers resulting in low rates of BH care access and<br/>use among Black, Indigenous, and people of color (BIPOC) populations</li> </ul>   |



| <ul> <li>Higher education programs failing to meet demand for nursing students; low graduate rates, with Oregon ranking last among U.S. states in nursing graduates per capita</li> <li>Barriers to expanding nursing programs (e.g., faculty shortages, lack of clinical placements, facility limitations)</li> </ul>  |
|---|
| <ul> <li>Need for more training opportunities for BH providers and clear pathways for BH occupations</li> <li>Need for culturally competent/responsive BH care training as BIPOC clients experience racism, discrimination, and bias in medical settings; Western and Anglo-American assumptions about BH can alienate and harm BIPOC communities</li> <li>Review of the effectiveness of recent funding initiatives to strengthen the BH workforce, including those from the American Rescue Plan Act</li> </ul> |
| (ARPA) and Oregon House Bills 2949 and 4071 (e.g., scholarships, loan repayment programs, and other financial incentives), are underway and ongoing   |
| Low compensation and inadequate insurance reimbursement rates resulting in challenges with recruitment and retention  |
| <ul> <li>Private health care (e.g., privately owned hospitals, clinics, nursing<br/>homes, other medical facilities that are for-profit or nonprofit) and social<br/>assistance have the highest total job vacancies and the largest number<br/>of hard-to-fill positions (e.g., nursing assistants, registered nurses)</li> </ul>  |
| <ul> <li>Lack of career advancement and workforce support programs (e.g., BH<br/>career pathway programs, scholarship programs, mentorship<br/>opportunities, licensure exam preparation programs)</li> </ul>   |
| Burdensome licensure processes compared to other states <sup>1</sup>  |
| <ul> <li>Barriers to program expansion due to lack of faculty, clinical<br/>placements, and specialized facilities</li> </ul>   |
| <ul> <li>Misalignment between workforce systems and education (e.g., lack of<br/>clear and defined pathways from K-12 and postsecondary to BH<br/>careers, lack of collaboration among schools, colleges, and BH<br/>employers)</li> </ul>  |
|   |

<sup>&</sup>lt;sup>1</sup> Zhu, J. M., et al. (2022, February 1). *Behavioral health workforce report to the Oregon Health Authority and State Legislature*. Center for Health Systems Effectiveness, Oregon Health & Science University. <a href="https://www.oregon.gov/oha/ERD/SiteAssets/Pages/Government-Relations/Behavioral%20Health%20Workforce%20Wage%20Study%20Report-Final%20020122.pdf">https://www.oregon.gov/oha/ERD/SiteAssets/Pages/Government-Relations/Behavioral%20Health%20Workforce%20Wage%20Study%20Report-Final%20020122.pdf</a>



|                                 | <ul> <li>Lack of centralized workforce authority; fragmentation in the job market; no recognized, universal skill set; employers struggle to find candidates with the necessary skills and experience</li> <li>Lack of transparency and opportunities for salary increases and leadership roles</li> <li>Insufficient funding to cover the estimated costs needed for education, training, salaries, and support for BH roles, leaving gaps in addressing demand across the care continuum</li> </ul>  |
|---------------------------------|--|
| Geographic Disparities          | <ul> <li>Workforce concentration in urban areas (e.g., Multnomah County) with shortages in rural regions</li> <li>Rural workers have less access to training and workforce support services (e.g., internships, mentorship programs, career counseling, job placement services)</li> <li>Rural disparities in availability of BH services</li> </ul>   |
| Lack of Diversity and<br>Equity | <ul> <li>Underrepresentation of Latino/a/x, American Indian or Alaska Native, Black, and Pacific Islander health care professionals; overrepresentation of white and Asian individuals, particularly in higher-paying roles</li> <li>Occupational segregation: Latino/a/x workers overrepresented in lower-barrier fields such as certified nursing assistants; gender disparities, with men overrepresented in higher-paying medical professions, while women populate lower-paying roles</li> <li>Shortage of culturally specific and bilingual BH providers; difficulties in accessing culturally appropriate care, especially for communities of color</li> <li>Majority of BIPOC clients receive BH care from religious figures,</li> </ul> |
| Social Barriers                 | <ul> <li>traditional healers, community-based organizations, and clinics</li> <li>Lack of funding for wraparound services (e.g., housing, childcare) to improve equitable access, recruitment, retention, and promotion</li> </ul>   |



## **Current Workforce and Demand Analysis**

AHP began its analysis of the BH workforce pipeline with a review of reports focused on Oregon's capacity to address and provide mental health and SUD services (see <a href="Appendix B">Appendix B</a>) to characterize shortages and needs and to inform recommendations. AHP augmented this information with relevant survey data.

#### **Workforce Needs**

Beyond geographical challenges in providing sufficient career opportunities and support across rural and frontier regions, two critical areas of need surfaced. First, reflecting a national trend, Oregon is experiencing a shortage of child BH specialists. Second, there is an urgent need for additional SUD services, particularly for certified prevention specialists and qualified mental health professionals.

The following charts and graphics visually represent and characterize Oregon's current BH workforce and demand for services by demographics and geography. Within a state that is predominantly rural and frontier, the correspondence between service shortages and high demand will not surprise but can inform how to prioritize funding and initiatives.

## **Shortages and Surpluses**

The Health Resources and Services Administration (HRSA) projects Oregon will need an additional 240 full-time equivalent (FTE) psychiatrists (48.2% increase) and 510 FTE addiction counselors (114.6% increase) by 2030.

Forecasted surpluses include psychiatric nurse practitioners (80 FTE), psychologists (340 FTE), mental health counselors (610 FTE), and social workers (3,600 FTE).<sup>2</sup>

It's a broken system of behavioral health and substance use disorders care. What I mean is, we don't have capacity within our systems. We don't have capacity... to actually treat people at the right level of care for the right duration. So, there's a chronic level of care mismatch between what clients have access to and what they actually need.

Physician and BH healthcare leader

<sup>&</sup>lt;sup>2</sup> National Center for Health Workforce Analysis. (2018). *State-Level Projections of Supply and Demand for Behavioral Health Occupations: 2016-2030.* U.S. Department of Health and Human Services, HRSA. <a href="https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/state-level-estimates-report-2018.pdf">https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/state-level-estimates-report-2018.pdf</a>



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The following three charts break down Oregon's current BH workforce by race and ethnicity, age, and gender, with bullets noting significant findings.<sup>3</sup>

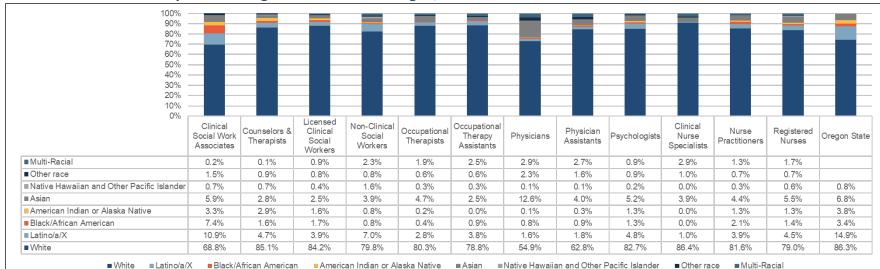


Chart 1: Race and Ethnicity of Practicing BH Workforce in Oregon, 2022

- Clinical social work associates have the highest percentages of Latino/a/x, Black/African American, and American Indian or Alaska Native individuals among BH occupations.
- In contrast, clinical nurse specialists have the highest percentage of white individuals and the lowest percentage of Latino/a/x, Black/African American, American Indian or Alaska Native, and Native Hawaiian and Other Pacific Islander individuals.
- While Latino/a/x people make up nearly 15% of the state's population, they are vastly underrepresented in the BH workforce, especially in medical specialties such as physicians, physician assistants, and clinical nurse specialists (all less than 2%).

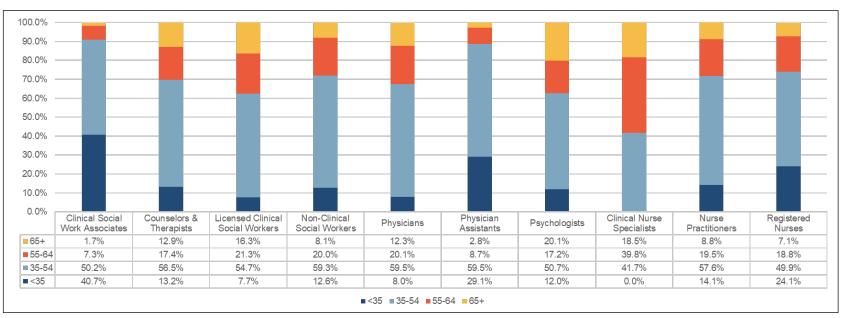
https://visual-data.dhsoha.state.or.us/t/OHA/views/Oregonslicensedhealthcareworkforce/Supplybyoccupation?%3Aorigin=card\_share\_link&%3Ae\_mbed=y&%3AisGuestRedirectFromVizportal=y#1



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<sup>&</sup>lt;sup>3</sup> Oregon Health Authority (2023, April). What's the health workforce supply in Oregon? (Version 2022.1) [Workbook]. Health Care Workforce Reporting Program.

Chart 2: Ages of Practicing BH Workforce in Oregon, 2022\*



<sup>\*</sup>Age-related data were not available for occupational therapists or occupational therapy assistants.

- Clinical social work associates have the highest percentage of individuals under 35 years old.
- Physicians and physician assistants have the highest percentages of those 35–54 years old.
- Clinical nurse specialists have the lowest percentage of individuals from under 35 years old.



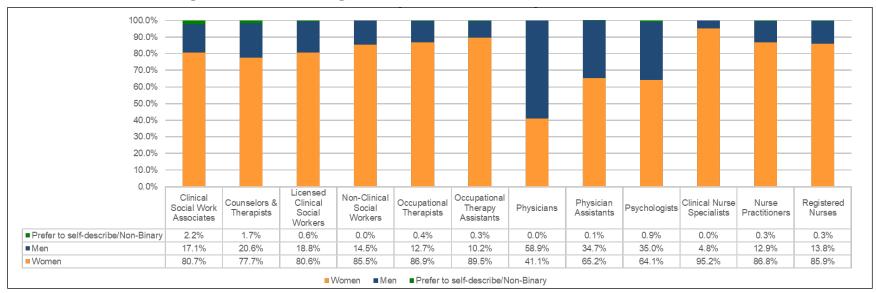


Chart 3: Gender of Practicing BH Workforce in Oregon, 2022

- Women are generally overrepresented across BH occupations.
- · Men have a higher representation in physician roles and other higher-paying roles compared to women.

Due to the limited availability of secondary data on the demographic characteristics of qualified mental health associates (QMHAs), qualified mental health professionals (QMHPs), and certified alcohol and drug counselors (CADCs), AHP analyzed these characteristics using data from a sample of its survey participants (Table 2).



Table 2: Survey-Based Demographic Characteristics for QMHA, QMHP, and CADC I, II, III, and IV (n=55)

| Demographic Characteristic                         | Mean/%     |
|--|------------|
| Mean Age   | 34         |
| Age Ranges   | Percentage |
| 18–29  | 27.3%      |
| 30–39  | 56.4%      |
| 40–49  | 7.3%       |
| 50+  | 9.1%       |
| Race   | Percentage |
| American Indian, Native American, or Alaska Native | N/A        |
| Asian  | N/A        |
| Black or African American                          | 45.5%      |
| White  | 52.7%      |
| Native Hawaiian or other Pacific Islander          | N/A        |
| Other  | 1.8%       |
| Multiple Races                                     | N/A        |
| Ethnicity  | Percentage |
| Hispanic   | 63.6%      |
| Gender Identity                                    | Percentage |
| Man (cisgender)                                    | 54.5%      |
| Man (transgender)                                  | 16.4%      |
| Woman (cisgender)                                  | 23.6%      |
| Woman (transgender)                                | 3.6%       |
| Gender Non-Conforming or Non-Binary                | 1.8%       |
| Prefer not to answer                               | 0%         |



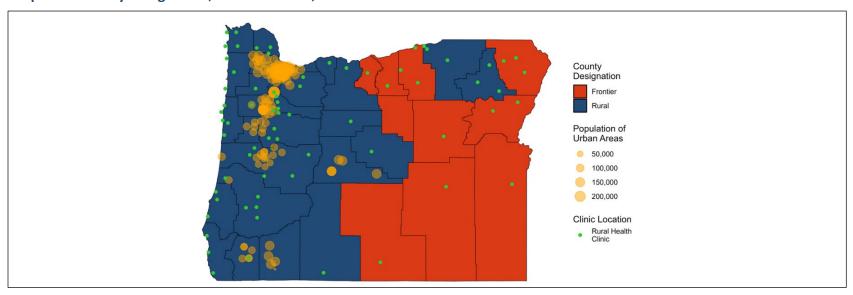
Data from AHP's survey of Oregon's BH workers (Table 3) largely support the distributions of demographic characteristics from the secondary data sources shown above. This table also presents the employment status and educational status of the BH workers in the sample.

Table 3: Survey-Based Demographics, Employment Status, and Educational Achievement of BH Workers in Oregon (n=326)

| Mean Age   | 35         |
|--|------------|
| Average Age of Starting in BH Field                | 30         |
| Race   | Percentage |
| American Indian, Native American, or Alaska Native | 1.8%       |
| Asian  | 1.2%       |
| Black or African American                          | 19.9%      |
| White  | 70.6%      |
| Native Hawaiian or other Pacific Islander          | 0.3%       |
| Other  | 2.1%       |
| Multiple Races                                     | 4.0%       |
| Ethnicity  |            |
| Hispanic   | 42.6%      |
| Gender Identity                                    |            |
| Man (cisgender)                                    | 49.7%      |
| Man (transgender)                                  | 9.5%       |
| Woman (cisgender)                                  | 38.3%      |
| Woman (transgender)                                | 0.6%       |
| Gender Non-Conforming or Non-Binary                | 0.9%       |
| Prefer not to answer                               | 0.9%       |
| Employment Status                                  |            |
| Full-time (about 40 hours/week)                    | 77.0%      |
| Full-time (41–50 hours/week)                       | 11.7%      |
| Full-time (51 or more hours/week)                  | 1.8%       |
| Part-time (31–39 hours/week)                       | 3.7%       |
| Part-time (20–30 hours/week)                       | 3.7%       |
| Part-time (10–29 hours/week)                       | 1.8%       |
| Part-time (1–9 hours/week)                         | 0.3%       |
| Educational Achievement                            |            |
| Associate degree                                   | 52.5%      |
| Bachelor's degree                                  | 63.2%      |
| Master's degree, Ph.D., or M.D.                    | 63.2%      |



Using a county-level map of the state, the next four graphics were generated by layering different datasets from Oregon's Office of Rural Health that illustrate designation, levels of unmet need, service capacity, workforce, and educational opportunities.<sup>4</sup> In combination, this information can inform strategic planning, prioritization of funding and initiatives, and collaboration among stakeholders.



**Graphic 2: County Designation, Urban Centers, and Rural Health Clinic Locations** 

This first map illustrates Oregon's predominantly rural and frontier landscape, with rural health clinics notably sparse in frontier regions, particularly in the southeast corner of the state.

https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ohsu.edu%2Fsites%2Fdefault%2Ffiles%2F2024-08%2FRHCs%25208-2024.xlsx&wdOrigin=BROWSELINK



<sup>&</sup>lt;sup>4</sup> Oregon Office of Rural Health (n.d.).[Data sets]. Retrieved January 9, 2025, from the following URLs: MAIN - Zip Codes 8\_24-Ohttps://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ohsu.edu%2Fsites%2Fdefault%2Ffiles%2F2024-08%2FMAIN%2520-%2520Zip%2520Codes%25208-24\_0.xlsx&wdOrigin=BROWSELINK; 2024 Areas of Unmet Health Care Need Variables Spreadsheet. https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ohsu.edu%2Fsites%2Fdefault%2Ffiles%2F2024-09%2F2024%2520Areas%2520of%2520Unmet%2520Health%2520Care%2520Need%2520Variables%2520Spreadsheet.xlsx&wdOrigin=BROWSELINK; RHCs 8-2024.

**Graphic 3: Unmet Need Score and Rural Health Clinic Locations\*** 

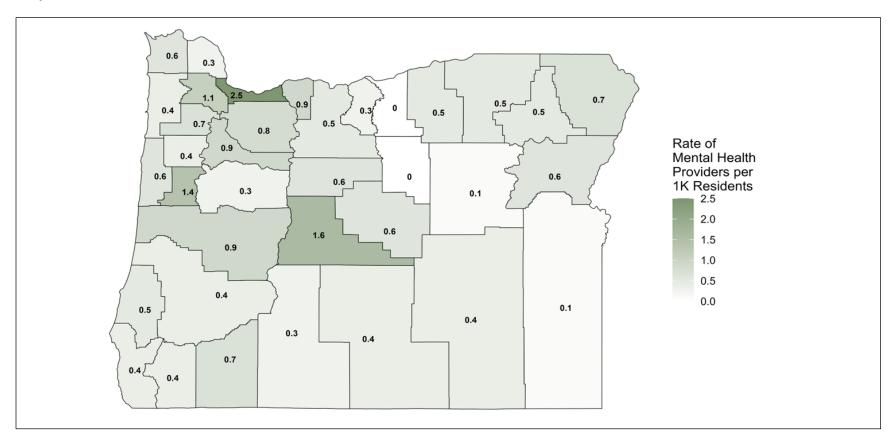
This map highlights several counties with greater unmet need scores (lighter shaded area) and limited access to care (single and remote health clinics).

<sup>&</sup>lt;sup>5</sup> Oregon Office of Rural Health (ORH) (2024, September). *Oregon Areas of Unmet Health Care Need Report September* 2024, p 6. Oregon Health & Science University. <a href="https://www.ohsu.edu/sites/default/files/2024-09/AUHCN%20Report\_2024%20-%20FINAL%209-17-24%206.pdf">https://www.ohsu.edu/sites/default/files/2024-09/AUHCN%20Report\_2024%20-%20FINAL%209-17-24%206.pdf</a>; ORH (n.d.). *2024 Areas of Unmet Health Care Need Variables Spreadsheet* [Data set]. Retrieved January 9, 2025, from <a href="https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ohsu.edu%2Fsites%2Fdefault%2Ffiles%2F2024-09%2F2024%2520Areas%2520of%2520Unmet%2520Health%2520Care%2520Need%2520Variables%2520Spreadsheet.xlsx&wdOrigin=BROW SELINK.">https://www.ohsu.edu/sites/default/files/2024-09/AUHCN%20Report\_2024%20-%20FINAL%209-17-24%206.pdf</a>; ORH (n.d.). *2024 Areas of Unmet Health Care Need Variables Spreadsheet* [Data set]. Retrieved January 9, 2025, from <a href="https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ohsu.edu%2Fsites%2Fdefault%2Ffiles%2F2024-09%2F2024%2520Areas%2520of%2520Unmet%2520Health%2520Care%2520Need%2520Variables%2520Spreadsheet.xlsx&wdOrigin=BROW SELINK.



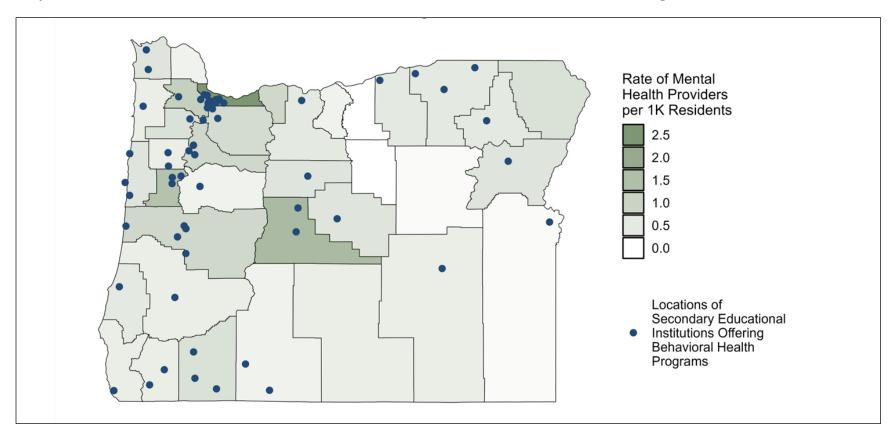
<sup>\*</sup>Unmet need score reflects all health care, physical and mental.5

**Graphic 4: Rate of Mental Health Providers Per 1,000 Residents** 



This map underscores the critical shortage of mental health providers in Oregon's rural and frontier counties, with 32 of 36 having fewer than one provider per 1,000 residents.





Graphic 5: Rate of Mental Health Providers Per 1,000 Residents and Available BH Educational Programs

This map highlights the limited availability of BH programs in rural areas and a correlation with increased BH providers in areas surrounding educational institutions.

To summarize, areas of Oregon without educational institutions specializing in BH tend to have fewer mental health providers. The predominantly rural nature of much of Oregon underscores the need for increased focus on establishing and supporting educational institutions in these areas. Notably, several service areas in Oregon have no health care providers available per 1,000 residents.



### **Critical Workforce Shortages**

Many of the factors impacting the BH workforce identified in these reports mirror the factors and challenges in the larger health care system. To begin to align and associate interconnected and overlapping factors, AHP used the lenses of recruitment and retention.

In terms of recruitment, the table below catalogs the challenges that individually and collectively create barriers to an awareness of, interest in, and willingness to pursue a career in BH. In terms of retention, the table outlines challenges that individually or collectively increase the intent to quit, contribute to burnout, and give impetus for people to leave the BH sector entirely.

Table 4: Challenges to Recruitment and Retention in the BH Sector

| Recruitment  | Retention  |
|--|--|
| Low wages  | Low wages  |
| Limited career development opportunities   | Limited career development opportunities   |
| <ul> <li>Lack of clear career pathways</li> </ul>                                      | <ul> <li>Lack of clear career pathways</li> </ul>  |
| Cultural and linguistic barriers   | Cultural and linguistic barriers   |
| <ul> <li>Disparities in cultural and linguistic<br/>representation in field</li> </ul> | <ul> <li>Disparities in cultural and linguistic<br/>representation in field</li> </ul>                         |
| Geographic imbalances (urban vs. rural)  | Geographic imbalances (urban vs. rural)  |
| Poor infrastructure and traumatic work environments                                    | Poor infrastructure and traumatic work environments  |
| Background check barriers  | <ul><li>Administrative burden</li><li>Staff reductions (post-COVID-19)</li><li>Increased competition</li></ul> |

This understaffed workforce directly decreases the range and quality of care options. For example, shortages of bilingual providers and culturally responsive services exacerbate accessibility issues for diverse populations, particularly in rural areas; a significant over-concentration of providers in Multnomah County (Portland area) leaves Eastern Oregon and other rural areas underserved; nurse practitioners fill gaps where psychiatrists are lacking, but psychiatrists remain disproportionately concentrated in urban areas; there is an acute need for children's mental health specialists and SUD providers, with nearly half of the recommended SUD services unavailable.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup> Zhu, J. M., et.al. (2022, February 1). *Behavioral Health Workforce Report to the Oregon Health Authority and State Legislature*. Center for Health Systems Effectiveness, Oregon Health & Science University. <a href="https://www.oregon.gov/oha/ERD/SiteAssets/Pages/Government-Relations/Behavioral Health WorkforceWage Study Report-Final 020122.pdf">https://www.oregon.gov/oha/ERD/SiteAssets/Pages/Government-Relations/Behavioral Health WorkforceWage Study Report-Final 020122.pdf</a>



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According to the report by Li et al. (2023), Multnomah County has the highest ratio of BH providers per 10,000 Oregonians at 31.9, compared to the lowest county ratio of 2.3 among all Oregon counties. Despite this, the Health Resources and Services Administration (HRSA) designated Multnomah County as a mental health shortage area for Medicaid eligible individuals in 2021. This disparity highlights the need for more research to understand whether there are shortages for specific BH services or population groups in Multnomah County.

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<sup>&</sup>lt;sup>8</sup> Oregon Office of Rural Health (2021, November 15). *Oregon mental health HPSAs*. Oregon Health & Science University. https://www.ohsu.edu/media/209061



<sup>&</sup>lt;sup>7</sup> Li, Tao, et. al. (2023, February). *Oregon's Health Care Workforce Needs Assessment 2023*. Oregon Health Authority and Oregon Health Policy Board. <a href="https://www.oregon.gov/oha/HPA/HP-HCW/Meeting%20Documents/5.-2023-Health-Care-Workforce-Needs-Assessment-Report-January-2023.pdf">https://www.oregon.gov/oha/HPA/HP-HCW/Meeting%20Documents/5.-2023-Health-Care-Workforce-Needs-Assessment-Report-January-2023.pdf</a>

Table 5: Supply and Demand for Selected BH Occupations\*9

| Occupation                               | Estimated<br>Supply<br>2024 | Estimated<br>Supply<br>Growth | Projected<br>Supply<br>2034 | Estimated<br>Demand<br>2024 | Estimated<br>Demand<br>Growth | Projected<br>Demand<br>2034 | Projected<br>Supply<br>(minus)<br>Demand<br>2034 |
|--|-----------------------------|-------------------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|--|
| Addiction Counselors                     | 2220                        | -80                           | 2140                        | 2160                        | 770                           | 2930                        | -790   |
| Adult Psychiatrists                      | 520                         | -30                           | 490                         | 690                         | 230                           | 920                         | -430   |
| Child & Adolescent Psychiatry            | 140                         | 30                            | 170                         | 160                         | 30                            | 190                         | -20  |
| Child, Family, and School Social Workers | 1520                        | -260                          | 1260                        | 1820                        | 580                           | 2400                        | -1140  |
| Health Care Social Workers               | 1040                        | 1050                          | 2090                        | 1100                        | 490                           | 1590                        | 500  |
| Mental Health Counselors                 | 1330                        | 100                           | 1430                        | 1680                        | 590                           | 2270                        | -840   |
| Occupational Therapists                  | 1380                        | 380                           | 1760                        | 1810                        | 170                           | 1980                        | -220   |
| Occupational Therapy Assistants          | 310                         | 100                           | 410                         | 580                         | 60                            | 640                         | -230   |
| Psychiatric Nurse Practitioners          | 410                         | 240                           | 650                         | 260                         | 90                            | 350                         | 300  |
| Psychiatric Physician Assistants         | 30                          | 50                            | 80                          | 50                          | 10                            | 60                          | 20   |
| Psychologists                            | 2100                        | 780                           | 2880                        | 1470                        | 420                           | 1890                        | 990  |
| School Counselors                        | 1970                        | 1070                          | 3040                        | 1690                        | 390                           | 2080                        | 960  |

<sup>\*</sup>Supply and demand data were not available for community health workers, marriage and family therapists, mental health and substance abuse social workers, occupational therapy aides, psychiatric aides, or psychiatric technicians.

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<sup>&</sup>lt;sup>9</sup> Health Resources and Services Administration (n.d.). *Health workforce projections*. U.S. Department of Health and Human Services. Retrieved December 20, 2024, from <a href="https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand">https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand</a>

As indicated in the preceding table, over half the positions listed project a shortage, some quite significant. For example, both child, family, and school social workers and adult psychiatrists will be understaffed by almost half (53%), mental health counselors and occupational therapy assistants by nearly a third (63%), and addiction counselors by about a quarter (73%). With supply anticipated to fall considerably short of demand, retention becomes essential. AHP's survey data underscore how fragile the issue of retention may be. Tables 6 and 7 introduce the troubling factor of intent to quit, and some of the numbers are quite telling. For example, more than 75% of addiction counselors, medical doctors, and psychiatrists, and 61% of BH professionals in the 30 to 39 age range reported an intent to quit.

Table 6: Survey-Based Percentages of Intent to Quit this Month (n=248)

| BH Position Title                    | % Intending to Quit Job This Month |
|--------------------------------------|------------------------------------|
| Addiction Counselor (CADC-III)       | 92%                                |
| Certified Alcohol and Drug Counselor | 71%                                |
| Certified Prevention Specialist      | 68%                                |
| Community Health Worker              | 18%                                |
| Medical Doctor                       | 86%                                |
| Mental Health Counselor              | 8%                                 |
| Other                                | 9%                                 |
| Psychiatric Nurse Practitioner       | 73%                                |
| Psychiatrist                         | 76%                                |
| Qualified Mental Health Associate    | 20%                                |
| Qualified Mental Health Professional | 40%                                |

Table 7: Survey-Based Percentages of Intent to Quit Next Month by Age (n=326)

| Age Group    | % Intending to Quit Job Next Month |
|--------------|------------------------------------|
| 18 to 29     | 44%                                |
| 30 to 39     | 61%                                |
| 40 to 49     | 25%                                |
| 50 and Older | 10%                                |

When considered in combination, increased demand, decreasing supply, and the intent to quit surpassing 67% for 9 out of the 14 job titles surveyed, the situation is dire.

### **Key Informant Interviews**

AHP developed KII and focus group protocols, including a script for verbal consent to participate. AHP shared the drafts of each document with the steering committee for their feedback and edited



accordingly. To identify interview and focus group participants, AHP presented categories of people we proposed to interview to the steering committee. HECC collected names and contact information for people recommended for KIIs or focus groups and shared a list of over 100 potential participants. AHP reviewed the list and selected participants based on number of times recommended, recommender notes, and region. AHP then worked with HECC to modify the list to best meet the needs of regional and organizational representation.

The final list agreed upon by AHP and HECC included the following for KIIs:

### Five employers

- Four working in administrative/leadership roles in both public and private sectors
- One currently working for a regional workforce partnership in a leadership role with prior experience as an employer

#### Five BH workforce educators 10

- One high school
- One private university
- Three community colleges

### Five people working in the BH field

- One clinical director
- Two state-level training trainer/supporter of the BH workforce and experienced practitioners
- Two practicing therapists working in either public or private practices

In all, AHP completed 14 interviews with 15 people (one interview had two people in it). Gaining access to participants for KIIs relied heavily on warm-handoff emails from steering committee members, which AHP greatly appreciated.

The team then uploaded the notes from the interviews and focus group to NVivo, a qualitative data software program, and coded them using thematic analysis. This analysis was used to identify themes on barriers/challenges, recommendations, state of the workforce, skill gaps, and strengths.

<sup>&</sup>lt;sup>10</sup> One other person interviewed as a person working in the BH field also serves as an adjunct professor at a public university and spoke about their experiences as both a practitioner and an educator.



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There's more attention given to behavioral health than I've ever seen before. You see it across the country that folks are really dialed into the fact that behavioral health is in dire need of [a] stronger, more robust workforce. I think that's encouraging.

Behavioral health workforce educator

### **Interview Findings**

In general, the KIIs aligned with and confirmed the BH workforce's realities and challenges reflected in the summarized reports. Discussions and comments focused on aspects of education and training, the need for living wages and other financial resources, systemic and regional barriers, and understaffing within the context of increasing demand for services (see <a href="Appendix C">Appendix C</a>). In brief, these interviews concluded that the BH field is not actively or consistently presented in early career exploration, not well supported in terms of wages and resources, lacks clear career pathways, and continues to struggle with retention from burnout, challenging workplace conditions, and the resulting trauma and emotional exhaustion.

The following summary discusses drivers for entry into and exit from the field, as well as existing strengths. In addition, the KIIs underscored the rural/urban divide in terms of educational opportunities and pay gaps, reflected the ongoing equity challenges between private and community-based practices, and characterized a skills gap across the field in terms of understanding the challenging scope of work when providing services to those experiencing mental health and SUDs. The need for more stakeholder input, including community partners and those receiving care, when defining, designing, and managing BH initiatives also emerged as a notable theme (see callout box).

### **Drivers for Entry into BH Field**

- Early exposure to BH careers
- High school programs or advertising can spark interest in BH careers by combining education with practical experiences.

#### **Structural and Systemic Challenges**

- Excessive administrative regulations governing patient care and licensing
- Prescriptive care mandates
- Lack of stakeholder involvement in decision-making process
- Attorneys making decisions about care acuity contrary to providers
- Lack of unified statewide strategic planning limiting coordinated efforts to address workforce shortages
- Staffing laws and union contracts often clashing with practical needs, creating inefficiencies and limiting flexibility
- Exposing students to various facets of human services early in their education provides valuable insights into career options and fosters a more informed and skilled workforce.



- Educational pathways to employment
- Practicums and internships frequently lead directly to employment; students often secure jobs through these programs before graduation.
- Motivation and lived experience
- A strong desire to help others, a fascination with human behavior, knowledge of community needs, and a commitment to social justice and equity motivate individuals in this field.
- Financial incentives are generally not the primary motivator, with many acknowledging they could earn significantly more in other sectors.

People are much sicker. They are not in good shape ... That is horrible for them ... but it beats the heck out of the workforce ... You go into this scary, semi-violent sort of atmosphere, and ... they're not going to do [it]. They're going to walk out. I don't know if 20 something years ago if that would happen to me, I might have done the same thing.

State agency employee and experienced treatment professional

### **Drivers for Leaving the BH Field**

- Burnout: The overwhelming stress of high caseloads, exposure to trauma, and emotional
  toll leads to burnout. Many professionals feel overworked, unsupported, and unable to
  maintain a healthy work-life balance. Additionally, some professionals leave due to a
  misalignment in values between themselves and their organizations, including values around
  work-life balance and ability to provide high-quality care for clients within the current
  framework.
- Low Pay: Despite the demanding nature of the job, compensation is often insufficient, especially in nonprofit or public sectors. Many professionals leave for higher-paying opportunities outside the field or to start their own private practice.
- Workplace Conditions: High administrative burdens, lack of respect or recognition, and toxic work environments contribute to dissatisfaction. Many employees feel unsupported by their organizations, which exacerbates burnout.
- **Limited Advancement Opportunities:** Career growth opportunities, particularly in leadership, are minimal in many settings, leading to frustration.
- **Systemic Issues:** The lack of resources, unmanageable expectations, and bureaucratic inefficiencies in public mental health systems often leave workers feeling ineffective and disillusioned, pushing them to seek better environments.
- Trauma and Emotional Exhaustion: Exposure to high-acuity clients, including those with substance use issues and severe mental health conditions, can lead to emotional fatigue, contributing to job attrition.



# Strengths

- Workforce Development Initiatives: Existing (though limited) grants and training opportunities at the state and national levels support workforce development and advancement.
- State-Level Support and Funding: Oregon has made significant strides in supporting the BH workforce, particularly through changes in Medicaid reimbursement rates and funding through state cannabis tax revenue (Measure 110).
- **Collaboration Across Stakeholders:** Collaboration between primary care providers, schools, and other organizations was emphasized, with BH now more integrated into primary care settings, a shift from a decade ago.
- Community-Based Innovative Programs: Many programs mentioned during the interviews are
  individual efforts funded by nonprofits or small grants, including programs funded by the
  Behavioral Health Resource Network (BHRN), enabling regional providers to meet people where
  they are in the community.
- Support for Workers: On-the-job training and workplace flexibility have improved, with
  organizations offering support to employees facing family crises and creating more opportunities
  for professional growth and advancement.
- **Focus on Equity:** While more work needs to be done, participants were excited about existing efforts to create a more equitable workforce (e.g., providing culturally responsive trainings, tuition reimbursement and scholarships, support for employees to work while in school to advance their careers, virtual or hybrid courses, clinical supervisors charging lower supervision costs for interns from diverse communities).

#### Skill Gaps in the BH Workforce

- Lack of specialized and evidence-based training; students leaving schools with a "generalist" approach to BH without sufficient evidence-based methods for working with the BH populations; going back to school to get more specialized training is also expensive
- Struggles with professional boundaries and safety, especially with the emerging peer workforce
- Regulatory knowledge, a lot of regulations for people with limited education to understand in lower-level paraprofessional and peer roles
- Inadequate clinical supervision; not enough qualified and experienced supervisors available to train the new workforce
- Professional writing and digital literacy; challenge for agencies to train in writing appropriate case notes and the use of record management systems
- Resilience and self-care; high caseloads and moral injury/distress hard to manage with acute client population



- Cultural responsiveness; lack of appropriate training in schools and on the job for cultural responsivity, specifically for American Indian or Alaska Native, Latinx, and rural communities
- Team-based care; new workforce not being adequately trained in schools to work in an interdisciplinary team with other community providers (particularly a problem for community providers working with high-acuity clients)

# **Talent Pipeline Components**

#### Introduction

To characterize the talent pipeline, AHP researched the network of career pathways, identified key skills recognized as essential to effective direct service, catalogued the education and training opportunities, reviewed recent enrollment and graduation data, and spoke with focus groups to provide firsthand perspectives on challenges and gaps.

### **Oregon BH Career Pathways and Transferable Skills Analysis**

Oregon's BH career pathways are expansive and complicated (Oregon Behavioral Health Career Pathways), and while information is available, for someone looking to enter the field, this complexity makes it hard to understand the full picture. For example, Oregon has 14 different certifying/licensing boards offering 60 different BH credentials/licenses. The pathways graphic (linked above) also highlights how many "stakeholders" there are in Oregon involved in the credentialing process. Moreover, the cost of advancement can create an additional barrier. For example, certain career progressions entail additional education (e.g., master's, doctorate); sometimes individuals must pay out of pocket for required supervision, which may not always yield a positive return on investment. Another consideration will be to analyze what credentials offer limited career mobility and which provide broader opportunities. Understanding this distinction is crucial for targeted investments to bolster the BH workforce.

I would say in general, Oregon doesn't have a statewide roadmap or plan that offers any sort of clarity, and it certainly doesn't have coordination amongst [key stakeholders]. All of these big systems don't ... work together, and they certainly don't work together in a way where you would see it online so that someone interested in the field could make sense of it.

Health care workforce strategist

Using the available scopes of practice, AHP identified key skill standards across the 60 credentials/licenses linked to Oregon's BH workforce. While recognizing the need for strong development of soft skills such as active listening, collaboration, and critical thinking, AHP sought to identify more advanced skills uniquely relevant to providing BH services. In compiling this list (see Appendix E), AHP combined similar or overlapping concepts under a single term to reduce redundancy and sharpen the focus on relevant BH skills. AHP's subject matter experts validated the



list to ensure accuracy and relevance to the occupation's role and the services provided. When appropriate, additional skills were included in a credential/license to provide a more comprehensive and accurate representation of the services that fall within the occupation's purview. The final step involved analyzing the data to determine the skill frequency in BH credentials/licenses.

The five most universal transferable skills were BH support, client advocacy, treatment planning, crisis counseling, and trauma-informed care. Notably, crisis intervention, SUD assessment, behavioral therapy, and emotional support ranked high as well (see Chart 4). The BH roles involving the most transferable skills include the following:

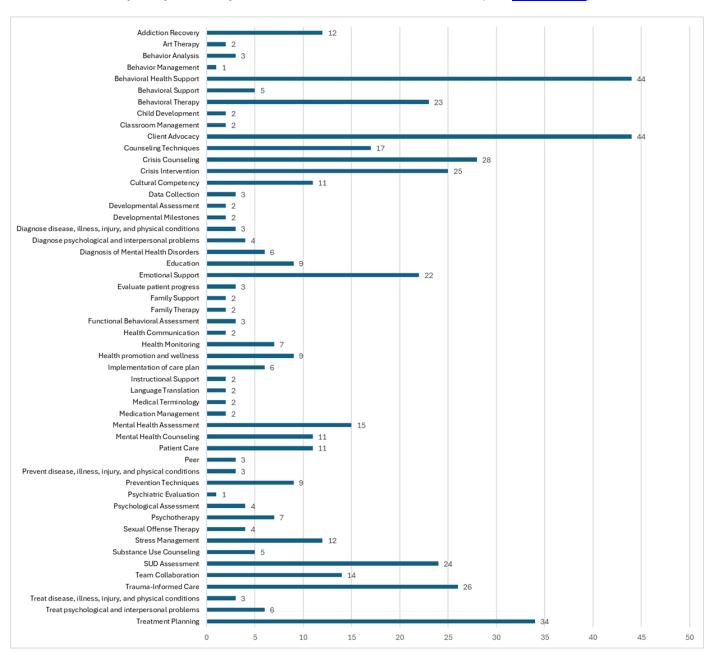
- Licensed marriage and family therapist, marriage and family therapist registered associate,
   licensed clinical social worker, and licensed Master of Social Work
- Board certified psychiatrist and licensed psychologist
- Certified secondary clinical sexual offense therapist, certified clinical sexual offense therapist, certified associate clinical sexual offense therapist, and certified clinical sexual offense therapist intern

Based on our examination of the interaction of skills, skills gaps, and supply/demand in Oregon, we have concluded that the prevalence of skills gaps for specific shortages reported by the stakeholders interviewed in Oregon's BH community suggests that these are generally not skills in the traditional sense of the term. Specifically, most of the skills gaps reported pointed to more systemic and pervasive factors such as challenges engaging in self-care (which are pervasive as evidenced by our quantitative survey findings), overly general training prior to starting in BH workforce positions, and digital literacy issues. In other words, the "skills gaps" identified by the BH workforce stakeholders in Oregon are more akin to a behavioral/skill repertoire, and represent complex, multifaceted patterns of behavior that would generally be considered to be larger and more challenging to address than a simple skill. Graduates may have many of the teachable skills that are transferrable but find themselves unprepared for the emotional and psychological demands of the work, expectations of working on a team, or administrative workload.

The prevalence of relevant transferrable skills within the Oregon BH system is a strength, but we find significant systematic issues undermining both the pipeline (how people learn about and enter a profession) and retention of BH workers. This suggests that the skills transferability is highly unlikely to be interacting in any notable way with the supply/demand. If the skills were clearly related to supply/demand, we would see more clear-cut, discrete skills gaps that would be connected to shortages. Instead, the skills gaps mostly brought our attention back to the pipeline issues during higher education and complex issues that lead to ineffective self-care and burnout.



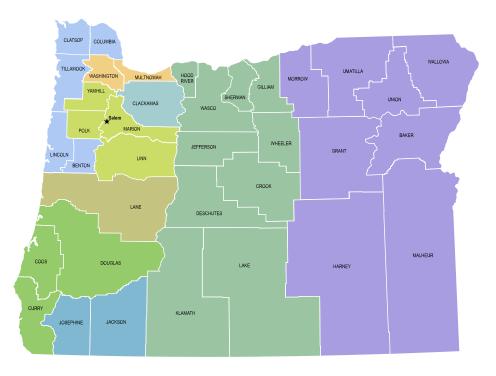
Chart 4: Frequency of 52 Key Skills in BH Credentials and Licenses (see Appendix E)





# **Graphic 6: Inventory Postsecondary BH Education and Training Programs**

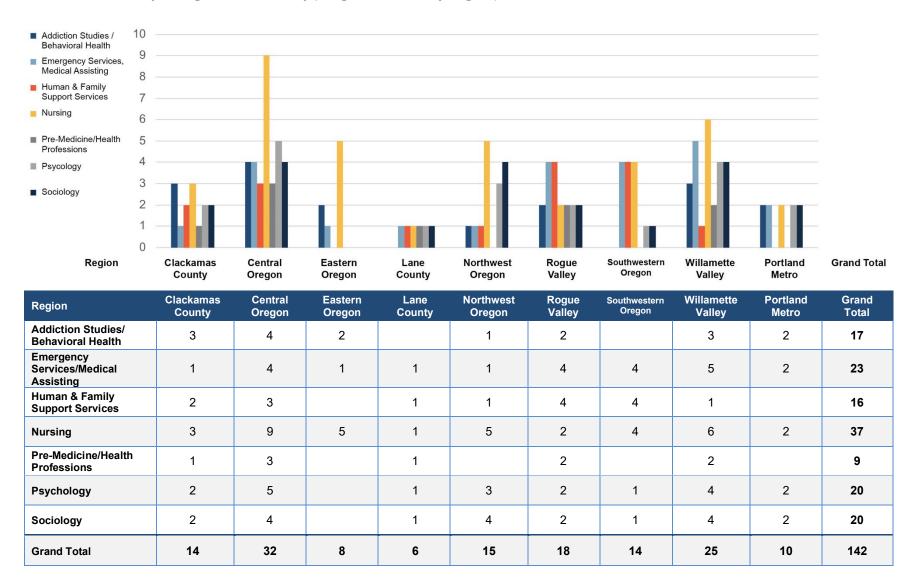
In collaboration with HECC, Oregon's counties were arranged into the following regions, finding that this distribution is largely reflective of shared economic conditions, commute sheds, education partners, and workforce service providers.



| Regions           |                 |                   |                     |
|-------------------|-----------------|-------------------|---------------------|
| Central Oregon    | Eastern Oregon  | Northwest Oregon  | Rogue Valley        |
| Crook County      | Baker County    | Benton County     | Jackson County      |
| Deschutes County  | Grant County    | Clatsop County    | Josephine County    |
| Gilliam County    | Harney County   | Columbia County   | Southwestern Oregon |
| Hood River County | Malheur County  | Lincoln County    | Coos County         |
| Jefferson County  | Morrow County   | Tillamook County  | Curry County        |
| Klamath County    | Umatilla County | Portland Metro    | Douglas County      |
| Lake County       | Union County    | Multnomah County  | Willamette Valley   |
| Sherman County    | Wallowa County  | Washington County | Linn County         |
| Wasco County      | Lane County     |                   | Marion County       |
| Wheeler County    | Lane County     |                   | Polk County         |
| Clackamas County  |                 |                   | Yamhill County      |
| Clackamas County  |                 |                   |                     |

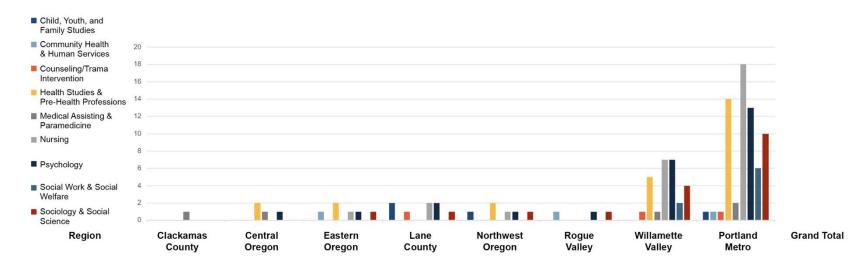


**Chart 5: Community College Areas of Study (Program Counts by Region)** 





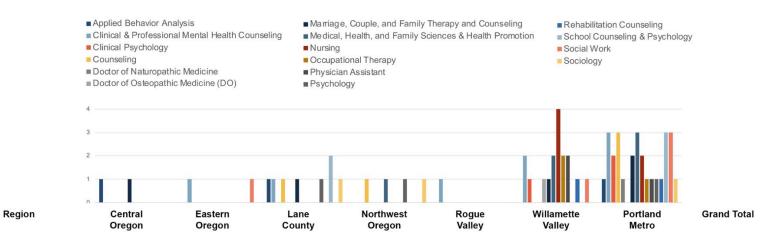
# **Chart 6: Undergraduate Areas of Study (Program Counts by Region)**



| Region                                  | Clackamas<br>County | Central<br>Oregon | Eastern<br>Oregon | Lane<br>County | Northwest<br>Oregon | Rogue Valley | Willamette<br>Valley | Portland<br>Metro | Grand<br>Total |
|---|---------------------|-------------------|-------------------|----------------|---------------------|--------------|----------------------|-------------------|----------------|
| Child, Youth, and Family Studies        |                     |                   |                   | 2              | 1                   |              |                      | 1                 | 4              |
| Community Health & Human Services       |                     |                   | 1                 |                |                     | 1            |                      | 1                 | 3              |
| Counseling/Trauma<br>Intervention       |                     |                   |                   | 1              |                     |              | 1                    | 1                 | 3              |
| Health Studies & Pre-Health Professions |                     | 2                 | 2                 |                | 2                   |              | 5                    | 14                | 25             |
| Medical Assisting & Paramedicine        | 1                   | 1                 |                   |                |                     |              | 1                    | 2                 | 5              |
| Nursing                                 |                     |                   | 1                 | 2              | 1                   |              | 7                    | 18                | 29             |
| Psychology                              |                     | 1                 | 1                 | 2              | 1                   | 1            | 7                    | 13                | 26             |
| Social Work & Social<br>Welfare         |                     |                   |                   |                |                     |              | 2                    | 6                 | 8              |
| Sociology & Social Science              |                     |                   | 1                 | 1              | 1                   | 1            | 4                    | 10                | 18             |
| Grand Total                             | 1                   | 4                 | 6                 | 8              | 6                   | 3            | 27                   | 66                | 121            |



**Chart 7: Graduate Areas of Study (Program Counts by Region)** 



| Region  | Central<br>Oregon | Eastern<br>Oregon | Lane County | Northwest<br>Oregon | Rogue<br>Valley | Willamette<br>Valley | Portland<br>Metro | Grand<br>Total |
|---|-------------------|-------------------|-------------|---------------------|-----------------|----------------------|-------------------|----------------|
| Applied Behavior Analysis                               | 1                 |                   | 1           |                     |                 |                      | 1                 | 3              |
| Clinical & Professional Mental<br>Health Counseling     |                   | 1                 | 1           |                     | 1               | 2                    | 3                 | 8              |
| Clinical Psychology                                     |                   |                   |             |                     |                 | 1                    | 2                 | 3              |
| Counseling  |                   |                   | 1           | 1                   |                 |                      | 3                 | 5              |
| Doctor of Naturopathic Medicine                         |                   |                   |             |                     |                 |                      | 1                 | 1              |
| Doctor of Osteopathic Medicine (D.O.)                   |                   |                   |             |                     |                 | 1                    |                   | 1              |
| Marriage, Couple, and Family<br>Therapy and Counseling  | 1                 |                   | 1           |                     |                 | 1                    | 2                 | 5              |
| Medical, Health, and Family Sciences & Health Promotion |                   |                   |             | 1                   |                 | 2                    | 3                 | 6              |
| Nursing   |                   |                   |             |                     |                 | 5                    | 2                 | 7              |
| Occupational Therapy                                    |                   |                   |             |                     |                 | 2                    | 1                 | 3              |
| Physician Assistant                                     |                   |                   |             |                     |                 | 2                    | 1                 | 3              |
| Psychology  |                   |                   | 1           | 1                   |                 |                      | 1                 | 3              |
| Rehabilitation Counseling                               |                   |                   |             |                     |                 | 1                    | 1                 | 2              |
| School Counseling & Psychology                          |                   |                   | 2           |                     |                 |                      | 3                 | 5              |



| Region      | Central<br>Oregon | Eastern<br>Oregon | Lane County | Northwest<br>Oregon | Rogue<br>Valley | Willamette<br>Valley | Portland<br>Metro | Grand<br>Total |
|-------------|-------------------|-------------------|-------------|---------------------|-----------------|----------------------|-------------------|----------------|
| Social Work |                   | 1                 |             |                     |                 | 1                    | 3                 | 5              |
| Sociology   |                   |                   | 1           | 1                   |                 |                      | 1                 | 3              |
| Grand Total | 2                 | 2                 | 8           | 4                   | 1               | 18                   | 28                | 63             |

- Portland Metro has the highest number of undergraduate and graduate areas of study related to BH. However, it ranks seventh in the number of
  community colleges offering programs in this field. Central Oregon leads in the number of community colleges, followed by Willamette Valley and Rogue
  Valley in second and third place, respectively.
- Central Oregon, despite having the highest number of community colleges offering programs related to BH, has limited higher education opportunities in this field. It offers only one undergraduate area of study in medical assisting and paramedicine, and two graduate areas of study in applied behavioral analysis and marriage, couple, and family therapy and counseling. Similarly, Clackamas County offers 14 areas of study related to BH through community colleges, but only 1 undergraduate area of study in medical assisting and paramedicine, and no BH areas of study through graduate school. Rogue Valley offers 18 areas of study through community colleges, but only 3 undergraduate programs and 1 graduate program related to BH.
- Willamette County ranks second for both undergraduate and graduate program areas of study related to BH after Portland Metro, and second after Central Oregon for community college programs. It has a more balanced distribution of programs across graduate, undergraduate, and community college levels compared to Portland Metro.
- Nursing is the most prevalent area of study across community college, undergraduate, and graduate programs. Beyond nursing, the most commonly
  offered behavioral health-related programs at community colleges include emergency services/medical assisting, psychology, and sociology. Among
  undergraduate programs, aside from nursing, the most commonly offered programs include psychology, health studies and pre-health professions, and
  sociology and social science. For graduate programs related to BH, the top areas of study are clinical and professional mental health counseling, nursing,
  and medical, health, and family sciences and health promotion.



#### **Educational Data**

Tables 8–10 below present data regarding BH course enrollment, BH-associated majors, and BH credential or degree earned, provided by HECC for the 17 community colleges and seven public 4-year public universities in Oregon. AHP conducted analyses to examine changes in student enrollment numbers prior to the COVID-19 pandemic, after the pandemic, and for all years the data were available.

Specifically, AHP examined the percentage changes from 2014–15 to 2018–19, from 2021–22 to 2023–24, and from 2014–15 to 2023–24 for the number of students who took any BH course, number of students whose first declared major was BH and who took at least one BH course, and number of students who earned a BH credential. The associated year ranges were selected to narrow in on the impact that the COVID-19 pandemic may have had on higher education enrollment and degree attainment trends between 2020 and 2021.

Overall, the number of students who enrolled in any BH course decreased between the 2014 and 2023 academic years for both community colleges and public universities (-29% and -12%, respectively). Findings show that the number of students who enrolled in any BH course at community colleges decreased prior to the pandemic (-13%), but this trend reversed and increased in the years following the pandemic (13%). Public universities experienced the same degree of decreasing enrollment both before (-6%) and after (-6%) the pandemic (Table 8).

The number of community college students whose first declared major is BH associated and who took at least one BH course decreased by 57% from 2014–15 to 2018–19, then increased by 56% from 2021–22 to 2023–24. The overall trend, including pandemic years, shows a decrease of 35% (Table 10). This trend was different for public university students generally increased slightly over time, as reflected by a 5% increase from 2014–15 to 2018–19, a 4% increase from 2021–22 to 2023–24, and a 22% increase from 2014–15 to 2023–24 (Table 9).

Similarly, results show decreases in the number of students who earned a BH credential from community colleges and slight increases from public universities. The number of community college students who earned a BH credential decreased by 48% from 2014–15 to 2023–24, but the number of students who earned a BH credential from public universities increased 5% over the same time span (Table 10). Overall, the trends reflected in this data reveal a decline in students who enter the BH field from community colleges over time, a trend that started prior to the pandemic. This finding underscores the need for exploring and understanding this trend, as well as greater investment in these institutions to attract and recruit students into the BH workforce talent pipeline.



Table 8. Number of Students Who Enrolled in any BH Course by Institution and Percent Change from 2014–15 to 2018–19, 2021–22 to 2023–24, and 2014–15 to 2023–24

|                            | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | % change<br>from 2014-15<br>to 2018-19 | % change<br>from 2021-22<br>to 2023-24 | % change<br>from 2014-15<br>to 2023-24 |
|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|--|--|
| <b>Community Colleges</b>  |         |         |         |         |         |         |         |         |         |         |  |  |  |
| ВМСС                       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 17      | 0       | 0       | N/A                                    | N/A                                    | N/A                                    |
| cocc                       | 2,112   | 2,023   | 2,065   | 1,991   | 2,146   | 2,212   | 1,922   | 1,597   | 1,450   | 1,518   | 2%                                     | -5%                                    | -28%                                   |
| Chemeketa CC               | 7,030   | 7,640   | 6,649   | 6,911   | 6,389   | 6,041   | 4,975   | 4,104   | 4,334   | 4,827   | -9%                                    | 18%                                    | -31%                                   |
| Clackamas CC               | 2,771   | 2,575   | 2,424   | 2,384   | 2,231   | 2,012   | 1,958   | 1,540   | 1,610   | 1,609   | -19%                                   | 4%                                     | -42%                                   |
| Clatsop CC                 | 443     | 536     | 524     | 501     | 445     | 527     | 349     | 336     | 323     | 313     | 0%                                     | -7%                                    | -29%                                   |
| CGCC                       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 42      | 0       | 368     | N/A                                    | 776%ª                                  | N/A                                    |
| КСС                        | 599     | 722     | 625     | 670     | 700     | 778     | 627     | 568     | 706     | 874     | 17%                                    | 54%                                    | 46%                                    |
| LCC                        | 2,820   | 2,489   | 2,438   | 2,341   | 2,422   | 2,388   | 2,359   | 1,939   | 2,093   | 2,217   | -14%                                   | 14%                                    | -21%                                   |
| LBCC                       | 2,256   | 2,143   | 2,056   | 2,012   | 1,908   | 1,732   | 1,534   | 1,359   | 1,458   | 1,511   | -15%                                   | 11%                                    | -33%                                   |
| МНСС                       | 3,422   | 2,810   | 2,660   | 2,363   | 2,173   | 2,096   | 1,683   | 1,323   | 1,276   | 1,446   | -36%                                   | 9%                                     | -58%                                   |
| occc                       | 223     | 107     | 203     | 188     | 165     | 205     | 176     | 142     | 126     | 175     | -26%                                   | 23%                                    | -22%                                   |
| PCC                        | 616     | 592     | 525     | 553     | 531     | 452     | 525     | 504     | 512     | 480     | -14%                                   | -5%                                    | -22%                                   |
| SWOCC                      | 1,066   | 1,070   | 1,051   | 1,113   | 1,002   | 1,263   | 912     | 1,026   | 903     | 924     | -6%                                    | -10%                                   | -13%                                   |
| TBCC                       | 69      | 71      | 116     | 48      | 75      | 97      | 108     | 78      | 75      | 70      | 9%                                     | -10%                                   | 1%                                     |
| TVCC                       | 1,400   | 1,169   | 1,010   | 945     | 971     | 943     | 848     | 664     | 672     | 744     | -31%                                   | 12%                                    | -47%                                   |
| UCC                        | 1,087   | 1,001   | 1,043   | 1,172   | 1,283   | 1,131   | 1,040   | 996     | 1,104   | 1,329   | 18%                                    | 33%                                    | 22%                                    |
| Grand Total                | 25,914  | 24,948  | 23,389  | 23,192  | 22,441  | 21,877  | 19,016  | 16,235  | 16,642  | 18,405  | -13%                                   | 13%                                    | -29%                                   |
| <b>Public Universities</b> |         |         |         |         |         |         |         |         |         |         |  |  |  |
| EOU                        | 1,380   | 1,300   | 1,171   | 1,075   | 1,048   | 1,075   | 1,450   | 1,439   | 1,307   | 1,280   | -24%                                   | -11%                                   | -7%                                    |
| OIT                        | 1,428   | 1,308   | 1,424   | 1,336   | 1,314   | 1,484   | 1,386   | 1,421   | 1,269   | 1,300   | -8%                                    | -9%                                    | -9%                                    |
| OSU                        | 11,207  | 11,224  | 11,673  | 11,263  | 11,225  | 11,256  | 10,358  | 10,771  | 10,479  | 10,704  | 0%                                     | -1%                                    | -4%                                    |
| PSU                        | 12,296  | 11,963  | 11,404  | 11,339  | 11,331  | 10,747  | 10,383  | 10,192  | 9,686   | 9,191   | -8%                                    | -10%                                   | -25%                                   |
| SOU                        | 2,087   | 2,651   | 2,549   | 2,368   | 2,248   | 2,185   | 2,182   | 3,214   | 2,828   | 2,589   | 8%                                     | -19%                                   | 24%                                    |
| UO                         | 10,410  | 10,889  | 11,603  | 10,028  | 9,397   | 9,572   | 9,557   | 9,783   | 9,728   | 9,846   | -10%                                   | 1%                                     | -5%                                    |
| WOU                        | 3,473   | 3,594   | 3,514   | 3,402   | 3,315   | 3,375   | 3,207   | 2,772   | 2,662   | 2,498   | -5%                                    | -10%                                   | -28%                                   |
| Grand Total                | 42,108  | 42,748  | 43,144  | 40,597  | 39,624  | 39,420  | 38,292  | 39,324  | 37,702  | 37,107  | -6%                                    | -6%                                    | -12%                                   |

<sup>\*</sup> Completions include bachelor's, master's, and doctoral degrees as well as undergraduate and postbaccalaureate certificates.

N/A represents instances where percent change could not be calculated due to a value of 0 or no data reported.

<sup>&</sup>lt;sup>a</sup> This value is an outlier that perhaps represents a steep increase from zero or very few courses offered to an expanded course offering that started in the 2023–24 academic year, which is inconsistent with the overall trend for CGCC.



<sup>\*</sup> Completions include associate degrees and certificates of < 1 year to 2+ years.

<sup>(\*)</sup> indicates no data reported.

Table 9. Number of Students Whose First Declared Major Is BH and Who Enrolled in at Least One BH Course by Institution and Percent Change from 2014–15 to 2018–19, 2021–22 to 2023–24, and 2014–15 to 2023–24

|                           | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | % change:<br>2014-15 to<br>2018-19 | % change:<br>2021-22 to<br>2023-24 | % change:<br>2014-15 to<br>2023-24 |
|---------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------------------------------|------------------------------------|------------------------------------|
| <b>Community Colleges</b> |         |         |         |         |         |         |         |         |         |         |                                    |                                    |                                    |
| ВМСС                      | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| COCC                      | 84      | 69      | 71      | 62      | 42      | 53      | 46      | 48      | 39      | 63      | -50%                               | 31%                                | -25%                               |
| Chemeketa CC              | 264     | 148     | 100     | 63      | 58      | 43      | 33      | 31      | 41      | 35      | -78%                               | 13%                                | -87%                               |
| Clackamas CC              | 38      | 35      | 37      | 31      | 26      | 37      | 36      | 28      | 31      | 32      | -32%                               | 14%                                | -16%                               |
| Clatsop CC                | 0       | 0       | 0       | 0       | *       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| CGCC                      | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| ксс                       | 0       | 0       | *       | *       | *       | *       | *       | *       | 13      | *       | N/A                                | N/A                                | N/A                                |
| LCC                       | *       | *       | *       | 0       | 0       | *       | 0       | 0       | *       | 0       | N/A                                | N/A                                | N/A                                |
| LBCC                      | 54      | 50      | 60      | 83      | 45      | 53      | 43      | 54      | 66      | 73      | -17%                               | 35%                                | 35%                                |
| МНСС                      | 91      | 87      | 94      | 57      | 56      | 64      | 99      | 108     | 119     | 224     | -38%                               | 107%                               | 146%                               |
| оссс                      | *       | 0       | *       | 0       | 0       | 0       | *       | *       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| PCC                       | 19      | 13      | 12      | 18      | 14      | *       | 10      | *       | 13      | 21      | -26%                               | N/A                                | 11%                                |
| SWOCC                     | *       | *       | *       | *       | *       | 18      | *       | *       | *       | 0       | N/A                                | N/A                                | N/A                                |
| ТВСС                      | 0       | *       | 0       | 0       | 0       | 0       | *       | *       | *       | *       | N/A                                | N/A                                | N/A                                |
| TVCC                      | 246     | 168     | 93      | 73      | 88      | 57      | 56      | 44      | 46      | 64      | -64%                               | 45%                                | -74%                               |
| UCC                       | 0       | 0       | 0       | 0       | *       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| Grand Total               | 801     | 579     | 473     | 389     | 341     | 338     | 332     | 335     | 373     | 522     | -57%                               | 56%                                | -35%                               |
| Public Universities       |         |         |         |         |         |         |         |         |         |         |                                    | -                                  |                                    |
| EOU                       | 234     | 218     | 209     | 183     | 188     | 185     | 260     | 287     | 268     | 325     | -20%                               | 13%                                | 39%                                |
| OIT                       | 75      | 75      | 101     | 93      | 112     | 131     | 151     | 131     | 146     | 148     | 49%                                | 13%                                | 97%                                |
| OSU                       | 1,981   | 1,937   | 1,930   | 1,874   | 1,951   | 2,165   | 2,299   | 2,563   | 2,719   | 3,130   | -2%                                | 22%                                | 58%                                |
| PSU                       | 4,282   | 4,410   | 4,330   | 4,337   | 4,652   | 4,335   | 4,147   | 4,081   | 3,699   | 3,522   | 9%                                 | -14%                               | -18%                               |
| SOU                       | 420     | 481     | 515     | 535     | 542     | 521     | 539     | 1,000   | 1,057   | 1,037   | 29%                                | 4%                                 | 147%                               |
| UO                        | 1,989   | 2,032   | 2,112   | 1,911   | 2,073   | 2,173   | 2,196   | 2,645   | 2,847   | 3,092   | 4%                                 | 17%                                | 55%                                |
| WOU                       | 746     | 735     | 810     | 729     | 693     | 704     | 688     | 649     | 618     | 611     | -7%                                | -6%                                | -18%                               |
| Grand Total               | 9,727   | 9,888   | 10,007  | 9,662   | 10,211  | 10,214  | 10,280  | 11,356  | 11,354  | 11,865  | 5%                                 | 4%                                 | 22%                                |

<sup>\*</sup> Completions include bachelor's, master's, and doctoral degrees as well as undergraduate and postbaccalaureate certificates.

N/A represents instances where percent change could not be calculated due to a value of 0 or no data reported.



<sup>\*</sup> Completions include associate degrees and certificates of < 1 year to 2+ years.

<sup>(\*)</sup> indicates no data reported.

Table 10. Number of Students Who Earned a BH Credential by Institution and Percent Change from 2014–15 to 2018–19, 2021–22 to 2023–24, and 2014–15 to 2023–24

|                     | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | % change:<br>2014-15 to<br>2018-19 | % change:<br>2021-22 to<br>2023-24 | % change:<br>2014-15 to<br>2023-24 |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------------------------------|------------------------------------|------------------------------------|
| Community Colleges  |         |         |         |         |         |         |         |         |         |         |                                    |                                    |                                    |
| BMCC                | 0       | *       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| COCC                | *       | *       | *       | *       | *       | *       | 0       | 0       | *       | *       | N/A                                | N/A                                | N/A                                |
| Chemeketa CC        | 30      | 29      | 19      | 21      | 15      | *       | 15      | 17      | 11      | *       | -50%                               | N/A                                | N/A                                |
| Clackamas CC        | 28      | 27      | 19      | 40      | 15      | 16      | 24      | 13      | 19      | 23      | -46%                               | 77%                                | -18%                               |
| Clatsop CC          | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| CGCC                | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| ксс                 | 0       | 0       | 0       | 0       | 0       | 0       | *       | *       | *       | *       | N/A                                | N/A                                | N/A                                |
| LCC                 | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| LBCC                | 11      | 10      | 16      | 22      | 32      | 22      | 26      | 23      | 27      | 20      | 191%                               | -13%                               | 82%                                |
| МНСС                | 53      | 54      | 37      | 50      | 38      | 18      | *       | 11      | 18      | 18      | -28%                               | 64%                                | -66%                               |
| occc                | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| PCC                 | 72      | 58      | 41      | 63      | 69      | 39      | 41      | 89      | 53      | 29      | -4%                                | -67%                               | -60%                               |
| RCC                 | *       | 11      | *       | 17      | *       | *       | 16      | *       | 13      | 11      | N/A                                | N/A                                | N/A                                |
| swocc               | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| TBCC                | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| TVCC                | 19      | 20      | 0       | *       | *       | *       | *       | *       | 0       | *       | N/A                                | N/A                                | N/A                                |
| UCC                 | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | N/A                                | N/A                                | N/A                                |
| Grand Total         | 227     | 213     | 142     | 215     | 181     | 115     | 136     | 168     | 147     | 118     | -20%                               | -30%                               | -48%                               |
| Public Universities |         |         |         |         |         |         |         |         |         |         |                                    |                                    |                                    |
| EOU                 | 33      | 36      | 26      | 26      | 31      | 23      | 36      | 35      | 53      | 67      | -6%                                | 91%                                | 103%                               |
| OIT                 | 35      | 34      | 39      | 42      | 44      | 40      | 55      | 56      | 33      | 51      | 26%                                | -9%                                | 46%                                |
| OSU                 | 515     | 556     | 535     | 527     | 500     | 578     | 547     | 562     | 579     | 647     | -3%                                | 15%                                | 26%                                |
| PSU                 | 1,069   | 1,018   | 1,049   | 1,113   | 1,069   | 1,042   | 1,036   | 1,048   | 1,050   | 1,039   | 0%                                 | -1%                                | -3%                                |
| SOU                 | 110     | 103     | 116     | 143     | 136     | 154     | 122     | 125     | 110     | 117     | 24%                                | -6%                                | 6%                                 |
| UO                  | 594     | 526     | 584     | 492     | 518     | 539     | 480     | 525     | 521     | 542     | -13%                               | 3%                                 | -9%                                |
| WOU                 | 180     | 159     | 174     | 200     | 186     | 224     | 200     | 202     | 188     | 199     | 3%                                 | -1%                                | 11%                                |
| Grand Total         | 2,536   | 2,432   | 2,523   | 2,543   | 2,484   | 2,600   | 2,476   | 2,553   | 2,534   | 2,662   | -2%                                | 4%                                 | 5%                                 |

<sup>\*</sup> Completions include bachelor's, master's, and doctoral degrees as well as undergraduate and postbaccalaureate certificates.

N/A represents instances where percent change could not be calculated due to a value of 0 or no data reported.



<sup>\*</sup> Completions include associate degrees and certificates of < 1 year to 2+ years.

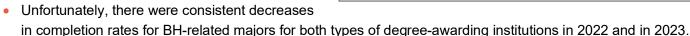
<sup>(\*)</sup> indicates no data reported.

### Data from Integrated Postsecondary Education Data System: Completion of Degrees and Certificates

The associated demand data identified in this analysis should be compared with and informed by the trend analyses of the IPEDS data on the completion of degrees and certificates (i.e., sub-degree credentials, associates, bachelors, masters, doctorates) from Oregon colleges and universities, public and private, that are commonly associated with the BH occupation continuum. Using the IPEDS data, we discovered the following key findings:

### Chart 8: Percentage of BH-Related Majors Who Completed Their Degree by Degree Type and Year

- The Oregon community college completion rate for BH-related majors was 37%, which is slightly lower than the national average of 43%.
- Oregon public universities that grant bachelor's degrees saw completion rates for BH-related majors at only 24%, which is dramatically lower than the national average of 67%.
- Chart 8 shows that for community colleges, but not public bachelor's degree institutions in Oregon, there was considerable variability year-over-year from 2014 to 2023 such that even though the completion rate for community colleges is slightly lower than the national average overall, it surpassed national averages during three of the years within this timeframe.



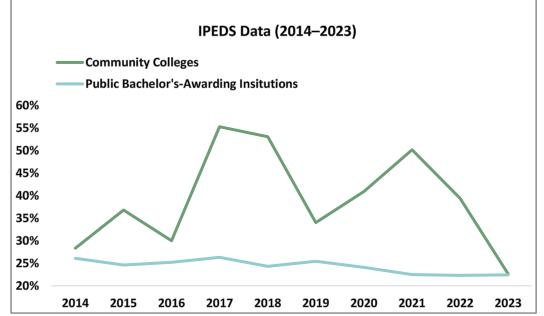




Table 11 shows the completion rates in public institutions granting bachelor's degrees in Oregon as a function of BH-related majors by year and by race using IPEDS data provided by HECC (insufficient data was available for community colleges). We found that Black/African American students' completion rates decreased year-over-year from 2013 to 2019 such that completion rates were 23% (i.e., similar to the overall average) in 2019 prior to dropping all the way to 16% in 2023. This consistent decrease represents an almost 30% decrease in the completion rates for Black/African American students while the other races on average showed no change in either direction. These findings are concerning not only because they point to racial educational disparities, but because our primary survey findings also found that Black/African American students in the BH field were more likely to begin but not complete their bachelor's degree relative to their white counterparts, thus notably increasing our confidence in this overall finding. No gender-specific differences were found in completion rates in these data.

Table 11: Completion Rates for BH-Related Bachelor's Degrees in Oregon Public Institutions

|                                     | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Asian American/Asian                | 24%  | 29%  | 24%  | 27%  | 23%  | 25%  | 24%  | 28%  | 24%  | 25%  |
| Black/African American              | 21%  | 25%  | 23%  | 23%  | 19%  | 23%  | 22%  | 19%  | 17%  | 16%  |
| Latino/a/x/Hispanic                 | 21%  | 21%  | 23%  | 23%  | 23%  | 22%  | 23%  | 21%  | 22%  | 21%  |
| Native American/Alaska<br>Native    | 16%  | 17%  | 21%  | 31%  | 26%  | 25%  | 22%  | 24%  | 25%  | *    |
| Native Hawaiian/Pacific<br>Islander | 34%  | 25%  | 21%  | 18%  | 24%  | 33%  | 20%  | 24%  | 18%  | *    |
| Two or more                         | 23%  | 17%  | 23%  | 24%  | 21%  | 22%  | 22%  | 20%  | 19%  | 21%  |
| White                               | 28%  | 26%  | 26%  | 28%  | 26%  | 27%  | 25%  | 23%  | 23%  | 24%  |



### **Focus Groups**

AHP held two virtual focus groups composed of educators in the BH field and BH oversight authorities. The final focus groups list agreed upon by AHP and HECC included invitations sent to 11 BH oversight authorities and 13 invitations to educators. Five people invited for each group were able to participate. As with the KIIs, the team uploaded the notes from the focus groups to NVivo, a qualitative data software program, and coded them using thematic analysis. This analysis was used to identify recommendations to address challenges in the field.

Micromanaging behavioral health providers, ... 30 years ago that probably made some sense because we didn't have enough licenses; it was all new. But now the industry has multiple certifications that are complex and confusing, and we need more specific training for them ... We still have these antiquated kind of redundant and maybe antithetical to modern practice requirements. We've got to fix this problem because it's driving people out of the field.

Leader in a statewide BH association

Participants in focus groups included the following:

#### Five BH educators:

- One community college
- Three public universities
- One postsecondary education training and support provider

#### Five BH oversight authorities:

- One Oregon Health Authority (OHA) representative
- One Oregon Council for Behavioral Health representative
- One representative from CareOregon, the state's largest provider of Medicaid health services
- One Mental Health & Addiction Certification Board of Oregon (MHACBO) representative
- One Oregon Community Health Workers Association representative

#### **Table 12: Key Recommendations from Focus Groups**

#### **Oversight Authorities**

- Implement broader licensing, including more professionals who can diagnose and supervise.
- Increase compensation at all levels.
- · Reduce administrative burden and heavy caseloads.
- Reduce staff-to-client ratio.
- · Create safer working conditions.
- Provide training for roles with advancement potential and working within scope of care.



#### **Educators**

- Review opportunities to support funding for higher education and reduce costs.
- Continue creating partnerships between employers and higher education.
- Employers should continue reaching out to schools to fill open positions.
- Increase salaries to keep up with cost of living, especially salaries for entry-level staff.
- Explore ways to hire and retain faculty for in-demand programs.
- Create opportunities for collaboration vs. competition among higher educational institutions.
- Fund staff time for collaborative work.
- Support students to get more practical, hands-on experience, especially students from rural and frontier areas.
- Address fear of what the state of education will be with changing governmental administration, especially funding from the Department of Education.
- Create flexible learning opportunities for students across the state while also balancing the need to learn skills in person.
- Address lack of broadband in rural communities.
- Market to high school–aged youth.

# **Current Challenges**

# **Typical Labor Market Experiences**

Data from our November 2024 survey of 326 BH workers in Oregon shows that 58% of respondents reported spending between 6 months to 2 years in the BH workforce (see Table 15 for additional breakdown and details). Moreover, only 17% of the sample of respondents reported having worked at least 6 or more years in the field, which further suggests that the current average duration of work experience in the field is short. Existing estimates of average longevity of BH careers are highly variable, with estimates ranging from 8 to 20 years.

# Wage Growth

Table 13 presents data from the U.S. Bureau of Labor Statistics that show, when adjusting for inflation percentage per year, the last several years experienced relatively flat wage growth in the United States, and Oregon's wage levels typically are slightly lower than national averages. <sup>11</sup> Based on these findings, unless particularly notable changes occur statewide, in the northwestern United States, and/or nationally that shift economic and financial infrastructures in behavioral health systems, we forecast continued steady-state patterns of wage stagnation for BH workers in Oregon. The data suggest wages will hover around zero growth for a while with a potential slight trend

<sup>&</sup>lt;sup>11</sup> Bureau of Labor Statistics. (2024, April 3). *May 2023 national occupational employment and wage estimates*. U.S. Department of Labor. <a href="https://www.bls.gov/oes/2023/may/oes\_nat.htm">https://www.bls.gov/oes/2023/may/oes\_nat.htm</a>



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towards decreasing, but the indicators are not consistent or clear enough to formulate a reliable prediction.

Table 13: Recent Wage Growth Changes after Adjusting for Inflation

|  | Percentage of Change<br>in National Wage |               | Inflation-Adjusted Wage<br>Change |               |
|--|--|---------------|-----------------------------------|---------------|
|  | 2022 vs. 2023                            | 2021 vs. 2022 | 2022 vs. 2023                     | 2021 vs. 2022 |
| Psychologists                          | 5%                                       | 4%            | 0.2%                              | -3.7%         |
| Psychiatrists                          | 4%                                       | -1%           | -1.0%                             | -9.0%         |
| Nurse Practitioner                     | 3%                                       | 5%            | -2.1%                             | -2.7%         |
| Marriage and Family Therapists         | 8%                                       | 6%            | 3.2%                              | -2.2%         |
| Mental Health Counselors               | 5%                                       | 3%            | 0.8%                              | -4.6%         |
| SUD or Mental Health<br>Social Workers | 6%                                       | 11%           | 1.2%                              | 3.0%          |

Notably, in other industries, U.S. wage growth has remained relatively steady at approximately 4–5% growth per year, which is similar to the 5% average wage growth shown for these BH workforce positions in the last two year-over-year calculations. We also found that with the exception of marriage and family therapists and clinical social workers, all other occupations in this table have experienced a net decrease in wages when accounting for inflation. An additional consideration to include is wage competition among providers that contributes to staff turnover.

The span for BH workers in Oregon is similar or shorter than 20 years. For example, as shown in Table 14 below, self-reported intent to quit one's job in the next month peaks at 61% for BH workers aged 30–39 and older. It is common that formal intent to quit rates are somewhat correlated with proximity to retirement age as a preplanned life event, but no such finding was observed here.

Critically, self-reported intent to quit one's job shows variable levels of correspondence with actual, voluntary quitting in real-world studies. To provide context regarding the potential percentage of BH workers in Oregon who may actually voluntarily quit their job in the near future, we summarized the effects of three diverse studies that examined the differences between self-reported and actual



voluntary quit rates in organizations. 12,13,14 Moreover, we used two different forms of aggregation in an attempt to further reduce potential error associated with estimating the correspondence between self-reported and actual turnover rates between these studies and the current survey study. We are confident that our estimate is likely conservative—the proportion who actually quit relative to the total who self-reported that they will quit in our survey is likely higher than we are estimating.

Based on the above assumptions, as shown in Table 14 below, we estimate at least 13% of those 18 to 29, 18% of those 30 to 39, 7% of those 40 to 49 and 3% of those 50 and older will voluntarily quit outside of retirement contexts. This suggests that approximately 1 in 5 BH workers aged 30–39 is estimated to voluntarily quit their job in the next month. This finding is concerning not only because this age range encompasses the largest proportion of BH workers in the state, but because these BH workers are often highly skilled and trained staff, such that their departure is likely to have a larger negative impact on the existing workforce at their organization than other positions. For example, those intending to quit their job in the next month averaged a salary of \$137,000, whereas those not intending to quit their job averaged \$64,800 in annual pay. Moreover, there were over 100 participants in each of these two groups, and the standard errors of the mean were less than \$5,000 for each group, which suggest that this difference is very robust.

Table 14: Survey-Based Percentages of Intent to Quit Next Month by Age (n=326)

| Age Group    | Yes | Estimated % Who Will<br>Formally Quit Next Month |
|--------------|-----|--|
| 18 to 29     | 44% | 13%  |
| 30 to 39     | 61% | 18%  |
| 40 to 49     | 25% | 7%   |
| 50 and Older | 10% | 3%   |

It is feasible that those who remain in the BH workforce for over 6 years may reach a functional "cusp" point wherein they are considerably more likely to stay in the field for a longer relative duration than those who did not stay in the field up to that duration.

Another consideration is that the observed average age of BH workers in Oregon in our sample was 34 years old, and the average age of one's first BH position was 31 years old. Therefore, there is

<sup>&</sup>lt;sup>14</sup> Cho, Y. J., & Lewis, G. B. (2012). Turnover intention and turnover behavior: Implications for retaining federal employees. *Review of Public Personnel Administration*, *32*(1), 4–23. https://doi.org/10.1177/0734371X11408701



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<sup>&</sup>lt;sup>12</sup> Peltokorpi, V., Allen, D. G. and Shipp, A. J. (2023) Time to leave? The interaction of temporal focus and turnover intentions in explaining voluntary turnover behavior. *Applied Psychology*, *72* (1). pp. 297–316. https://doi.org/10.1111/apps.12378

<sup>&</sup>lt;sup>13</sup> Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2015). Who really quits? A longitudinal analysis of voluntary turnover among IT personnel. *SIGMIS Database*, *46*(4), 26–47. https://doi.org/10.1145/2843824.2843827

likely a shorter time until retirement for those in the BH workforce in Oregon compared to other fields where individuals are more likely to begin their career in their field of choice in their early to late 20s. When comparing the age of 34 found in our respondents to those who may attain their first job in their preferred career at 25 years old, we observe a notable 23% difference in the number of presumably active years of employment simply based on retirement proximity alone.

On average, those BH workforce in Oregon surveyed reported starting their first full-time job in their early-to-mid 30s, suggesting many needed that time to complete the necessary education and training requirements and others likely came to the BH field after having worked in a different field or industry. Together, the evidence in this section about BH career timelines in Oregon suggests it is likely that the average tenure in the BH field is less than 20 years.

Although the survey does not precisely pinpoint the exact duration of time between when respondents first knew they wanted to work in BH and when they first acquired a position, based on our data on time employed in BH, age, and the year respondents first felt confident that they would pursue a career in BH, we can ascertain that BH workers in Oregon spend on average more than 10 years between thinking they want to work in the field and successfully finding employment. Notably, once committed, the interval between completing their highest education and obtaining a job in the field decreases considerably; once they completed their highest education, it took approximately 6 months for BH respondents in this survey to find a job.

Most students who eventually enter the BH workforce do so late in their undergraduate careers. The majority of Oregon's BH workforce has a bachelor's degree, and we found the following insights:

- 57% did not declare their final major/concentration in college until their junior year or later.
- On average, students changed majors three times before completing their undergraduate program.
- Approximately 80% or higher of those who completed bachelor's and graduate programs reported satisfaction levels (1–5) of 4 or 5 when rating their professors and instructors.
- Over 50% completed an associate's degree, which is a much higher prevalence than national averages across all industries.

### **Inferential and Predictive Analytics**

We compared demographic characteristics of those who did not attempt to earn a bachelor's degree, those who began the degree in Oregon but did not finish, those who began the degree outside of Oregon and did not finish, those who completed their bachelor's degree in Oregon, and those who successfully completed that degree outside of Oregon.

Results showed that Black individuals and individuals reporting multiple races appear to be more likely to start, but not finish, bachelor's programs relative to those reporting their race as white (Table 15). For example, 36% of the sample reporting starting but not completing their bachelor's program



in Oregon were Black, and only 22% of those who successfully completed their bachelor's degree in Oregon were Black. Conversely, although 45% of the sample who began but did not finish their bachelor's program were white, 72% of the sample completing their degree in Oregon were white. Together, these findings suggest potential racial inequities in the likelihood of completing bachelor's degree programs in Oregon. Similarly, those reporting gender identities of man (transgender), woman (transgender), or gender non-conforming or non-binary were more likely to start but not finish their bachelor's degree in Oregon. By discovering these two inequities, we can be more confident than otherwise that there are indeed such inequities present in the BH workforce in Oregon.

Table 15: Comparison by Demographics by Location and Completion Status of Bachelor's Degree

| Variable  | Did Not<br>Attempt | Started in<br>OR, Did<br>Not Finish | Started<br>Outside of<br>OR, Did Not<br>Finish | Completed in OR | Completed<br>Outside<br>of OR |
|---|--------------------|-------------------------------------|--|-----------------|-------------------------------|
|   |                    | Race                                |  |                 |                               |
| American Indian, Native<br>American, or Alaska Native | 5%                 | 0%                                  | 0%   | 1%              | 2%                            |
| Asian   | 2%                 | 5%                                  | 3%   | 1%              | 0%                            |
| Black or African American                             | 10%                | 36%                                 | 28%  | 22%             | 30%                           |
| White   | 73%                | 45%                                 | 61%  | 72%             | 79%                           |
| Native Hawaiian or other<br>Pacific Islander          | 0%                 | 0%                                  | 0%   | 1%              | 0%                            |
| Other   | 3%                 | 5%                                  | 3%   | 1%              | 3%                            |
| Multiple Races  | 8%                 | 9%                                  | 6%   | 2%              | 2%                            |
| Ethnicity   |                    |                                     |  |                 |                               |
| Hispanic  | 10%                | 36%                                 | 36%  | 54%             | 55%                           |
| Gender Identity                                       |                    |                                     |  |                 |                               |
| Man (cisgender)                                       | 31%                | 36%                                 | 42%  | 59%             | 56%                           |
| Man (transgender)                                     | 5%                 | 18%                                 | 14%  | 9%              | 11%                           |
| Woman (cisgender)                                     | 58%                | 36%                                 | 42%  | 31%             | 33%                           |
| Woman (transgender)                                   | 0%                 | 5%                                  | 3%   | 0%              | 0%                            |
| Gender Non-Conforming or Non-Binary                   | 2%                 | 5%                                  | 0%   | 1%              | 0%                            |
| Prefer not to answer                                  | 5%                 | 0%                                  | 0%   | 0%              | 0%                            |



We also compared whether completing a bachelor's degree and whether completing a graduate degree in Oregon versus outside of Oregon were associated with differences in the proportion of respondents who reported specific reasons for pursuing the BH field, the percentage experiencing burnout multiple times a month or more, the percentage reporting intent to quit their job this month, and the percentage intending to quit the BH industry as a whole within the next month.

I see lots of folks really wanting to go into social work, seeing it as allowing them to have the tools in order to make a change. People don't do it for monetary reasons ... There's typically a passion piece around it.

Community college educator



Generally, most existing BH workers surveyed indicated that they pursued a BH career due to the desire to follow their values (i.e., helping others) regardless of the location of their completed higher education program (min.: 50.7% to max.: 64.2%). Notably, 1 in 5 BH workers who completed their bachelor's degree in Oregon cited career guidance as the number one reason they entered the BH workforce, which was roughly four times the percentage of those who received their degree outside of Oregon. Intent to quit one's job in the next month, percentage experiencing burnout multiple times a week or more, and intent to quit the BH industry entirely were above 50% for all four groups. Notably, those whose graduate education was completed outside of Oregon were significantly higher for each of these measures such that roughly 3 out of 4 experienced burnout, intended to quit their job, and intended to leave the field. Based on data from other studies, <sup>15</sup> these burnout and intent to quit findings are much higher than anticipated compared to other states.

Table 16: Comparison of Impetus toward a BH Career, Burnout, and Intent to Quit by Location of Education

|   | Bachelor's Program |           | Graduate Program |           |
|---|--------------------|-----------|------------------|-----------|
| Top Reason for Pursuing a BH Career       | In OR              | Not in OR | In OR            | Not in OR |
| Values (e.g., helping others)             | 54.4%              | 59.5%     | 50.7%            | 64.2%     |
| Career guidance was provided to me        | 20.0%              | 5.4%      | 13.4%            | 20.8%     |
| Lived experience                          | 11.1%              | 10.8%     | 16.4%            | 0.0%      |
| Industry mission and values               | 5.6%               | 5.4%      | 7.5%             | 1.9%      |
| Pay/benefits                              | 2.2%               | 13.5%     | 9.0%             | 1.9%      |
| Works with my lifestyle and/or family     | 3.3%               | 2.7%      | 0.0%             | 7.5%      |
| Intent to Quit                            | In OR              | Not in OR | In OR            | Not in OR |
| Intent to quit job this month             | 64.3%              | 71.2%     | 55.2%            | 78.9%     |
| Burnout % multiple times per week or more | 58.6%              | 62.1%     | 52.6%            | 78.9%     |
| Intent to quit BH industry                | 53.6%              | 57.6%     | 46.6%            | 73.3%     |

# Return on Investment (ROI) Modeling of Current Pipeline and Turnover Outcomes

When combined with existing empirical evidence, our survey data suggest slightly over 1 in 10 (i.e., 12%) of current, active BH workers in Oregon will quit the BH industry entirely in 2025. Although such a prevalence might be considered typical for voluntary turnover at a specific organization or job, when considered at an industry-wide level, this estimate is concerning.

<sup>&</sup>lt;sup>15</sup> Data was derived from internal data collected by AHP. This data is proprietary and not publicly available.



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To estimate the general cost of turnover in Oregon, we first use our weighted percentage estimate of the percentage of Oregon BH workers who will objectively guit in the next month (i.e., 14%) and multiply that percentage by the estimated total of 10,848 BH workers in the state. 16 This results in 1,502 BH workers estimated to guit their BH job in the next month. Next, we use our average salary of those reporting intent to guit their job in the next month (i.e., \$137,000) and multiply that by a conservative estimate of average turnover and replacement costs per worker who voluntarily quits (i.e., 50% of 1-year salary; \$68,500). Last, we multiply \$68,500 in per-worker costs of guitting by the number estimated to quit, 1,502, and we arrive at \$102,887,000 in turnover costs. Notably, this conservative estimate does not take into account that our data suggest over half of those likely to quit their BH job are also indicating that they intend to leave the BH industry entirely. Moreover, this calculation of turnover costs only technically accounts for 1 month. When our turnover estimate is converted to an annual rate, we estimate roughly \$1.2 billion in turnover costs are spent per year in the BH system in Oregon.

# What Pipeline and System Variables Predict Entering the BH Workforce?

Among those with a bachelor's degree or higher as their highest education, we added key workforce variables experienced before and during employment, after education and training were completed. for workers across all industries, to identify which variables predicted prospective, relative odds of entering the BH workforce. Overall, the model was 75% accurate on average for correctly predicting those who did indeed enter the BH workforce and for correctly predicting those who did not enter the BH workforce. We controlled for gender identity and employment duration in one's industry, but neither variable was statistically significant in the model.

#### Key findings include the following:

- Choosing one's college major later in one's college experience was generally associated with elevated odds of entering the BH workforce such that those choosing their major 5 years or later into their time in college were over four times more likely to going into the BH workforce.
- Having a family member or family friend in the BH workforce when a child was associated with 12 times greater relative odds of entering the BH workforce.

<sup>&</sup>lt;sup>16</sup> Zhu, J. M., et al. (2022, February 1). Behavioral health workforce report to the Oregon Health Authority and State Legislature. Center for Health Systems Effectiveness, Oregon Health & Science University. https://www.oregon.gov/oha/ERD/SiteAssets/Pages/Government-Relations/Behavioral%20Health%%20Workforce%20Wage%20Study%20Report-Final%20020122.pdf



Table 17: Factors Increasing the Odds of Entering the BH Workforce

|  | Significant? | Increase in Relative<br>Odds of Going into<br>BH Job |
|--|--------------|--|
| Point Bachelor's Major Chosen (ref: Freshman Year) | Yes          |  |
| Sophomore year                                     | Yes          | 2.5 times greater                                    |
| Junior year  | No           |  |
| Senior year  | Yes          | 2.1 times greater                                    |
| Year 5 or later                                    | Yes          | 4.2 times greater                                    |
| Family or Key Family Friend Was in BH in Childhood | Yes          | 12 times greater                                     |
| Gender Identity                                    | No           |  |
| Stressors (ref: 100% from life)                    | Yes          |  |
| 75% from outside of work                           | Yes          | 7.2 times greater                                    |
| 50% from outside of work                           | Yes          | 2.4 times greater                                    |
| 75% from work                                      | Yes          | 2.7 times greater                                    |
| 100% from work                                     | Yes          | 4.5 times greater                                    |

# What Pipeline and System Variables Predict Leaving the BH Workforce?

Among bachelor's students, when examining predictors of leaving the BH workforce (i.e., intent to quit), we found that the contribution of choosing the major one graduates with later in one's college career was associated with 4.4 times greater odds of leaving the BH workforce when it occurred during senior year, and 15 times greater when it happened any year after senior year. Experiencing half of one's stress from work and half from life was the only stress category that contributed to elevated risk of turnover (i.e., 4.9 greater times for intending to quit). Those reporting experiencing burnout multiple times per month or more demonstrated 7.9 times greater relative odds of intending to quit their job in the next month.

Interestingly, the contribution of having a family member or family friend in the BH workforce as a child was not significantly predictive of turnover, but also in contrast to the past model, we found that identifying as a man (cisgender) was associated with 4.8 times greater relative odds of turnover. The gender-specific finding suggests that at least part of the reason for such a higher prevalence of women in the BH workforce is due to lower attrition for women. However, when considering our findings together from this report, it is moderately likely that this gender effect is one of the few empirical findings that is functionally holding Oregon's BH workforce shortages from reaching critical thresholds.



Table 18: Predicting Turnover Amongst BH Workforce Using Pipeline Factors in Oregon

|  | Significant | Increase in Relative Odds<br>of Leaving BH Job                             |
|--|-------------|--|
| Point Bachelor's Major Chosen (ref: Freshman Year) | Yes         |  |
| Sophomore year                                     | No          |  |
| Junior year  | No          |  |
| Senior year  | Yes         | 4.4 times greater  |
| Year 5 or later                                    | Yes         | 15 time greater  |
| Family or Key Family Friend Was in BH in Childhood | No          |  |
| Gender Identity                                    | Yes         | 4.8 times greater odds Man<br>(cisgender) relative to<br>Woman (cisgender) |
| Stressors (ref: 100% from life)                    | Yes         |  |
| 75% from outside of work                           | No          |  |
| 50% from outside of work                           | Yes         | 4.9 times greater  |
| 75% from work                                      | No          |  |
| 100% from work                                     | No          |  |
| Burnout Multiple Times/Month or More (N vs. Y)     | Yes         | 7.9 times greater  |
| Primary Earner in Household                        | No          |  |

# **Recommendations Relevant to BH Talent Pipeline**

First and foremost, the call for addressing wage gaps and promoting transparent wage scales remains a foundational expectation toward increasing equity and providing an authentic living wage. Without concerted effort and progress on this front, other recommendations and initiatives will too easily contribute to wage suppression and perpetuate occupational segregation.

I think we will have to pay people well to come to this field. It will really have to be a livable, long-term wage, where I think right now it's something people are really driven to do by their heart, they have to step away from because it's not a logical, long-term decision financially.

Clinical director

The recommendations relevant to the BH workforce fall into four categories with notable overlap. Collectively, they call for program expansion, implementation, policy, and public funding opportunities as well as recruitment, retention, and advancement strategies to address gaps and opportunities to growing and expanding a diverse BH workforce.



- 1. Academic and Career Pathways (equity and access, components and quality, uniformity and transparency, career exploration and recruitment, career pathway development and communication, informed by data)
- 2. Compensation, Reimbursement, and Benefits (equity and access, authentic living wage, resources and support toward diversity and representation, informed by data)
- 3. Workforce Development, Education, and Training (equity and access, resources and support to offset cost and historically low return on investment, informed by data)
- 4. Data Collection and Workforce Alignment (equity and access, centralized hub, publicly accessible)

In considering how best to approach and manage these recommendations, HECC's Healthcare Industry Consortium is well-positioned to establish a BH workforce workgroup that can review, prioritize, identify lead stakeholders, help coordinate initiatives, establish accountability, and monitor progress. To aid in this process, recommendations are labeled as short-, medium-, and long-term, which should not be misconstrued as indicating priority. It is likely that many medium- and long-term initiatives will take precedence over some short-term strategies. No matter the timeframe for any initiatives, workforce development is an iterative process that requires constant management, assessment, adjustment, and improvement.

These recommendations stem from a scope of work that focused on the talent pipeline, particularly postsecondary capacity. Over the course of the research, discussions, and writing of this report, as with any sector approach to workforce development, the academic and educational resources provided only part of the picture. The data on intent to quit speak directly to this fact. While the manner in which BH professionals prepare to enter the field certainly impacts their potential career longevity, a matrix of factors contributes to burnout and intent to quit. As recommendations turn to action steps within the scope of the talent pipeline, these should be complimented by initiatives across the BH workforce experience from reducing demand to creating employee-centered workspaces to building new facilities that provide BH services in underserved regions. Additional areas for improvement include prevention programming, workplace culture, leadership training, worker mental health and wellness management, strategic partnerships, infrastructure initiatives, responsible and responsive telehealth and digital education.

The AHP team appreciated the commitment and spirit of the steering committee, whose feedback and insights proved invaluable in crafting this report and, in particular, in formulating the recommendations. To highlight the relevance of their input, the specific components of a recommendation offered or influenced by the committee are identified by an asterisk (\*).

## **Academic and Career Pathways**

**Recommendation:** Evaluate the efficacy of academic pathways leading to employment in the BH sector

The survey data surfaced clear discrepancies between those completing their postsecondary



education in and outside of Oregon that directly affect the choice of and longevity in the BH workforce. The survey data also indicated a strong correlation between frequent and late shifts in deciding on a BH-related major and longevity in the BH field. Among other priority action steps, understanding these dynamics more fully is critical. (short to medium)

 Conduct further investigations into successful practices and outcomes based on educational data (Tables 9, 10, and 11) to determine and help inform initiatives to bolster enrollment, career guidance, and entry into the BH sector. (short to medium)

**Recommendation:** Craft a set of statewide initiatives to provide early career exploration, appropriate work-based learning experiences, and career guidance based on individual interest, skills, and career fit. Recommendations offered or influenced by the steering committee are identified by an asterisk (\*).

The interviews and survey data indicate that there is not a systematic or effective set of practices helping to educate and direct people into the BH workforce. A steering committee might provide the most inclusive and effective design, management, and oversight across these suggested initiatives.

- Design and disseminate a marketing campaign for a broad audience of stakeholders from high school students to legislators that answers a set of basic questions.\* (short to medium)
  - What is BH?
  - What skills are needed or preferred?
  - What is the scope of roles from entry-level direct service to management to analysts?
- Establish and disseminate best practices in BH career guidance to better assess, inform, and encourage job fit (e.g., personality/skill inventories to inform career exploration, encourage a discursive process, informational interviews). (short to medium)
- Define and pilot high school–level curriculum unit(s) or electives that reflect authentic
  rewards and challenges in providing BH care services (e.g., virtual reality/experiential
  modules), including individual and group mentoring to explore and develop transferable
  skills.\* (medium to long)
  - For example, the Career Technical Education Center, operated by Salem-Keizer Public Schools, offers a program that "is designed to provide students with a comprehensive understanding of the complexities surrounding human behavior, mental health, and social well-being." <a href="https://ctec.salkeiz.k12.or.us/programs/behavior-health-and-human-services">https://ctec.salkeiz.k12.or.us/programs/behavior-health-and-human-services</a>
  - Support statewide initiatives to minimize the urban/rural divides in education about and access into the BH field.
- Identify and pilot viable early BH career experiences such as partnering with social service agencies who address food and housing insecurities, job shadowing of nonclinical roles paired with informational interviews with clinicians, and wellness coaches/ambassadors in



- schools. (short to medium)
- Promote BH technician roles as a pathway for younger demographics into the BH workforce, as this is a position that pays well, serves as an entry point, and does not require lived experience.\* (short to medium)

**Recommendation:** Increase access to and financial support for BH-related educational programs to address faculty shortages and regional gaps in access, opportunities, and number of BH professionals. Recommendations offered or influenced by the steering committee are identified by an asterisk (\*).

- Create pipelines for BH faculty with salaries that support the cost of living.\* (long)
- Increase BH degrees offered (community college, bachelor's, and graduate degree levels) and slots within programs.\* (long)
  - Bolster Associate of Arts Oregon Transfer (A.A.O.T.) and Associate of Science Oregon Transfer (A.S.O.T.) degree pathways concentrated in psychology/social work so that students have complete transferable credits in Oregon public universities. (medium to long)
  - Communicate how Associate of Applied Science (A.A.S.) degrees from BH workforce and allied professional Career and Technical Education (CTE) programs in community colleges are a viable pathway. (short to medium)
- Investigate further the trend of declining numbers of students entering the BH field from community colleges (Table 10).\* (short to medium)
- Analyze which credentials offer limited career mobility and which provide broader opportunities to better inform investments intended to bolster the BH workforce. (short to medium)
- Recognize that state funding for educational/training programs needs to come with a 5- to-6year timeline so that programming can be fully developed and sustainable; accreditation for programs can take up to 3 years.\* (short to medium)
- Lower the cost of education to increase access, especially for community college and public universities.\* (medium to long)
- Support financial aid, scholarships, tuition reimbursement, and loan forgiveness programs.\*
- Explore alternative options to cumbersome and confusing loan forgiveness programs.
   (medium to long)



Provide funding for micro-credentials. (medium to long)

I think because the workforce is so diverse that there isn't a common definition of behavioral health education ... We have human service education, we have social work, we have counseling ... We need to do a better job with our vocabulary around human services ... Social workers, counselors, they're human service practitioners, but not all human service practitioners are social workers or counselors. And I think that's where many people become very confused.

Human services educator

**Recommendation:** Create clear language to define BH and manage publicly accessible resources to help guide and support those entering and working within the BH field. Recommendations offered or influenced by the steering committee are identified by an asterisk (\*).

- Convene a working group of stakeholders to create clear language around BH (e.g., as well-defined as physical health) to foster more cohesive and consistent vocabulary and structure.\*
   (short to medium)
- Create information on career pathways that outlines clear steps to obtain various BH careers
  (e.g., human services, social work, counseling) informed by BH professionals' experiences;
  offer comprehensive, publicly accessible career and credentialing information with no fee,
  membership, or registration required. (medium to long)
- Streamline and standardize licensure process and requirements. (long)
  - Research best practices from other states and apply them to Oregon's situation while honoring and preserving a local and responsive quality of care. One example is how Washington State is approaching <u>licensing reciprocity</u>.
  - Utah is working to "reduce unnecessary barriers to workforce development."
  - Massachusetts has created a state-level resource for SUD career development, <u>Career of Substance</u>.
  - Work to create a crosswalk of BH credential and licensure requirements and standard coursework in relevant fields. Important partners might include the <u>Association for Multidisciplinary Education and Research in Substance use and Addiction</u> (AMERSA) and statewide programs to increase knowledge about mental health and BH in other fields and occupations, such as nursing, emergency medical technology, school counseling, business administration, and criminal justice.
  - Explore national initiatives such as the <u>National Center for Interstate Compacts</u>' the <u>Social Work Licensure Compact</u>, as well as the <u>National Mental Health Workforce</u> <u>Acceleration Collaborative</u>.



- Offer region-specific BH career roadmaps to encourage a grow-your-own approach for Tribal, rural, and frontier communities. (short to medium)
- Be transparent about the time commitment and costs to get licensure or further degrees (e.g., supervision hours, costs associated with supervision), so students and newcomers to the field understand the full breadth of requirements.\* (short to medium)

**Recommendation:** Define and expand support for educational pathways from high school and across all postsecondary options. Recommendations offered or influenced by the steering committee are identified by an asterisk (\*).

- Create a curriculum akin to a "premed" path for BH careers that has a recognized value when applying to the next level of education. (medium to long)
  - Work with the Boards of Education to include BH as a focus within health career
    pathways. The <u>National Occupational Competency Testing Institute</u> (NOCTI) could be
    contracted to work with a cohort of leaders to craft curricula and develop
    micro-credentials in BH.
- Expand support for community colleges as a step to bachelor's and beyond; give additional funding to community colleges that have students going on to bachelor's programs.\* (medium to long)
  - Incentivize collaboration (i.e., articulation agreements) with community colleges to facilitate a viable career pathway. (medium to long)
- Work within bachelor's and graduate degree programs to support BH pathways to raise completion rates. (medium to long)

#### Compensation, Reimbursement, and Benefits

Suggestions run from specific initiatives such as pay incentives for specialized positions to more general wage premiums for specialized roles, skills, and providing care to populations that are underserved.

**Recommendation:** Address inequities between community-based and private practice providers. Recommendations offered or influenced by the steering committee are identified by an asterisk (\*).

- Develop progressive reimbursement rates and billable services, which currently undervalue community-based health care as well as client needs and outcomes and fail to support culturally responsive care.\* (medium to long)
- Explore and fund financial incentives for specialized workforce roles (e.g., position/job role, region, underserved communities) that align with union regulations and are equitable.\*
   (medium to long)



 Redefine and provide the resources to community mental health work as a sustainable career choice rather than a stepping stone to private practice.\* (medium to long)

## **Workforce Development, Education, and Training**

As recruitment and retention in the BH field persist as pain points, it is necessary to prioritize further improvements in working conditions (in tandem with authentic living wages) to foster healthier, more inclusive workplace cultures that support retention and attract diverse candidates.

**Recommendation:** Expand funding and resources for education and professional development. Recommendations offered or influenced by the steering committee are identified by an asterisk (\*).

- Expand tuition reimbursement programs; subsidize training opportunities and certification costs.\* (medium to long)
- Subsidize housing, relocation, and childcare costs, particularly in rural areas and within underserved communities.\* (medium to long)
- Establish best practices for supporting workers and supervisors.\*
  - Subsidize clinical supervision. (medium to long)
  - Review and simplify or reduce administrative burdens placed on BH providers and supervisors to strike a balance between ensuring high-quality patient care and overburdening providers. (medium to long)
  - Fund work-based learning experiences (e.g., internships, apprenticeships). (medium to long)
  - o Pair acute clients with appropriately trained providers. (medium to long)
  - Reduce staff-to-client ratio. (medium to long)
- Foster collaboration across agencies and stakeholders.\*
  - Centralize and create a statewide strategy for collaboration with representative working groups tasked with recommending innovative solutions based on needs from the field (i.e., data-driven solutions). (short to medium)
  - Address the administrative burden on care providers and supervisors; rethink, revise, and simplify reporting, billing, and current redundancies in process and protocols. (medium to long)
- Continue to create more partnerships between employers and higher education.\*
  - Add tiered pathways into BH jobs that support education and employment together as one, not separately. (medium to long)



Fund students in predesignated areas/fields that are experiencing shortages and pair this
with a 2-year working commitment (e.g., California Title IV-E program focused on child
welfare). (medium to long)

The fact that we very much have a patchwork approach, so I think there's a lot of left hand doesn't know what the right hand is doing ... All these different people who are all concerned about the same thing ...

Community college BH workforce educator

**Recommendation:** Infuse the principles of equity and inclusion to diversify and expand the talent pipeline. Recommendations offered or influenced by the steering committee are identified by an asterisk (\*).

- Expand training toward a culturally responsive workforce starting with leadership (e.g., training leaders and management to better set the tone for workplace culture, cultural responsiveness, inclusive practices, community engagement and voice).
- Identify and then reduce barriers for BIPOC individuals seeking a career in BH.\* (medium to long)
- Increase opportunities for the workforce to learn evidence-based practices, professional boundaries and safety, professional writing and digital literacy skills, resilience and self-care, cultural humility, and team-based care skills.\* (medium to long)
- Create programming within organizations that have supportive services, mentorship, and wraparound support built in for staff. (short to medium)
- Focus on rural and culturally relevant services.\*
  - Increase access to in-person and virtual BH resources in rural areas with culturally competent providers. (medium to long)
  - Increase the share of providers who are multilingual and represent populations that are underserved, underrepresented, and under-resourced. (medium to long)
- Develop clear career pathways that are supported, well compensated, and sustainable to attract and retain a more diverse workforce.\* (medium to long)
- Use data to intentionally inform initiatives focused on increasing workforce diversity.\*
   (medium to long)

#### **Data Collection and Workforce Alignment**

Another common recommendation is for more comprehensive, coordinated, and intentional use of data to assess workforce diversity and wage gaps to inform strategic decisions, to assess pilot



initiatives and funding, and to track and assess client-centered service delivery, adequacy, and quality. These data then can be used to inform sector-specific workforce development and lifelong learning initiatives.

Recommendation: Create a state data center overseen by a data methodologist.

- Enhance IPEDS and BH data processes/protocols to consistently capture primary, relevant, and current data. (medium to long)
- Make data readily available for others to access and analyze, for use across stakeholders and decision makers. (medium to long)
- Fund a large, primary data collection initiative that leverages an annual longitudinal survey to
  establish benchmarks and assess where legislative and regulatory initiatives are effectively
  improving the workforce. (medium to long)



# **Appendix A: Summary of Existing BH Supply and Demand Reports**

# **Reports Reviewed**

**Effects of the Pandemic on Oregon's Healthcare Workforce**: Summarizes the high-level industry trends in the health care workforce and the findings from a survey of Oregon health care providers. <a href="https://www.oregon.gov/workforceboard/Talent%20Documents/Health%20Industry%20Workforce%2">https://www.oregon.gov/workforceboard/Talent%20Documents/Health%20Industry%20Workforce%2</a> OReport%2011-13-2020.pdf

**Postsecondary Healthcare Education Shortage in Oregon**: Examines the role Oregon postsecondary institutions could play in potentially helping to alleviate the shortage of health care professionals, with emphasis on increasing program capacity in postsecondary nursing programs. <a href="https://www.oregon.gov/highered/strategy-research/Documents/SLDS/STUDY-PostsecondaryHealthcareEducationShortageInOregonFinal.pdf">https://www.oregon.gov/highered/strategy-research/Documents/SLDS/STUDY-PostsecondaryHealthcareEducationShortageInOregonFinal.pdf</a>

**Health Care Trends in Oregon**: Provides an overview of health care trends in Oregon, including unemployment rates, comparisons between industries, employment trends, and vacancies. <a href="https://www.oregon.gov/highered/about/Documents/Industry-Consortia/Healthcare/9-14-23-4.0-Healthcare/Consortia/Healthcare/9-14-23-4.0-Healthcare/Consortia/Healthcare/PolataRefresherAndSurveyResults.pdf">https://www.oregon.gov/highered/about/Documents/Industry-Consortia/Healthcare/9-14-23-4.0-Healthcare/Consortia/Healthcare/PolataRefresherAndSurveyResults.pdf</a>

**Oregon 2024 Talent Assessment**: Looks to gain a comprehensive understanding of the opportunities and challenges within Health Sciences, Information Technology & Analytical Instruments, Construction, and Wood Products Manufacturing industry clusters by using labor market data and workforce and education system coordination, analysis of job postings, interviews with key partners in Oregon, and a statewide employer survey.

https://www.oregon.gov/highered/strategy-research/Documents/Reports/2024-talent-assessment.pdf

**Oregon's Licensed Health Care Workforce Supply**: Examines the number of licensed professionals practicing in Oregon, time spent with patients, where professionals are working, how many professionals there are relative to the population, and how many professionals specialize in primary care, BH, and oral health.

https://www.oregon.gov/oha/HPA/ANALYTICS/HealthCareWorkforceReporting/HWRP Supply Report 2024.pdf

The Diversity of Oregon's Licensed Health Care Workforce: Explores the race, ethnicity, gender, language, and disability makeup of Oregon's nearly 126,000 licensed health care professionals compared with that of the state to understand the racial and ethnic composition of Oregon's licensed health care workforce, how the workforce composition is changing, how the workforce culturally and linguistically represents the population that it serves, and what portion of the workforce report living with some form of disability. <a href="https://www.oregon.gov/oha/HPA/HP-HCW/Meeting%20Documents/4.-Workforce-Diversity-Report.pdf">https://www.oregon.gov/oha/HPA/HP-HCW/Meeting%20Documents/4.-Workforce-Diversity-Report.pdf</a>



## **Evaluation of the Effectiveness of Health Care Provider Incentive Programs in Oregon**:

Evaluates Oregon's health care provider incentives and informs efforts to achieve health equity and increase access to culturally responsive care in urban and rural underserved areas of the state. <a href="https://www.oregon.gov/oha/HPA/HP-HCW/Documents/2023-Evaluation-of-Health-Care-Provider-Incentives-Report.pdf">https://www.oregon.gov/oha/HPA/HP-HCW/Documents/2023-Evaluation-of-Health-Care-Provider-Incentives-Report.pdf</a>

**Substance Use Disorder Financial Analysis**: Analyzes the adequacy of BH structures in the state, including conducting an analysis of BH costs and financing. https://www.oregon.gov/oha/HSD/AMH/DataReports/SUD-Financial-Analysis-Report-0424.pdf

Investing in Culturally and Linguistically Responsive Behavioral Health Care in Oregon: Aims to improve the access, utilization, and outcomes of BH for all Oregonians through a coconstructed, community-led research process to provide OHA's recommendations for culturally and linguistically responsive services at the level of coordinated care organizations (CCOs). https://www.coalitioncommunitiescolor.org/2021-bh-report



# **Appendix B: Current Workforce and Demand Analysis**

# **Reports Reviewed**

**Community Health Workers and Behavioral Health Care:** Examines the role of community health workers (CHWs) in BH services, focusing on state and federal legislation's impact on CHW roles, funding mechanisms, training requirements, and comparing state approaches to determine if reforms are grassroots-driven or top-down initiatives.

https://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1387&context=jhclp

Factors Influencing Turnover and Attrition in the Public Behavioral Health System Workforce: Qualitative Study: Assesses factors contributing to workforce turnover and attrition in Oregon's public BH system, with a focus on challenges in the clinical work environment and insights from BH professionals' firsthand experiences. <a href="https://psychiatryonline.org/doi/abs/10.1176/appi.ps.20220516">https://psychiatryonline.org/doi/abs/10.1176/appi.ps.20220516</a>

An Analysis of Oregon's Behavioral Health Workforce: Describes the composition and distribution of Oregon's licensed and unlicensed BH workforce in relation to population needs, identifying provider shortages and maldistributions that hinder optimal care delivery.

https://www.oregon.gov/oha/HPA/ANALYTICS/HealthCareWorkforceReporting/2019-03-Analysis-Oregon-BH-Workforce.pdf

Behavioral Health Workforce Report to the Oregon Health Authority and State Legislature: Provides recommendations to the Oregon Legislature for achieving equitable, living wages for BH care workers, including peers and family support specialists, aligning with the state's equity goals. <a href="https://www.oregon.gov/oha/ERD/SiteAssets/Pages/Government-">https://www.oregon.gov/oha/ERD/SiteAssets/Pages/Government-</a>
Relations/Behavioral%20Health%20Workforce%20Wage%20Study%20Report-Final%20020122.pdf

Access to Primary, Mental Health, and Specialty Care: a Comparison of Medicaid and Commercially Insured Populations in Oregon: Examines disparities in access to primary and specialty mental health care between Medicaid and commercially insured patients across rural and urban areas in Oregon using comprehensive claims data. <a href="https://pubmed.ncbi.nlm.nih.gov/31659659/">https://pubmed.ncbi.nlm.nih.gov/31659659/</a>

Oregon Substance Use Disorder Services Inventory and Gap Analysis: Conducted by Oregon Health & Science University–Portland State University School of Public Health, in partnership with OHA and the Alcohol and Drug Policy Commission, this report inventories Oregon's SUD services, identifying gaps in prevention, harm reduction, treatment, and recovery resources. <a href="https://www.oregon.gov/oha/HSD/AMH/DataReports/SUD-Gap-Analysis-Inventory-Report.pdf">https://www.oregon.gov/oha/HSD/AMH/DataReports/SUD-Gap-Analysis-Inventory-Report.pdf</a>

**Oregon's Health Care Workforce Needs Assessment 2023**: Provides insights into workforce needs in communities across Oregon as well as general guidance on how to expand and diversify the health care workforce, including distributing health care provider incentives. This is the fourth biennial assessment of the health care workforce per House Bill 3261 (2017).

https://www.oregon.gov/oha/HPA/HP-HCW/Meeting%20Documents/5.-2023-Health-Care-Workforce-Needs-Assessment-Report-January-2023.pdf



Recruitment and Retention Recommendations for Oregon's Behavioral Health Workforce:

Offers strategies for enhancing Oregon's BH workforce recruitment and retention efforts, drawing on research and case studies from beyond the state to support evidence-based recommendations. <a href="https://www.oregon.gov/oha/HPA/ANALYTICS/HealthCareWorkforceReporting/2019-04-Recruitment-Retention-Recs-Oregon-BH-Workforce.pdf">https://www.oregon.gov/oha/HPA/ANALYTICS/HealthCareWorkforceReporting/2019-04-Recruitment-Retention-Recs-Oregon-BH-Workforce.pdf</a>



# **Appendix C: Key Informant Interviews**

## **Challenges and Barriers**

#### **Education**

- Insufficient educational opportunities
  - Faculty shortages and high turnover rates that hinder program stability and scalability
  - Lack of slots in educational programs, paired with lack of faculty or ability to create new programs in areas where more degree programs for BH are needed
  - Lack of a clear pathway for young adults in school to degree/credential and occupational attainment, which creates confusion
- Limited advanced degree programs in BH in Oregon, especially in rural areas
- Financial barriers and incentives
  - High cost of education and low salaries for mental health professionals, which discourage entry into the field
- Lack of preparation in schools for the reality of the workforce, such as clients with high-acuity physical and mental health challenges and insufficient resources to support them
- Loan forgiveness programs that are underutilized due to complexity and lack of awareness
- Faculty recruitment challenges due to lower pay and high demands compared to clinical practice
- Rural areas lacking access to career pathways and educational resources, limiting opportunities for students outside urban centers

#### Barriers outside of BH that impact the field (external social and economic challenges)

- High cost of living
- Lack of community services to support people with BH needs, resulting in overburdened hospital systems
- Lack of providers in rural areas
- Increased or exacerbated BH needs/high acuity due to social determinants of health—global pandemic, housing crisis, opioid epidemic, etc.
- Basic needs, such as internet access and infrastructure, remaining unmet in some rural areas, exacerbating inequities

#### Structural and systemic challenges:

Government/legislative decisions impacting BH system's ability to function



- Excessive administrative regulations governing patient care and licensing
- Prescriptive care mandates
- Lack of stakeholder involvement in decision-making process
- Attorneys making decisions about care acuity contrary to providers
- 2016 decision that allowed private practice to bill to Medicaid for services by new hires
  without a license (who have a master's and register with the board as an associate), which
  created a problem for community BH providers where new hires traditionally started their
  careers—new hires now bypassing community BH for more lucrative private practice
- BH providers and educators working in siloes with limited collaboration across systems of care
- Licensing hurdles, such as nontransferable credentials and costly requirements, which create unnecessary barriers for qualified professionals
- A lack of unified statewide strategic planning, which limits coordinated efforts to address workforce shortages
- Hyper-focus on certificate holders/relaxed qualification standards for QMHA vs. QMHP
- Cumbersome, unclear, and costly licensing requirements (Some master's level students must pay clinicians for their own supervision per week.)
- Lack of alignment with national standards
- Historical underinvestment across the state in BH
- Changes in statutes and a rise in workplace violence, which discourage workers, particularly
  younger individuals, from entering the field
- Staffing laws and union contracts that often clash with practical needs, creating inefficiencies and limiting flexibility (Unions represent county employees, not specifically BH professionals.)

#### BH provider challenges

- Shortage of providers:
  - Psychiatrists and psychiatric nurse practitioners
  - Master's-level clinicians
  - Specialists in clinical subfield (children, adolescents, older adults, LGBTQIA+, etc.)
  - Direct care and residential staff
  - Paraprofessionals and case managers
- High volume and high acuity of clients, specifically in the Medicaid population served by community health providers



- High acuity paired with a "green" workforce
- Increase in telehealth service post-COVID-19; private practice providers not seeing as many people in person, especially in rural areas
- Lack of diversity in provider network (mostly white women)
- New generation of workforce with new workforce norms; new workforce demanding higher wages and quality of life, not willing to do typical entry-level pathway
- Licensed professionals increasingly transitioning to private practice, career development coaching, or other nonclinical roles due to better work-life balance and tangible outcomes
- Fewer professionals willing to work with high-need clients
- Questions about the longevity of new workforce participants and their willingness to stay in the field amidst systemic challenges

#### BH system challenges

- Workforce burnout and retention:
  - Early career practitioners facing burnout from heavy workloads and difficult conditions in community agencies
  - Employers often failing to adapt to workforce needs, offering limited job quality and support
- Need for more competitive wages and benefits
- Moral distress/injury as a result of seeing clients get sicker and having no resources to better support them
- Unions may be of limited assistance because they are designed to be county unions and do not understand the unique challenges for BH
- Employers incurring increased costs of on-the-job training (separate from what is being taught in schools)
- Lack of resources/ability to make referrals
- Need for more peer support
- Mismatched services and level of care needed
- Misplaced focus on more training; hard to do training when overwhelmed with day-to-day work
- Computer literacy and documentation standards lacking
- Lack of career advancement opportunities without challenging educational and licensure barriers



- High administrative burden
- Lack of qualified supervisors

### **Skill Gaps in BH Workforce**

- Lack of specialized and evidence-based training; students leaving schools with a "generalist" approach to BH without sufficient evidence-based methods for working with BH populations; high cost of going back to school to get more specialized training
- Struggles with professional boundaries and safety, especially with the emerging peer workforce
- Regulatory knowledge; a lot of regulations for people with limited education to understand in lower-level paraprofessional and peer roles
- Inadequate clinical supervision; not enough qualified and experienced supervisors available to train the new workforce
- Professional writing and digital literacy; challenge for agencies to train in writing appropriate case notes and the use of record management systems
- Resilience and self-care; high caseloads and moral injury/distress hard to manage with acute client population
- Cultural responsiveness; lack of appropriate training in schools and on the job for cultural responsivity, specifically for American Indian or Alaska Native, Latinx, and rural communities
- Team-based care; new workforce not being adequately trained in schools to work in an interdisciplinary team with other community providers (particularly a problem for community providers working with high-acuity clients)



# **Appendix D: Task 4: Inventory of Postsecondary BH Education and Training Programs in Oregon**

Table A1. High School and Community College BH Field Areas of Study

| Institution  | County   | ZIP                                       | Area of Study (CIP Code) <sup>17</sup>   |
|--|--|---|--|
| High School  |  |   |  |
| Career Technical Education Center, Salem-<br>Keizer Public Schools | Marion County  | 97301                                     | - Behavior Health & Human Services   |
| Community Colleges   |  |   |  |
| Blue Mountain Community College (BMCC)                             | Umatilla County<br>Morrow County<br>Baker County     | 97838<br>97801<br>97862<br>97818<br>97814 | - Nursing (51.3801)<br>- Medical Assisting (51.0801)   |
| 2. Central Oregon Community College (COCC)                         | Deschutes County<br>Crook County<br>Jefferson County | 97756<br>97754<br>97741                   | <ul> <li>Addiction Studies/Human Services (51.1501)</li> <li>Pre-Medicine (51.1102)</li> <li>Practical Nursing (51.3901)</li> <li>Nursing (Registered Nurse [RN]) (51.3801)</li> <li>Medical Assistant (51.0801)</li> <li>Paramedicine (51.0904)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul> |
| Chemeketa Community College (Chemeketa CC)                         | Marion County<br>Polk County<br>Yamhill County       | 97305<br>97338                            | <ul> <li>Pre-Medicine (51.1102)</li> <li>Paramedicine (51.0904)</li> <li>Behavioral Health (51.2212)</li> <li>Addiction Counselor Certification Prep (51.1501)</li> <li>Medical Assisting (51.0801)</li> <li>Practical Nursing (51.3901)</li> <li>Psychology (42.0101)</li> </ul>                                      |

<sup>&</sup>lt;sup>17</sup> Areas of study include degree programs, majors, minors, certificate programs, and transfer degrees. Classification of Instructional Programs (CIP) codes map programs of study throughout the United States.

AIP \_\_\_\_

| Institution                                   | County                            | ZIP                              | Area of Study (CIP Code) <sup>17</sup>  |
|---|-----------------------------------|----------------------------------|---|
|   |                                   |                                  | - Nursing (51.3801)<br>- Sociology (45.1101)  |
| 4. Clackamas Community College (Clackamas CC) | Clackamas County                  | 97045<br>97222<br>97070          | <ul> <li>Alcohol &amp; Drug Counselor Career Pathway (51.1501)</li> <li>Nursing (51.3801)</li> <li>Human Services Generalist (44.0000)</li> <li>Medical Assistant (51.0801)</li> <li>Social Sciences, Human Services, Criminal Justice (45.0101)</li> </ul>   |
| 5. Clatsop Community College (Clatsop CC)     | Clatsop County                    | 97103<br>97138                   | <ul> <li>Nursing (51.3801)</li> <li>Medical Assistant (51.0801)</li> <li>Drug and Alcohol Counselor (51.1501)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul>   |
| 6. Columbia Gorge Community College (CGCC)    | Hood River County<br>Wasco County | 97058                            | <ul><li>Paramedic (51.0904)</li><li>Nursing (51.3801)</li><li>Psychology (42.0101)</li></ul>  |
| 7. Klamath Community College (KCC)            | Klamath County<br>Lake County     | 97603                            | <ul> <li>Nursing (51.3801)</li> <li>Criminal Justice–Addiction Studies (51.1501)</li> <li>Medical Assistant (51.0801)</li> </ul>  |
| 8. Lane Community College (LCC)               | Lane County                       | 97405<br>97401<br>97439<br>97424 | <ul> <li>Nursing (51.3801)</li> <li>Practical Nursing (51.3901)</li> <li>Medical Assistant (51.0801)</li> <li>Paramedicine (51.0904)</li> <li>Pre-Professional Health Professions (51.1199)</li> <li>Human Services—Addiction Studies (51.1501)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul> |
| 9. Linn-Benton Community College (LBCC)       | Linn County<br>Benton County      | 97321<br>97355<br>97330          | <ul> <li>Nursing (51.3801)</li> <li>Medical Assisting (51.0801)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul>   |
| 10. Mt. Hood Community College (MHCC)         | Wasco County<br>Clackamas County  | 97030<br>97220                   | <ul> <li>Mental Health, Social Service, and Addiction<br/>Counseling (51.1599)</li> <li>Behavioral Healthcare Specialist (51.1504)</li> <li>Nursing (51.3801)</li> <li>Medical Assistant (51.0801)</li> <li>Psychology (42.0101)</li> </ul>   |



| Institution                                       | County   | ZIP                              | Area of Study (CIP Code) <sup>17</sup>   |
|---|--|----------------------------------|--|
|   |  |                                  | - Sociology (45.1101)  |
| 11. Oregon Coast Community College (OCCC)         | Lincoln County   | 97366<br>97367<br>97394          | - Nursing (51.3801)<br>- Medical Assisting (51.0801)   |
| 12. Portland Community College (PCC)              | Multnomah County<br>Washington County<br>Yamhill County<br>Clackamas County<br>Columbia County | 97217<br>97229<br>97216<br>97219 | <ul> <li>Addiction Counselor (51.1501)</li> <li>Family and Human Services (51.1504)</li> <li>Emergency Medical Technician-Paramedic (51.0904)</li> <li>Nursing (51.3801)</li> <li>Medical Assisting (51.0801)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul>  |
| 13. Rogue Community College (RCC)                 | Jackson County<br>Josephine County   | 97527<br>97531<br>97501<br>97503 | <ul> <li>Addiction Studies (51.1501)</li> <li>Emergency Services (51.0904)</li> <li>Nursing (51.3801)</li> <li>Practical Nursing (51.3901)</li> <li>Medical Assisting Administrator (51.0801)</li> <li>Paramedicine (51.0904)</li> <li>Pre-Professional Medicine Interest (51.1199)</li> <li>Family Support Services (19.0707)</li> <li>Human Services (44.0701)</li> <li>Psychology (42.0101)</li> <li>Sociology-Social Work</li> </ul> |
| 14. Southwestern Oregon Community College (SWOCC) | Coos County<br>Curry County<br>Douglas County  | 97420<br>97415                   | <ul> <li>Paramedicine (51.0904)</li> <li>Human Services (44.0701)</li> <li>Addiction Studies (51.1501)</li> <li>Nursing (51.3801)</li> <li>Practical Nursing (51.3901)</li> <li>Medical Assistant (51.0801)</li> </ul>   |
| 15. Tillamook Bay Community College (TBCC)        | Tillamook County   | 97141                            | <ul><li>Nursing (51.3801)</li><li>Medical Assistant (51.0801)</li><li>Sociology (45.1101)</li></ul>  |
| 16. Treasure Valley Community College (TVCC)      | Malheur County   | 97914<br>97720                   | <ul> <li>Addiction Studies (51.1501)</li> <li>Medical Assistant (51.0801)</li> <li>Nursing (51.3801)</li> <li>Peer Recovery Coaching (51.1501)</li> </ul>  |



| Institution                        | County         | ZIP   | Area of Study (CIP Code) <sup>17</sup>   |
|------------------------------------|----------------|-------|--|
| 17. Umpqua Community College (UCC) | Douglas County | 97470 | <ul> <li>Addiction Studies (51.1501)</li> <li>Paramedicine (51.0904)</li> <li>Human Services (44.0701)</li> <li>Registered Nursing (51.3801)</li> <li>Practical Nursing (51.3901)</li> <li>Medical Assisting (51.0801)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul> |



Table A2. Public and Private University BH Field Undergraduate and Graduate Degrees and Certificate Programs

| School                                | County              | ZIP                     | Undergraduate (CIP Code)   | Graduate (CIP Code)  | Certificate (CIP<br>Code)  |
|---------------------------------------|---------------------|-------------------------|--|--|--|
| Public Universities (4-yea            | r)                  |                         |  |  |  |
| Eastern Oregon     University (EOU)   | Union<br>County     | 97850                   | <ul> <li>Health &amp; Human Performance:<br/>Community Health (51.2208)</li> <li>Pre-Medicine (51.1102)</li> <li>Pre-Nursing (51.1105)</li> <li>Pre-Physician Assistant<br/>(51.1111)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul>  | - Clinical Mental Health Counseling (51.1508) - Social Work (M.S.W.) (44.0701)   |  |
| Oregon Institute of Technology (OIT)  | Klamath<br>County   | 97601                   | <ul> <li>Applied Psychology (42.2813)</li> <li>Paramedicine (51.0904)</li> <li>Pre-Medical (51.1102)</li> <li>Pre-Osteopathic Medicine (51.1102)</li> </ul>  | <ul><li>Applied Behavior Analysis<br/>(42.2814)</li><li>Marriage and Family<br/>Therapy (51.1505)</li></ul>  | - Applied Behavior<br>Analysis (42.2814)   |
| Oregon State     University (OSU)     | Benton<br>County    | 97331<br>97702<br>97204 | <ul> <li>Human Development and Family Sciences (19.0701)</li> <li>Pre-Medicine (51.1102)</li> <li>Pre-Nursing (51.1105)</li> <li>Pre-Occupational Therapy (51.1107)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul>  | <ul> <li>School Counseling<br/>(13.1101)</li> <li>Human Development and<br/>Family Sciences (19.0701)</li> <li>Psychology (42.2799)</li> <li>Sociology (45.1101)</li> </ul>  | - Clinical Science (42.2801) - Community Health Worker (training program) (51.1504)        |
| 4. Portland State<br>University (PSU) | Multnomah<br>County | 97201                   | <ul> <li>Child, Youth, and Family Studies (44.0702)</li> <li>Human Services (44.0000)</li> <li>Social Work (B.S.W.) (44.0701)</li> <li>Pre-Medicine (51.1102)</li> <li>Pre-Naturopathic Medicine (51.1102)</li> <li>Pre-Nursing (51.1105)</li> <li>Pre-Physician Assistant (51.1111)</li> <li>Psychology (42.0101)</li> <li>Social Science (45.0101)</li> <li>Sociology (45.1101)</li> </ul> | <ul> <li>Applied Behavior Analysis (42.2814)</li> <li>Counseling: Clinical Mental Health (51.1508)</li> <li>Counseling: Clinical Rehabilitation (51.2300)</li> <li>Counseling: Marriage, Couple, and Family (51.1505)</li> <li>Counseling: School (13.1101)</li> </ul> | - Applied Behavior<br>Analysis (42.2814)<br>- Infant/Toddler<br>Mental Health<br>(51.1510) |



| School  | County            | ZIP   | Undergraduate (CIP Code)  | Graduate (CIP Code)  | Certificate (CIP<br>Code)   |
|---|-------------------|-------|---|--|---|
|   |                   |       |   | <ul> <li>Health Promotion:</li> <li>Community Health</li> <li>(51.2208)</li> <li>Social Work (44.0701)</li> <li>Psychology (42.2813)</li> <li>Sociology (45.1101)</li> </ul>   |   |
| 5. Southern Oregon<br>University (SOU)                                  | Jackson<br>County | 97520 | <ul> <li>Population, Public, and<br/>Community Health (51.2201)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul>   | - Clinical Mental Health<br>Counseling (51.1508)   | - Foundations of<br>School Mental &<br>Behavioral Health<br>(13.1101)   |
| 6. University of Oregon (UO)  | Lane County       | 97403 | <ul> <li>Child Behavioral Health (51.2212)</li> <li>Family and Human Services (19.0701)</li> <li>Psychology (42.0101)</li> <li>Sociology &amp; Anthropology (45.1301)</li> </ul>  | <ul> <li>Applied Behavior Analysis (42.2814)</li> <li>Counseling Psychology (42.2803)</li> <li>Couples and Family Therapy (51.1505)</li> <li>School Psychology (42.2805)</li> <li>Psychology (42.2799)</li> <li>Sociology (45.1101)</li> </ul> | - Spanish Language<br>Psychological<br>Services and<br>Research (42.2803)<br>- Child Behavioral<br>Health (51.1508) |
| 7. Western Oregon<br>University (WOU)                                   | Polk County       | 97361 | <ul> <li>Educational Psychology<br/>(42.2806)</li> <li>Pre-Nursing (51.1105)</li> <li>Pre-Medicine (51.1102)</li> <li>Pre-Occupational Therapy<br/>(51.1107)</li> <li>Pre-Physician Assistant<br/>(51.1111)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul> | - Rehabilitation Counseling<br>(51.2300)<br>- Occupational Therapy<br>(51.2306)  | - Mental Health<br>Counseling<br>(51.1508)  |
| Authorized Independent Colleges and Universities Exempt from Regulation |                   |       |   |  |   |
| Bushnell University   | Lane County       | 97401 | <ul> <li>Accelerated Bachelor of Science<br/>in Nursing (B.S.N.) (51.3801)</li> <li>RN to B.S.N. (51.3801)</li> <li>Psychology (42.0101)</li> </ul>   | - Clinical Mental Health<br>Counseling (51.1508)<br>- School Counseling<br>(13.1101)   | - School Counseling<br>(13.1101)  |



| School                   | County                                   | ZIP   | Undergraduate (CIP Code)   | Graduate (CIP Code)  | Certificate (CIP<br>Code)  |
|--------------------------|--|-------|--|--|--|
| 2. Corban University     | Marion<br>County                         | 97317 | <ul> <li>Bachelor of Science in Nursing (51.3801)</li> <li>Counseling Psychology (42.2803)</li> <li>Psychology (42.0101)</li> </ul>  | - Clinical Mental Health<br>Counseling (51.1508)   | - General Counseling<br>Psychology<br>(42.2803)<br>- Marriage & Family<br>(51.1505)<br>- Trauma &<br>Addictions<br>(51.1501) |
| 3. George Fox University | Yamhill<br>County                        | 97132 | <ul> <li>Psychology &amp; Mental Health<br/>Studies (42.0101)</li> <li>Bachelor of Science in Nursing<br/>(51.3801)</li> <li>Pre-Medicine (51.1102)</li> <li>Psychology (42.0101)</li> <li>Social Work (44.0701)</li> <li>Social Welfare (44.0000)</li> <li>Sociology (45.1101)</li> </ul> | <ul> <li>Clinical Psychology<br/>(42.2801)</li> <li>Clinical Mental Health<br/>Counseling (51.1508)</li> <li>Marriage, Couple, and<br/>Family Counseling<br/>(51.1505)</li> <li>Social Work (44.0701)</li> <li>Occupational Therapy<br/>(51.2306)</li> <li>Physician Assistant<br/>(51.0912)</li> <li>Medical Science (51.1401)</li> </ul> | - Trauma-Informed<br>Care (51.1513)<br>- Play Therapy<br>(51.2317)<br>- Behavioral Health<br>(51.2212)                       |
| 4. Lewis & Clark College | Multnomah<br>County                      | 97219 | <ul> <li>Health Studies (15.0001)</li> <li>Psychology (42.0101)</li> <li>Sociology and Anthropology (45.1301)</li> </ul>   | <ul> <li>Art Therapy (51.2301)</li> <li>Marriage, Couple, and<br/>Family Therapy (51.1505)</li> <li>Professional Mental Health<br/>Counseling (51.1508)</li> <li>School Counseling<br/>(13.1101)</li> <li>School Psychology<br/>(42.2805)</li> </ul>   | - Eating Disorders<br>(51.1508)<br>- Ecotherapies<br>(42.2803)<br>- Specialization in<br>Addictions<br>(51.1501)             |
| 5. Linfield University   | Yamhill<br>County<br>Multnomah<br>County | 97317 | <ul> <li>Nursing (B.S.N.) (51.3801)</li> <li>RN to B.S.N. (51.3801)</li> <li>Master's Entry into Professional<br/>Nursing (51.3801)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul>  | - M.S. Nursing (51.3818)   |  |



| School                           | County               | ZIP   | Undergraduate (CIP Code)   | Graduate (CIP Code)   | Certificate (CIP<br>Code)                     |
|----------------------------------|----------------------|-------|--|---|---|
| 6. Pacific University            | Washington<br>County | 97116 | <ul> <li>Social Work (B.S.W.) (44.0701)</li> <li>Pre-Graduate Psychology (42.0101)</li> <li>Pre-Medicine (51.1102)</li> <li>Pre-Occupational Therapy (51.1107)</li> <li>Pre-Physician Assistant (51.1111)</li> <li>Psychology (42.0101)</li> <li>Psychological Health &amp; Well-Being (42.0101)</li> <li>Sociology (45.1101)</li> </ul> | <ul> <li>Applied Clinical Psychology (42.2801)</li> <li>Clinical Psychology (42.02801)</li> <li>Social Work (M.S.W.) (44.0701)</li> <li>Occupational Therapy (51.2306)</li> <li>Medical Science (51.1401)</li> <li>Healthcare Science (51.0701)</li> <li>Physician Assistant (51.0912)</li> </ul> | Special Education<br>Endorsement<br>(13.1001) |
| 7. Reed College                  | Multnomah<br>County  | 97202 | <ul><li>Pre-Medicine (51.1102)</li><li>Psychology (42.0101)</li><li>Sociology (45.1101)</li></ul>  |   |   |
| 8. University of Portland        | Multnomah<br>County  | 97203 | <ul> <li>Social Work (B.S.W.) (44.0701)</li> <li>Nursing (B.S.N.) (51.3801)</li> <li>Psychology (B.A.) (42.0101)</li> <li>Sociology (B.A.) (45.1101)</li> </ul>  | - Doctor of Nursing<br>Practice–Family Nurse<br>Practitioner (51.3805)  |   |
| University of Western     States | Multnomah<br>County  | 97230 |  | Clinical Mental Health     Counseling (51.1508)     Doctor of Naturopathic     Medicine (51.3303)   |   |
| 10. Walla Walla University       | Multnomah<br>County  | 99324 | <ul> <li>Nursing (51.3801)</li> <li>Pre-Medicine (51.1102)</li> <li>Pre-Occupational Therapy (51.1107)</li> <li>Pre-Physician Assistant (51.1111)</li> <li>Social Work (B.S.W.) (44.0701)</li> <li>Social Welfare (44.0000)</li> <li>Psychology (42.0101)</li> <li>Sociology (45.1101)</li> </ul>  | - Social Work (M.S.W. & D.S.W.) (44.0701)   |   |



| School                                      | County              | ZIP   | Undergraduate (CIP Code)  | Graduate (CIP Code)   | Certificate (CIP<br>Code)     |
|---|---------------------|-------|---|---|-------------------------------|
| 11. Warner Pacific<br>University            | Multnomah<br>County | 97215 | <ul> <li>Social Work (B.S.W.) (44.0701)</li> <li>Pre-Medicine (51.1102)</li> <li>Pre-Nursing (51.1105)</li> <li>Pre-Physician Assistant (51.1111)</li> <li>Trauma Intervention (51.1513)</li> <li>Psychology (42.0101)</li> <li>Psychology and Human Development (42.0101)</li> <li>Social Science (45.0101)</li> </ul> |   |                               |
| 12. Western Seminary                        | Multnomah<br>County | 97215 |   | - Counseling (39.0701)  | - Addiction Studies (51.1501) |
| 13. Western University of<br>Health Science | Linn County         | 97355 |   | <ul> <li>Associate Degree in Nursing (A.D.N.)/RN to Master of Science in Nursing (M.S.N.) (51.3801)</li> <li>Doctor of Nursing Practice—Family Nurse Practitioner (D.N.P./FNP) (51.3805)</li> <li>Doctor of Nursing Practice—Psychiatric Mental Health Nurse Practitioner (D.N.P./PMHNP) (51.3810)</li> <li>Doctor of Osteopathic Medicine (D.O.) (51.1202)</li> <li>Medical Sciences (51.1401)</li> <li>B.S.N. to M.S.N. (58.3818)</li> <li>Physician Assistant Studies (51.0912)</li> </ul> |                               |



| School                                      | County                                       | ZIP   | Undergraduate (CIP Code)   | Graduate (CIP Code)              | Certificate (CIP<br>Code) |  |  |  |
|---|--|-------|--|----------------------------------|---------------------------|--|--|--|
| 14. Willamette University                   | Multnomah<br>County<br>Marion<br>County      | 97301 | <ul><li>Pre-Health (51.0000)</li><li>Psychology (42.0101)</li><li>Sociology (45.1101)</li></ul>  |                                  |                           |  |  |  |
| Authorized Private Colleg                   | Authorized Private Colleges and Universities |       |  |                                  |                           |  |  |  |
| Carrington College -     Portland           | Multnomah<br>County                          | 97232 | <ul> <li>Associate Degree in Nursing (51.3801)</li> <li>Registered Nurse to B.S.N. (51.3801)</li> <li>Medical Assistant (51.0801)</li> <li>Nursing Bridge or licensed vocational nurse (LVN) to A.D.N. (51.3901)</li> <li>Practical Nursing (51.3901)</li> <li>Vocational Nursing (51.3901)</li> </ul> |                                  |                           |  |  |  |
| College of Emergency Services               | Clackamas<br>County                          | 97222 | - Paramedic (EMT) (51.0904)  |                                  |                           |  |  |  |
| Concorde Career College                     | Multnomah<br>County                          | 97232 | <ul> <li>Nursing (Pre-Licensure) (51.3801)</li> <li>Practical/Vocational Nursing (51.3901)</li> <li>Registered Nursing to B.S.N. (51.3801)</li> <li>Medical Assistant (51.0801)</li> </ul>   |                                  |                           |  |  |  |
| 4. Gutenberg College                        |  | 97403 |  |                                  |                           |  |  |  |
| 5. Institute of Technology                  | Marion<br>County                             | 97305 | - Practical Nursing (51.3901)<br>- Medical Assistant (51.0801)   |                                  |                           |  |  |  |
| 6. Multnomah Campus of<br>Jessup University | Multnomah<br>County                          | 97220 | - Psychology (42.0101)   | - Counseling (M.A.)<br>(51.1501) |                           |  |  |  |
| 7. New Hope Christian College               | Lane County                                  | 97405 | - Christian Counseling (39.0701)   |                                  |                           |  |  |  |



| School            | County              | ZIP   | Undergraduate (CIP Code)  | Graduate (CIP Code) | Certificate (CIP<br>Code) |
|-------------------|---------------------|-------|---|---------------------|---------------------------|
| 8. Sumner College | Multnomah<br>County | 97220 | - Registered Nursing to B.S.N. (51.3801) - Nursing (B.S.N.) (51.3801) - Practical Nursing (LPN) (51.3901) |                     |                           |

## **Schools with No BH-related Offerings**

- 1. Embry-Riddle Aeronautical University
- Mount Angel Seminary
   National University of Natural Medicine
- 4. Northwest College of the Bible
- 5. American College of Healthcare Science
- 6. American Denturist College
- 7. A.T. Still University
- 8. Bergin College of Canine Studies
- Maitripa College
   Pacific Bible College
- 11. Pacific Evangelical School of Ministry
- 12. Portland Fashion Institute

**Table A3. Institutions Offering Degrees Aligned with Professional Job Titles** 

| Job Title                         | Degree     | Institutions Offering:   |
|-----------------------------------|------------|--|
| 1. Doctor of Osteopathic Medicine | D.O.       | Western University of Health Sciences                                    |
| 2. Occupational Therapy Doctorate | O.T.D.     | George Fox University<br>Pacific University<br>Western Oregon University |
| 3. Nurse Practitioner             | D.N.PFNP   | University of Portland<br>Western University of Health Sciences          |
| 4. Psychiatric Nurse Practitioner | D.N.PPMHNP | Western University of Health Sciences                                    |
| 5. Naturopathic Doctor            | N.D.       | University of Western States   |



|    | Job Title                                       | Degree                        | Institutions Offering:   |
|----|---|-------------------------------|--|
| 6. | Psychologist                                    | Psy.D.                        | George Fox University<br>Northwest University–Oregon<br>Pacific University   |
| 7. | Psychologist                                    | Ph.D.                         | University of Oregon<br>Pacific University   |
| 8. | School Psychologist                             | Ph.D.                         | University of Oregon   |
| 9. | Doctor of Social Work                           | D.S.W.                        | Walla Walla University   |
| 10 | . Marriage and Family Therapist (MFT)           | Master's-MFT                  | Oregon Tech<br>Whitworth University  |
| 11 | . Licensed Marriage and Family Therapist (LMFT) | Master's (LMFT preparation)   | Portland State University University of Oregon George Fox University Lewis & Clark University  |
| 12 | . Licensed Professional Counselor (LPC)         | Master's (LPC<br>preparation) | Portland State University Western Oregon University Bushnell University Corban University George Fox University Multnomah University and Biblical Seminary Northwest University—Oregon Pacific University Western Seminary |
| 13 | Qualified Mental Health Professional            | M.A.                          | Pacific University   |
| 14 | . Clinical Mental Health Counseling             | M.S./M.Coun.                  | Eastern Oregon University Oregon State University Portland State University Bushnell University Corban University George Fox University Northwest University—Oregon University of Western States                           |



| Job Title                                | Degree          | Institutions Offering:  |
|--|-----------------|---|
| 15. School Counselor                     | M.A./M.S./M.Ed. | Portland State University Whitworth University Bushnell University Lewis & Clark University                         |
| 16. Social Worker                        | M.S.W.          | Portland State University<br>George Fox University<br>Pacific University<br>Walla Walla University                  |
| 17. School Psychologist                  | M.S.            | University of Oregon  |
| 18. Applied Behavior Analyst             | M.A./M.S.       | Portland State University<br>University of Oregon   |
| 19. Art Therapist                        | M.A./M.S.       | Lewis & Clark University  |
| 20. Professional Mental Health Counselor | M.A.            | Lewis & Clark University  |
| 21. Nursing                              | M.S.N.          | Linfield University   |
| 22. Physician Assistant                  | M.P.A.S.        | Pacific University<br>George Fox University<br>Oregon Health & Science University                                   |
| 23. Social Work (B.S.W.)                 | B.S.W.          | George Fox University Pacific University Portland State University University of Portland Warner Pacific University |
| 24. Nurse (B.S.N.)                       | B.S.N.          | Bushnell University Corban University George Fox University Linfield University Northwest University                |
| 25. Addiction Counselor                  | A.A.S.          | Portland CC   |



| Job Title              | Degree      | Institutions Offering:   |
|------------------------|-------------|--|
| 26. Nursing            | A.A.S./A.S. | Blue Mountain CC Chemeketa CC Clackamas CC Clatsop CC Columbia Gorge CC Lane CC Linn-Benton CC Mt. Hood CC Oregon Coast CC Portland CC Rogue CC Southwestern Oregon CC Tillamook Bay CC Treasure Valley CC Umpqua CC |
| 27. Health Professions | A.A.O.T.    | Clackamas CC<br>Lane CC  |
| 28. Paramedicine       | A.A.S.      | Central Oregon CC Chemeketa CC Columbia Gorge CC Lane CC Portland CC Rogue CC Southwestern Oregon CC Umpqua CC   |
| 29. Nursing Assistant  | Certificate | Central Oregon CC Clackamas CC Clatsop CC Columbia Gorge CC Linn-Benton CC Mt. Hood CC Oregon Coast CC Tillamook Bay CC Umpqua CC  |



| Job Title                                | Degree      | Institutions Offering:   |
|--|-------------|--|
| 30. Registered Nursing                   | A.A.S.      | Central Oregon CC<br>Umpqua CC   |
| 31. Practical Nursing                    | Certificate | Central Oregon CC Chemeketa CC Oregon Coast CC Southwestern Oregon CC Umpqua CC  |
| 32. Basic Nursing Assistant              | Certificate | Chemeketa CC   |
| 33. Medical Assistant                    | Certificate | Blue Mountain CC Central Oregon CC Chemeketa CC Clackamas CC Clatsop CC Columbia Gorge CC Linn-Benton CC Mt. Hood CC Oregon Coast CC Rogue CC Southwestern Oregon CC Tillamook Bay CC Treasure Valley CC Umpqua CC |
| 34. Medical Assisting                    | A.A.S.      | Chemeketa CC<br>Treasure Valley CC   |
| 35. Certified Alcohol and Drug Counselor | Certificate | Central Oregon CC Chemeketa CC Clackamas CC Southwestern Oregon CC Treasure Valley CC  |
| 36. Peer Support Specialist              |             | Central Oregon CC  |
| 37. Community Health Worker              | Certificate | Central Oregon CC  |



| Job Title                                      | Degree      | Institutions Offering:   |
|--|-------------|--|
| 38. Emergency Medical Technician               | Certificate | Blue Mountain CC Central Oregon CC Clackamas CC Clatsop CC Columbia Gorge CC Mt. Hood CC Oregon Coast CC Rogue CC Southwestern Oregon CC Tillamook Bay CC Treasure Valley CC Umpqua CC |
| 39. Human Services Generalist                  | Certificate | Clackamas CC   |
| 40. Behavioral Health Care Specialist          | Certificate | Mt. Hood CC  |
| 41. Youth Worker                               | Certificate | Mt. Hood CC  |
| 42. Recovery Coach                             | Certificate | Treasury Valley CC   |
| 43. Child Development Associate                | Certificate | Treasury Valley CC   |
| 44. Case Aide                                  | Certificate | Umpqua CC  |
| 45. Board Certified Assistant Behavior Analyst | Certificate | Oregon Institute of Technology<br>Portland State University<br>University of Oregon  |



Table A4. Community College Program Counts of BH Areas of Study by County and Region

| Community College                | Acronym      |
|----------------------------------|--------------|
| Blue Mountain Community College  | BMCC         |
| Central Oregon Community College | COCC         |
| Chemeketa Community College      | Chemeketa CC |
| Clackamas Community College      | Clackamas CC |
| Clatsop Community College        | Clatsop CC   |
| Columbia Gorge Community College | CGCC         |
| Klamath Community College        | KCC          |
| Lane Community College           | LCC          |

| Community College                     | Acronym |
|---------------------------------------|---------|
| Linn-Benton Community College         | LBCC    |
| Mount Hood Community College          | MHCC    |
| Oregon Coast Community College        | OCCC    |
| Portland Community College            | PCC     |
| Rogue Community College               | RCC     |
| Southwestern Oregon Community College | SWOCC   |
| Tillamook Bay Community College       | TBCC    |
| Treasure Valley Community College     | TVCC    |
| Umpqua Community College              | UCC     |

| _                | Addiction<br>Studies/BH | Emergency<br>Services,<br>Medical<br>Assisting | Human &<br>Family<br>Support<br>Services | Nursing | Pre-<br>Medicine/<br>Health<br>Professions | Psychology | Sociology | Grand Total |
|------------------|-------------------------|--|--|---------|--|------------|-----------|-------------|
| Central Oregon   | 4                       | 4  | 3  | 9       | 3  | 5          | 4         | 32          |
| Crook County     | 1                       | 1  | 1  | 2       | 1  | 1          | 1         | 8           |
| COCC             | 1                       | 1  | 1  | 2       | 1  | 1          | 1         | 8           |
| Deschutes County | 1                       | 1  | 1  | 2       | 1  | 1          | 1         | 8           |
| COCC             | 1                       | 1  | 1  | 2       | 1  | 1          | 1         | 8           |
| Jefferson County | 1                       | 1  | 1  | 2       | 1  | 1          | 1         | 8           |
| COCC             | 1                       | 1  | 1  | 2       | 1  | 1          | 1         | 8           |
| Klamath County   |                         |  |  | 1       |  |            |           | 1           |
| KCC              |                         |  |  | 1       |  |            |           | 1           |



|                  | Addiction<br>Studies/BH | Emergency<br>Services,<br>Medical<br>Assisting | Human & Family Support Services | Nursing | Pre-<br>Medicine/<br>Health<br>Professions | Psychology | Sociology | Grand Total |
|------------------|-------------------------|--|---------------------------------|---------|--|------------|-----------|-------------|
| Wasco County     | 1                       | 1  |                                 | 2       |  | 2          | 1         | 7           |
| CGCC             |                         | 1  |                                 | 1       |  | 1          |           | 3           |
| MHCC             | 1                       |  |                                 | 1       |  | 1          | 1         | 4           |
| Clackamas County | 3                       | 1  | 2                               | 3       | 1  | 2          | 2         | 14          |
| Clackamas County | 3                       | 1  | 2                               | 3       | 1  | 2          | 2         | 14          |
| Clackamas CC     | 1                       |  | 2                               | 1       | 1  |            |           | 5           |
| MHCC             | 1                       |  |                                 | 1       |  | 1          | 1         | 4           |
| PCC              | 1                       | 1  |                                 | 1       |  | 1          | 1         | 5           |
| Eastern Oregon   | 2                       | 1  |                                 | 5       |  |            |           | 8           |
| Baker County     |                         |  |                                 | 1       |  |            |           | 1           |
| BMCC             |                         |  |                                 | 1       |  |            |           | 1           |
| Malheur County   | 2                       | 1  |                                 | 2       |  |            |           | 5           |
| TVCC             | 2                       | 1  |                                 | 2       |  |            |           | 5           |
| Morrow County    |                         |  |                                 | 1       |  |            |           | 1           |
| BMCC             |                         |  |                                 | 1       |  |            |           | 1           |
| Umatilla County  |                         |  |                                 | 1       |  |            |           | 1           |
| ВМСС             |                         |  |                                 | 1       |  |            |           | 1           |
| Lane County      |                         | 1  | 1                               | 1       | 1  | 1          | 1         | 6           |
| Lane County      |                         | 1  | 1                               | 1       | 1  | 1          | 1         | 6           |
| LCC              |                         | 1  | 1                               | 1       | 1  | 1          | 1         | 6           |
| Northwest Oregon | 1                       | 1  | 1                               | 5       |  | 3          | 4         | 15          |



|                     | Addiction<br>Studies/BH | Emergency<br>Services,<br>Medical<br>Assisting | Human &<br>Family<br>Support<br>Services | Nursing | Pre-<br>Medicine/<br>Health<br>Professions | Psychology | Sociology | Grand Total |
|---------------------|-------------------------|--|--|---------|--|------------|-----------|-------------|
| Benton County       |                         |  | 1  | 1       |  | 1          | 1         | 4           |
| LBCC                |                         |  | 1  | 1       |  | 1          | 1         | 4           |
| Clatsop County      |                         |  |  | 1       |  | 1          | 1         | 3           |
| Clatsop CC          |                         |  |  | 1       |  | 1          | 1         | 3           |
| Columbia County     | 1                       | 1  |  | 1       |  | 1          | 1         | 5           |
| PCC                 | 1                       | 1  |  | 1       |  | 1          | 1         | 5           |
| Lincoln County      |                         |  |  | 1       |  |            |           | 1           |
| occc                |                         |  |  | 1       |  |            |           | 1           |
| Tillamook County    |                         |  |  | 1       |  |            | 1         | 2           |
| TBCC                |                         |  |  | 1       |  |            | 1         | 2           |
| Portland Metro      | 2                       | 2  |  | 2       |  | 2          | 2         | 10          |
| Multnomah County    | 1                       | 1  |  | 1       |  | 1          | 1         | 5           |
| PCC                 | 1                       | 1  |  | 1       |  | 1          | 1         | 5           |
| Washington County   | 1                       | 1  |  | 1       |  | 1          | 1         | 5           |
| PCC                 | 1                       | 1  |  | 1       |  | 1          | 1         | 5           |
| Rogue Valley        | 2                       | 4  | 4  | 2       | 2  | 2          | 2         | 18          |
| Jackson County      | 1                       | 2  | 2  | 1       | 1  | 1          | 1         | 9           |
| RCC                 | 1                       | 2  | 2  | 1       | 1  | 1          | 1         | 9           |
| Josephine County    | 1                       | 2  | 2  | 1       | 1  | 1          | 1         | 9           |
| RCC                 | 1                       | 2  | 2  | 1       | 1  | 1          | 1         | 9           |
| Southwestern Oregon |                         | 4  | 4  | 4       |  | 1          | 1         | 14          |



|                   | Addiction<br>Studies/BH | Emergency<br>Services,<br>Medical<br>Assisting | Human &<br>Family<br>Support<br>Services | Nursing | Pre-<br>Medicine/<br>Health<br>Professions | Psychology | Sociology | Grand Total |
|-------------------|-------------------------|--|--|---------|--|------------|-----------|-------------|
| Coos County       |                         | 1  | 1  | 1       |  |            |           | 3           |
| SWOCC             |                         | 1  | 1  | 1       |  |            |           | 3           |
| Curry County      |                         | 1  | 1  | 1       |  |            |           | 3           |
| SWOCC             |                         | 1  | 1  | 1       |  |            |           | 3           |
| Douglas County    |                         | 2  | 2  | 2       |  | 1          | 1         | 8           |
| SWOCC             |                         | 1  | 1  | 1       |  |            |           | 3           |
| UCC               |                         | 1  | 1  | 1       |  | 1          | 1         | 5           |
| Willamette Valley | 3                       | 5  | 1  | 6       | 2  | 4          | 4         | 25          |
| Linn County       |                         |  | 1  | 1       |  | 1          | 1         | 4           |
| LBCC              |                         |  | 1  | 1       |  | 1          | 1         | 4           |
| Marion County     | 1                       | 2  |  | 2       | 1  | 1          | 1         | 8           |
| Chemeketa CC      | 1                       | 2  |  | 2       | 1  | 1          | 1         | 8           |
| Polk County       | 1                       | 2  |  | 2       | 1  | 1          | 1         | 8           |
| Chemeketa CC      | 1                       | 2  |  | 2       | 1  | 1          | 1         | 8           |
| Yamhill County    | 1                       | 1  |  | 1       |  | 1          | 1         | 5           |
| PCC               | 1                       | 1  |  | 1       |  | 1          | 1         | 5           |
| Grand Total       | 17                      | 23   | 16                                       | 37      | 9  | 20         | 20        | 142         |



Table A5. Undergraduate Program Counts of BH Areas of Study by County and Region

|   | Child, Youth,<br>and Family<br>Studies | Community<br>Health & Human<br>Services | Counseling,<br>Trauma<br>Intervention | Health Studies<br>& Pre-Health<br>Professions | Medical<br>Assisting &<br>Paramedicine | Nursing | Psychology | Social Work &<br>Social Welfare | Sociology &<br>Social<br>Science | Grand Total |
|---|--|---|---------------------------------------|---|--|---------|------------|---------------------------------|----------------------------------|-------------|
| Central Oregon  |  |   |                                       | 2   | 1                                      |         | 1          |                                 |                                  | 4           |
| Klamath County  |  |   |                                       | 2   | 1                                      |         | 1          |                                 |                                  | 4           |
| Public Universities   |  |   |                                       | 2   | 1                                      |         | 1          |                                 |                                  | 4           |
| Oregon Institute of Technology  |  |   |                                       | 2   | 1                                      |         | 1          |                                 |                                  | 4           |
| Clackamas County  |  |   |                                       |   | 1                                      |         |            |                                 |                                  | 1           |
| Clackamas County  |  |   |                                       |   | 1                                      |         |            |                                 |                                  | 1           |
| Authorized Private Colleges and Universities                                  |  |   |                                       |   | 1                                      |         |            |                                 |                                  | 1           |
| College of Emergency<br>Services  |  |   |                                       |   | 1                                      |         |            |                                 |                                  | 1           |
| Eastern Oregon  |  | 1                                       |                                       | 2   |  | 1       | 1          |                                 | 1                                | 6           |
| Union County  |  | 1                                       |                                       | 2   |  | 1       | 1          |                                 | 1                                | 6           |
| Public Universities   |  | 1                                       |                                       | 2   |  | 1       | 1          |                                 | 1                                | 6           |
| Eastern Oregon University   |  | 1                                       |                                       | 2   |  | 1       | 1          |                                 | 1                                | 6           |
| Lane County   | 2                                      |   | 1                                     |   |  | 2       | 2          |                                 | 1                                | 8           |
| Lane County   | 2                                      |   | 1                                     |   |  | 2       | 2          |                                 | 1                                | 8           |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |  |   |                                       |   |  | 2       | 1          |                                 |                                  | 3           |
| Bushnell University   |  |   |                                       |   |  | 2       | 1          |                                 |                                  | 3           |
| Authorized Private Colleges and Universities                                  |  |   | 1                                     |   |  |         |            |                                 |                                  | 1           |
| New Hope Christian College  |  |   | 1                                     |   |  |         |            |                                 |                                  | 1           |
| Public Universities   | 2                                      |   |                                       |   |  |         | 1          |                                 | 1                                | 4           |
| University of Oregon  | 2                                      |   |                                       |   |  |         | 1          |                                 | 1                                | 4           |
| Northwest Oregon  | 1                                      |   |                                       | 2   |  | 1       | 1          |                                 | 1                                | 6           |
| Benton County   | 1                                      |   |                                       | 2   |  | 1       | 1          |                                 | 1                                | 6           |

|   | Child, Youth,<br>and Family<br>Studies | Community<br>Health & Human<br>Services | Counseling,<br>Trauma<br>Intervention | Health Studies<br>& Pre-Health<br>Professions | Medical<br>Assisting &<br>Paramedicine | Nursing | Psychology | Social Work &<br>Social Welfare | Sociology &<br>Social<br>Science | Grand Total |
|---|--|---|---------------------------------------|---|--|---------|------------|---------------------------------|----------------------------------|-------------|
| Public Universities   | 1                                      |   |                                       | 2   |  | 1       | 1          |                                 | 1                                | 6           |
| Oregon State University   | 1                                      |   |                                       | 2   |  | 1       | 1          |                                 | 1                                | 6           |
| Portland Metro  | 1                                      | 1                                       | 1                                     | 14  | 2                                      | 18      | 13         | 6                               | 10                               | 66          |
| Multnomah County  | 1                                      | 1                                       | 1                                     | 11  | 2                                      | 18      | 10         | 5                               | 9                                | 58          |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |  |   | 1                                     | 8   |  | 6       | 8          | 4                               | 7                                | 34          |
| Lewis & Clark College   |  |   |                                       | 1   |  |         | 1          |                                 | 1                                | 3           |
| Linfield University   |  |   |                                       |   |  | 3       | 1          |                                 | 1                                | 5           |
| Reed College  |  |   |                                       | 1   |  |         | 1          |                                 | 1                                | 3           |
| University of Portland  |  |   |                                       |   |  | 1       | 1          | 1                               | 1                                | 4           |
| Walla Walla University  |  |   |                                       | 3   |  | 1       | 1          | 2                               | 1                                | 8           |
| Warner Pacific University   |  |   | 1                                     | 2   |  | 1       | 2          | 1                               | 1                                | 8           |
| Willamette University   |  |   |                                       | 1   |  |         | 1          |                                 | 1                                | 3           |
| Authorized Private Colleges and Universities                                  |  |   |                                       |   | 2                                      | 11      | 1          |                                 |                                  | 14          |
| Carrington College - Portland   |  |   |                                       |   | 1                                      | 5       |            |                                 |                                  | 6           |
| Concorde Career College   |  |   |                                       |   | 1                                      | 3       |            |                                 |                                  | 4           |
| Multnomah Campus of Jessup<br>University                                      |  |   |                                       |   |  |         | 1          |                                 |                                  | 1           |
| Sumner College  |  |   |                                       |   |  | 3       |            |                                 |                                  | 3           |
| Public Universities   | 1                                      | 1                                       |                                       | 3   |  | 1       | 1          | 1                               | 2                                | 10          |
| Portland State University   | 1                                      | 1                                       |                                       | 3   |  | 1       | 1          | 1                               | 2                                | 10          |
| Washington County   |  |   |                                       | 3   |  |         | 3          | 1                               | 1                                | 8           |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |  |   |                                       | 3   |  |         | 3          | 1                               | 1                                | 8           |
| Pacific University  |  |   |                                       | 3   |  |         | 3          | 1                               | 1                                | 8           |
| Rogue Valley  |  | 1                                       |                                       |   |  |         | 1          |                                 | 1                                | 3           |
| Jackson County  |  | 1                                       |                                       |   |  |         | 1          |                                 | 1                                | 3           |



|   | Child, Youth,<br>and Family<br>Studies | Community<br>Health & Human<br>Services | Counseling,<br>Trauma<br>Intervention | Health Studies<br>& Pre-Health<br>Professions | Medical<br>Assisting &<br>Paramedicine | Nursing | Psychology | Social Work &<br>Social Welfare | Sociology &<br>Social<br>Science | Grand Total |
|---|--|---|---------------------------------------|---|--|---------|------------|---------------------------------|----------------------------------|-------------|
| Public Universities   |  | 1                                       |                                       |   |  |         | 1          |                                 | 1                                | 3           |
| Southern Oregon University  |  | 1                                       |                                       |   |  |         | 1          |                                 | 1                                | 3           |
| Willamette Valley   |  |   | 1                                     | 5   | 1                                      | 7       | 7          | 2                               | 4                                | 27          |
| Marion County   |  |   | 1                                     | 1   | 1                                      | 2       | 2          |                                 | 1                                | 8           |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |  |   | 1                                     | 1   |  | 1       | 2          |                                 | 1                                | 6           |
| Corban University   |  |   | 1                                     |   |  | 1       | 1          |                                 |                                  | 3           |
| Willamette University   |  |   |                                       | 1   |  |         | 1          |                                 | 1                                | 3           |
| Authorized Private Colleges and Universities                                  |  |   |                                       |   | 1                                      | 1       |            |                                 |                                  | 2           |
| Institute of Technology   |  |   |                                       |   | 1                                      | 1       |            |                                 |                                  | 2           |
| Yamhill County  |  |   |                                       | 1   |  | 4       | 3          | 2                               | 2                                | 12          |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |  |   |                                       | 1   |  | 4       | 3          | 2                               | 2                                | 12          |
| George Fox University   |  |   |                                       | 1   |  | 1       | 2          | 2                               | 1                                | 7           |
| Linfield University   |  |   |                                       |   |  | 3       | 1          |                                 | 1                                | 5           |
| Polk County   |  |   |                                       | 3   |  | 1       | 2          |                                 | 1                                | 7           |
| Public Universities   |  |   |                                       | 3   |  | 1       | 2          |                                 | 1                                | 7           |
| Western Oregon University   |  |   |                                       | 3   |  | 1       | 2          |                                 | 1                                | 7           |
| Grand Total   | 4                                      | 3                                       | 3                                     | 25  | 5                                      | 29      | 26         | 8                               | 18                               | 121         |



Table A6. Graduate Program Counts of BH Areas of Study by County and Region

|   | Applied Behavior<br>Analysis | Clinical &<br>Professional Mental<br>Health Counseling | Clinical Psychology | Counseling | Doctor of<br>Naturopathic<br>Medicine | Doctor of<br>Osteopathic Medicine<br>(D.O.) | Marriage, Couple, and<br>Family Therapy and<br>Counseling | Medical, Health, and<br>Family Sciences &<br>Health Promotion | Nursing | Occupational<br>Therapy | Physician Assistant | Psychology | Rehabilitation<br>Counseling | School Counseling &<br>Psychology | Social Work | Sociology | Grand Total |
|---|------------------------------|--|---------------------|------------|---------------------------------------|---|---|---|---------|-------------------------|---------------------|------------|------------------------------|-----------------------------------|-------------|-----------|-------------|
| Lane County   | 1                            | 1  |                     | 1          |                                       |   | 1   |   |         |                         |                     | 1          |                              | 2                                 |             | 1         | 8           |
| Lane County   | 1                            | 1  |                     | 1          |                                       |   | 1   |   |         |                         |                     | 1          |                              | 2                                 |             | 1         | 8           |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              | 1                                 |             |           | 2           |
| Bushnell University   |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              | 1                                 |             |           | 2           |
| Public Universities   | 1                            |  |                     | 1          |                                       |   | 1   |   |         |                         |                     | 1          |                              | 1                                 |             | 1         | 6           |
| University of Oregon  | 1                            |  |                     | 1          |                                       |   | 1   |   |         |                         |                     | 1          |                              | 1                                 |             | 1         | 6           |
| Willamette Valley   |                              | 2  | 1                   |            |                                       | 1   | 1   | 2   | 5       | 2                       | 2                   |            | 1                            |                                   | 1           |           | 18          |
| Marion County   |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Corban University   |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Yamhill County  |                              | 1  | 1                   |            |                                       |   | 1   | 1   | 1       | 1                       | 1                   |            |                              |                                   | 1           |           | 8           |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |                              | 1  | 1                   |            |                                       |   | 1   | 1   | 1       | 1                       | 1                   |            |                              |                                   | 1           |           | 8           |
| George Fox University   |                              | 1  | 1                   |            |                                       |   | 1   | 1   |         | 1                       | 1                   |            |                              |                                   | 1           |           | 7           |
| Linfield University   |                              |  |                     |            |                                       |   |   |   | 1       |                         |                     |            |                              |                                   |             |           | 1           |
| Polk County   |                              |  |                     |            |                                       |   |   |   |         | 1                       |                     |            | 1                            |                                   |             |           | 2           |
| Public Universities   |                              |  |                     |            |                                       |   |   |   |         | 1                       |                     |            | 1                            |                                   |             |           | 2           |
| Western Oregon University   |                              |  |                     |            |                                       |   |   |   |         | 1                       |                     |            | 1                            |                                   |             |           | 2           |
| Linn County   |                              |  |                     |            |                                       | 1   |   | 1   | 4       |                         | 1                   |            |                              |                                   |             |           | 7           |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |                              |  |                     |            |                                       | 1   |   | 1   | 4       |                         | 1                   |            |                              |                                   |             |           | 7           |



|   | Applied Behavior<br>Analysis | Clinical &<br>Professional Mental<br>Health Counseling | Clinical Psychology | Counseling | Doctor of<br>Naturopathic<br>Medicine | Doctor of<br>Osteopathic Medicine<br>(D.O.) | Marriage, Couple, and<br>Family Therapy and<br>Counseling | Medical, Health, and<br>Family Sciences &<br>Health Promotion | Nursing | Occupational<br>Therapy | Physician Assistant | Psychology | Rehabilitation<br>Counseling | School Counseling &<br>Psychology | Social Work | Sociology | Grand Total |
|---|------------------------------|--|---------------------|------------|---------------------------------------|---|---|---|---------|-------------------------|---------------------|------------|------------------------------|-----------------------------------|-------------|-----------|-------------|
| Western University of Health Science  |                              |  |                     |            |                                       | 1   |   | 1   | 4       |                         | 1                   |            |                              |                                   |             |           | 7           |
| Eastern Oregon  |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   | 1           |           | 2           |
| Union County  |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   | 1           |           | 2           |
| Public Universities   |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   | 1           |           | 2           |
| Eastern Oregon University   |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   | 1           |           | 2           |
| Portland Metro  | 1                            | 3  | 2                   | 3          | 1                                     |   | 2   | 3   | 2       | 1                       | 1                   | 1          | 1                            | 3                                 | 3           | 1         | 28          |
| Multnomah County  | 1                            | 3  |                     | 3          | 1                                     |   | 2   | 1   | 2       |                         |                     | 1          | 1                            | 3                                 | 2           | 1         | 21          |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |                              | 2  |                     | 2          | 1                                     |   | 1   |   | 2       |                         |                     |            |                              | 2                                 | 1           |           | 11          |
| Lewis & Clark College   |                              | 1  |                     | 1          |                                       |   | 1   |   |         |                         |                     |            |                              | 2                                 |             |           | 5           |
| Linfield University   |                              |  |                     |            |                                       |   |   |   | 1       |                         |                     |            |                              |                                   |             |           | 1           |
| University of Portland  |                              |  |                     |            |                                       |   |   |   | 1       |                         |                     |            |                              |                                   |             |           | 1           |
| University of Western States  |                              | 1  |                     |            | 1                                     |   |   |   |         |                         |                     |            |                              |                                   |             |           | 2           |
| Walla Walla University  |                              |  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   | 1           |           | 1           |
| Western Seminary  |                              |  |                     | 1          |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Authorized Private Colleges and<br>Universities                               |                              |  |                     | 1          |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Multnomah Campus of Jessup<br>University                                      |                              |  |                     | 1          |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Public Universities   | 1                            | 1  |                     |            |                                       |   | 1   | 1   |         |                         |                     | 1          | 1                            | 1                                 | 1           | 1         | 9           |
| Portland State University   | 1                            | 1  |                     |            |                                       |   | 1   | 1   |         |                         |                     | 1          | 1                            | 1                                 | 1           | 1         | 9           |
| Washington County   |                              |  | 2                   |            |                                       |   |   | 2   |         | 1                       | 1                   |            |                              |                                   | 1           |           | 7           |
| Authorized Independent Colleges<br>and Universities Exempt from<br>Regulation |                              |  | 2                   |            |                                       |   |   | 2   |         | 1                       | 1                   |            |                              |                                   | 1           |           | 7           |
| Pacific University  |                              |  | 2                   |            |                                       |   |   | 2   |         | 1                       | 1                   |            |                              |                                   | 1           |           | 7           |
| Central Oregon  | 1                            |  |                     |            |                                       |   | 1   |   |         |                         |                     |            |                              |                                   |             |           | 2           |



| -                              | Applied Behavior<br>Analysis | Clinical &<br>Professional Mental<br>Health Counseling | Clinical Psychology | Counseling | Doctor of<br>Naturopathic<br>Medicine | Doctor of<br>Osteopathic Medicine<br>(D.O.) | Marriage, Couple, and<br>Family Therapy and<br>Counseling | Medical, Health, and<br>Family Sciences &<br>Health Promotion | Nursing | Occupational<br>Therapy | Physician Assistant | Psychology | Rehabilitation<br>Counseling | School Counseling &<br>Psychology | Social Work | Sociology | Grand Total |
|--------------------------------|------------------------------|--|---------------------|------------|---------------------------------------|---|---|---|---------|-------------------------|---------------------|------------|------------------------------|-----------------------------------|-------------|-----------|-------------|
| Klamath County                 | 1                            |  |                     |            |                                       |   | 1   |   |         |                         |                     |            |                              |                                   |             |           | 2           |
| Public Universities            | 1                            |  |                     |            |                                       |   | 1   |   |         |                         |                     |            |                              |                                   |             |           | 2           |
| Oregon Institute of Technology | 1                            |  |                     |            |                                       |   | 1   |   |         |                         |                     |            |                              |                                   |             |           | 2           |
| Northwest Oregon               |                              |  |                     | 1          |                                       |   |   | 1   |         |                         |                     | 1          |                              |                                   |             | 1         | 4           |
| Benton County                  |                              |  |                     | 1          |                                       |   |   | 1   |         |                         |                     | 1          |                              |                                   |             | 1         | 4           |
| Public Universities            |                              |  |                     | 1          |                                       |   |   | 1   |         |                         |                     | 1          |                              |                                   |             | 1         | 4           |
| Oregon State University        |                              |  |                     | 1          |                                       |   |   | 1   |         |                         |                     | 1          |                              |                                   |             | 1         | 4           |
| Rogue Valley                   |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Jackson County                 |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Public Universities            |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Southern Oregon University     |                              | 1  |                     |            |                                       |   |   |   |         |                         |                     |            |                              |                                   |             |           | 1           |
| Grand Total                    | 3                            | 8  | 3                   | 5          | 1                                     | 1   | 5   | 6   | 7       | 3                       | 3                   | 3          | 2                            | 5                                 | 5           | 3         | 63          |



## **Appendix E: Task 3: Assessment of Key Skill Standards**

**Table A1. Assessment of Key Skills Across Credentials and Licenses** 

| Key Skill <sup>18</sup>   | Related Credentials/Licenses  |
|---------------------------|---|
| Addiction Recovery        | Certified Alcohol and Drug Counselor, Certified Alcohol and Drug Counselor - Candidate (CADC-R), Certified Alcohol and Drug Counselor I (CADC-I), Certified Alcohol and Drug Counselor II (CADC-II), Certified Alcohol and Drug Counselor III (CADC-III), Certified Recovery Mentor I (CRM-I), Certified Recovery Mentor II (CRM-II), Certified Gambling Addiction Counselor - Registrant, (CGAC-R) Certified Gambling Addiction Counselor I (CGAC-I), Certified Gambling Addiction Counselor II (CGAC-II), Certified Gambling Consultant and Supervisor, Certified Gambling Recovery Mentor (CGRM)   |
| Art Therapy               | Licensed Art Therapist,<br>Licensed Certified Art Therapist   |
| Behavior Analysis         | Behavior Analysis Interventionist,<br>Licensed Assistant Behavior Analyst,<br>Licensed Behavior Analyst   |
| Behavior Management       | Child Care Development Specialist   |
| Behavioral Health Support | Board Certified Psychiatrist, Nurse Intern License, Registered Nurse (RN) License, Marriage and Family Therapist Registered Associate, Licensed Marriage and Family Therapist (LMFT), Registered Baccalaureate Social Worker License (RBSW), Clinical Social Work Associate License (CSWA), Licensed Clinical Social Worker (LCSW), Licensed Master of Social Worker (LCSW), Preliminary School Psychologist License, Professional School Psychologist License, Preliminary School Social Worker License, Professional School Social Worker License, Certified Sexual Offense Therapist Intern, Certified Associate Sexual Offense Therapist, Certified Clinical Sexual Offense Therapist, Licensed Art Therapist, Licensed Art Therapist, Licensed Certified Art Therapist, Behavior Analysis Interventionist, Licensed Assistant Behavior Analyst, Licensed Behavior Analyst, Certified Nurse Assistant (CNA), Qualified Mental Health Associate (QMHA), Certified Alcohol & Drug Counselor, Certified Alcohol and Drug Counselor I (CADC-I), |

<sup>18</sup> Skills were identified from the available scopes of practice.

|                      | Certified Alcohol and Drug Counselor II (CADC-II),              |
|----------------------|---|
|                      | Certified Alcohol and Drug Counselor III (CADC-III),            |
|                      | Certified Recovery Mentor I (CRM-I),                            |
|                      | Certified Recovery Mentor II (CRM-II),                          |
|                      | Registered Qualified Mental Health Associate (QMHA-R),          |
|                      |   |
|                      | Qualified Mental Health Associate I (QMHA-I),                   |
|                      | Qualified Mental Health Associate II (QMHA-II),                 |
|                      | Qualified Mental Health Professional - Registrant (QMHP-R),     |
|                      | Qualified Mental Health Professional - Certification (QMHP-C),  |
|                      | Certified Gambling Addiction Counselor - Registrant, (CGAC-R)   |
|                      | Certified Gambling Addiction Counselor I (CGAC-I),              |
|                      | Certified Gambling Addiction Counselor II (CGAC-II),            |
|                      | Certified Gambling Consultant and Supervisor,                   |
|                      | Certified Gambling Recovery Mentor (CGRM),                      |
|                      | Certified Prevention Specialist (CPS),                          |
|                      | Traditional Health Worker (THW),                                |
|                      | Professional Development Certification (PDC)                    |
|                      | Behavior Analysis Interventionist,                              |
|                      | Licensed Assistant Behavior Analyst,                            |
| Behavioral Support   | Licensed Assistant Benavior Analyst, Licensed Behavior Analyst, |
| Bellavioral Support  | Early Childhood Educator,                                       |
|                      |   |
|                      | Child Care Development Specialist                               |
|                      | Board Certified Psychiatrist,                                   |
|                      | Licensed Psychologist,  |
|                      | Psychologist Associate License,                                 |
|                      | Marriage and Family Therapist Registered Associate,             |
|                      | Licensed Marriage and Family Therapist (LMFT),                  |
|                      | Professional Counselor Registered Associate,                    |
|                      | Licensed Professional Counselor (LPC),                          |
|                      | Clinical Social Work Associate License (CSWA),                  |
|                      | Licensed Clinical Social Worker (LCSW),                         |
|                      | Licensed Master of Social Work (LMSW),                          |
|                      | Certified Sexual Offense Therapist Intern,                      |
| Behavioral Therapy   | Certified Associate Sexual Offense Therapist,                   |
|                      | Certified Secondary Clinical Sexual Offense Therapist,          |
|                      | Certified Clinical Sexual Offense Therapist,                    |
|                      | Licensed Certified Art Therapist,                               |
|                      | Certified Alcohol & Drug Counselor - Candidate (CADC-R),        |
|                      | Certified Alcohol and Drug Counselor I (CADC-I),                |
|                      | Certified Alcohol and Drug Counselor II (CADC-II),              |
|                      | Certified Alcohol and Drug Counselor III (CADC-III),            |
|                      | Certified Gambling Addiction Counselor I (CGAC-I),              |
|                      | Certified Gambling Addiction Counselor II (CGAC-II),            |
|                      | Certified Gambling Consultant and Supervisor,                   |
|                      | Certified Gambling Recovery Mentor (CGRM)                       |
|                      | Early Childhood Educator,                                       |
| Child Development    | Child Care Development Specialist                               |
|                      | Early Childhood Educator,                                       |
| Classroom Management | Child Care Development Specialist                               |
| _                    | Cilia Care Development Opecialist                               |



|                       | M.D./D.O. License,  |
|-----------------------|---|
|                       | Physician Associate License,  |
|                       |   |
|                       | Board Certified Psychiatrist, Nurse Intern License,   |
|                       | Licensed Practical Nurse (LPN),   |
|                       | Registered Nurse (RN) License,  |
|                       | Nurse Practitioner (APRN-NP),   |
|                       |   |
|                       | Clinical Nurse Specialist (APRN-CNS) License,<br>Licensed Marriage and Family Therapist (LMFT), |
|                       | Registered Baccalaureate Social Worker License (RBSW),  |
|                       | Clinical Social Work Associate License (CSWA),  |
|                       | Licensed Clinical Social Worker (LCSW),   |
|                       | Licensed Master of Social Work (LMSW),  |
|                       | Restricted School Counselor License,  |
|                       | Preliminary School Counselor License,   |
|                       | Professional School Counselor License,  |
|                       | Preliminary School Social Worker License,   |
|                       | Professional School Social Worker License,  |
|                       | Certified Sexual Offense Therapist Intern,  |
|                       | Certified Associate Sexual Offense Therapist,   |
|                       | Certified Secondary Clinical Sexual Offense Therapist,  |
|                       | Certified Clinical Sexual Offense Therapist,  |
| Client Advocacy       | Licensed Art Therapist,   |
|                       | Licensed Certified Art Therapist,   |
|                       | Behavior Analysis Interventionist,  |
|                       | Licensed Assistant Behavior Analyst,  |
|                       | Licensed Behavior Analyst,  |
|                       | Qualified Health Care Interpreter,  |
|                       | Certified Health Care Interpreter,  |
|                       | Certified Nurse Assistant (CNA),  |
|                       | Qualified Mental Health Associate (QMHA),   |
|                       | Certified Alcohol & Drug Counselor,   |
|                       | Certified Alcohol & Drug Counselor - Candidate (CADC-R),  |
|                       | Certified Alcohol and Drug Counselor I (CADC-I),  |
|                       | Certified Alcohol and Drug Counselor II (CADC-II),  |
|                       | Certified Alcohol and Drug Counselor III (CADC-III),  |
|                       | Certified Recovery Mentor I (CRM-I),  |
|                       | Certified Recovery Mentor II (CRM-II),  |
|                       | Registered Qualified Mental Health Associate (QMHA-R),  |
|                       | Qualified Mental Health Associate I (QMHA-I),   |
|                       | Qualified Mental Health Associate II (QMHA-II),   |
|                       | Qualified Mental Health Professional - Registrant (QMHP-R),                                     |
|                       | Qualified Mental Health Professional - Certification (QMHP-C),                                  |
|                       | Certified Prevention Specialist (CPS) Psychologist Associate License,                           |
|                       | Clinical Nurse Specialist (APRN-CNS) License,   |
|                       | Marriage and Family Therapist Registered Associate,   |
|                       | Licensed Marriage and Family Therapist (LMFT),  |
|                       | Professional Counselor Registered Associate,  |
| Counseling Techniques | Licensed Professional Counselor (LPC),  |
| Counseling reciniques | Restricted School Counselor License,  |
|                       | Preliminary School Counselor License,   |
|                       | Professional School Counselor License,  |
|                       | Preliminary School Psychologist License,  |
|                       | Professional School Psychologist License,   |
|                       |   |



|                     | 0 ((1) 10 10(1) 71 1111  |
|---------------------|--|
|                     | Certified Sexual Offense Therapist Intern, Certified Associate Sexual Offense Therapist, Certified Secondary Clinical Sexual Offense Therapist, Certified Clinical Sexual Offense Therapist, Licensed Art Therapist, Licensed Certified Art Therapist  |
| Crisis Counseling   | Clinical Nurse Specialist (APRN-CNS) License, Marriage and Family Therapist Registered Associate, Professional Counselor Registered Associate, Licensed Professional Counselor (LPC), Restricted School Counselor License, Preliminary School Counselor License, Professional School Counselor License, Professional School Psychologist License, Preliminary School Psychologist License, Professional School Psychologist License, Certified Sexual Offense Therapist Intern, Certified Associate Sexual Offense Therapist, Certified Secondary Clinical Sexual Offense Therapist, Certified Clinical Sexual Offense Therapist, Certified Alcohol & Drug Counselor, Certified Alcohol & Drug Counselor - Candidate (CADC-R), Certified Alcohol and Drug Counselor I (CADC-I), Certified Alcohol and Drug Counselor III (CADC-III), Certified Recovery Mentor I (CRM-I), Certified Recovery Mentor II (CRM-II), Qualified Mental Health Associate II (QMHA-II), Qualified Mental Health Professional - Registrant (QMHP-R), Qualified Mental Health Professional - Certification (QMHP-C), Certified Gambling Addiction Counselor - Registrant, (CGAC-R) Certified Gambling Addiction Counselor II (CGAC-II), Certified Gambling Addiction Counselor II (CGAC-III), Certified Gambling Recovery Mentor (CGRM) |
| Crisis Intervention | Board Certified Psychiatrist, Licensed Psychologist, Psychologist Associate License, Marriage and Family Therapist Registered Associate, Licensed Marriage and Family Therapist (LMFT), Registered Baccalaureate Social Worker License (RBSW), Clinical Social Work Associate License (CSWA), Licensed Clinical Social Worker (LCSW), Licensed Master of Social Worker (LMSW), Preliminary School Social Worker License, Professional School Social Worker License, Certified Sexual Offense Therapist Intern, Certified Associate Sexual Offense Therapist, Certified Clinical Sexual Offense Therapist, Certified Alcohol & Drug Counselor, Certified Alcohol & Drug Counselor - Candidate (CADC-R), Certified Alcohol and Drug Counselor I (CADC-II), Certified Alcohol and Drug Counselor III (CADC-III), Certified Alcohol and Drug Counselor III (CADC-III), Qualified Mental Health Associate I (QMHA-I),   |



|  | 0 10 110 111 111 111 111 111 111 111 11  |
|--|--|
|  | Qualified Mental Health Associate II (QMHA-II),<br>Qualified Mental Health Professional - Registrant (QMHP-R),<br>Qualified Mental Health Professional - Certification (QMHP-C),<br>Certified Prevention Specialist (CPS)  |
| Cultural Competency  | Qualified Health Care Interpreter, Certified Health Care Interpreter, Certified Recovery Mentor I (CRM-I), Certified Recovery Mentor II (CRM-II), Certified Gambling Addiction Counselor - Registrant, (CGAC-R) Certified Gambling Addiction Counselor I (CGAC-I), Certified Gambling Addiction Counselor II (CGAC-II), Certified Gambling Consultant and Supervisor, Certified Gambling Recovery Mentor (CGRM), Traditional Health Worker (THW), Professional Development Certification (PDC) |
| Data Collection  | Behavior Analysis Interventionist,<br>Licensed Assistant Behavior Analyst,<br>Licensed Behavior Analyst  |
| Developmental Assessment   | Early Childhood Educator, Child Care Development Specialist  |
| Developmental Milestones   | Early Childhood Educator, Child Care Development Specialist  |
| Diagnose Disease, Illness,<br>Injury, and Physical<br>Conditions | M.D./D.O. License, Physician Associate License, Nurse Practitioner (APRN-NP)   |
| Diagnose Psychological and Interpersonal Problems                | Board Certified Psychiatrist, Licensed Psychologist, Licensed Marriage and Family Therapist (LMFT), Licensed Professional Counselor (LPC)  |
| Diagnosis of Mental Health<br>Disorders                          | Board Certified Psychiatrist, Licensed Psychologist, Licensed Clinical Social Worker (LCSW), Licensed Master of Social Work (LMSW), Certified Secondary Clinical Sexual Offense Therapist, Certified Clinical Sexual Offense Therapist   |
| Education  | Restricted School Counselor License, Preliminary School Counselor License, Professional School Counselor License, Preliminary School Psychologist License, Professional School Psychologist License, Preliminary School Social Worker License, Professional School Social Worker License, Early Childhood Educator, Child Care Development Specialist  |
| Emotional Support  | Professional Counselor Registered Associate, Licensed Professional Counselor (LPC), Restricted School Counselor License, Preliminary School Counselor License, Professional School Counselor License, Preliminary School Psychologist License, Professional School Psychologist License, Preliminary School Social Worker License, Professional School Social Worker License, Certified Sexual Offense Therapist Intern, Certified Associate Sexual Offense Therapist,                         |



|                             | Certified Secondary Clinical Sexual Offense Therapist,   |
|-----------------------------|--|
|                             | Certified Clinical Sexual Offense Therapist,   |
|                             | Early Childhood Educator,  |
|                             | Child Care Development Specialist,   |
|                             | Certified Recovery Mentor I (CRM-I),   |
|                             | Certified Recovery Mentor II (CRM-II),   |
|                             | Certified Gambling Addiction Counselor - Registrant, (CGAC-R)                                      |
|                             | Certified Gambling Addiction Counselor I (CGAC-I),   |
|                             | Certified Gambling Addiction Counselor II (CGAC-II), Certified Gambling Consultant and Supervisor, |
|                             | Certified Gambling Recovery Mentor (CGRM)  |
|                             | Nurse Intern License,  |
| Evaluate Patient Progress   | Licensed Practical Nurse (LPN),  |
| Evaluate Patient Progress   | Registered Nurse (RN) License  |
|                             | Marriage and Family Therapist Registered Associate,  |
| Family Support              | Licensed Marriage and Family Therapist Registered Associate,                                       |
|                             | Marriage and Family Therapist (LMFT)   |
| Family Therapy              | Licensed Marriage and Family Therapist Registered Associate,                                       |
|                             | Behavior Analysis Interventionist,   |
| Functional Behavioral       | Licensed Assistant Behavior Analyst,   |
| Assessment                  | Licensed Assistant Benavior Analyst, Licensed Behavior Analyst                                     |
|                             | Qualified Health Care Interpreter,   |
| Health Communication        | Certified Health Care Interpreter  |
|                             | M.D./D.O. License,   |
|                             | Physician Associate License,   |
|                             | Nurse Intern License,  |
| Health Monitoring           | Licensed Practical Nurse (LPN),  |
|                             | Registered Nurse (RN) License,   |
|                             | Nurse Practitioner (APRN-NP),  |
|                             | Certified Nurse Assistant (CNA)  |
|                             | Nurse Intern License,  |
|                             | Licensed Practical Nurse (LPN),  |
|                             | Registered Nurse (RN) License,   |
| Health Promotion and        | Nurse Practitioner (APRN-NP),  |
| Wellness                    | Clinical Nurse Specialist (APRN-CNS) License,  |
| vveiiile55                  | Qualified Mental Health Professional - Registrant (QMHP-R),  |
|                             | Qualified Mental Health Professional - Certification (QMHP-C),                                     |
|                             | Traditional Health Worker (THW),   |
|                             | Professional Development Certification (PDC)   |
|                             | Nurse Intern License,  |
|                             | Licensed Practical Nurse (LPN),  |
| Implementation of Care Plan | Registered Nurse (RN) License,   |
| p.oon date i lan            | Clinical Nurse Specialist (APRN-CNS) License,  |
|                             | Licensed Assistant Behavior Analyst,   |
|                             | Licensed Behavior Analyst  |
| Instructional Support       | Early Childhood Educator,  |
|                             | Child Care Development Specialist  |
| Language Translation        | Qualified Health Care Interpreter,   |
| . 3                         | Certified Health Care Interpreter  |
| Medical Terminology         | Qualified Health Care Interpreter,   |
|                             | Certified Health Care Interpreter  |
| Medication Management       | Licensed Practical Nurse (LPN),  |
|                             | Registered Nurse (RN) License  |



|                           | M.D./D.O. License, Physician Associate License,               |
|---------------------------|---|
|                           | Board Certified Psychiatrist,                                 |
|                           | Licensed Psychologist,  |
|                           | Psychologist Associate License,                               |
|                           | Nurse Practitioner (APRN-NP),                                 |
|                           | Clinical Nurse Specialist (APRN-CNS) License,                 |
| Mental Health Assessment  | Marriage and Family Therapist Registered Associate,           |
|                           | Licensed Marriage and Family Therapist (LMFT),                |
|                           | Certified Sexual Offense Therapist Intern,                    |
|                           | Certified Associate Sexual Offense Therapist,                 |
|                           | Certified Secondary Clinical Sexual Offense Therapist,        |
|                           | Certified Clinical Sexual Offense Therapist,                  |
|                           | Qualified Mental Health Professional - Registrant (QMHP-R),   |
|                           | Qualified Mental Health Professional - Certification (QMHP-C) |
|                           | Clinical Social Work Associate License (CSWA),                |
|                           | Licensed Clinical Social Worker (LCSW)                        |
|                           | Licensed Master of Social Work (LMSW),                        |
|                           | Preliminary School Psychologist License,                      |
|                           | Professional School Psychologist License,                     |
| Mental Health Counseling  | Qualified Mental Health Associate (QMHA),                     |
|                           | Registered Qualified Mental Health Associate (QMHA-R),        |
|                           | Qualified Mental Health Associate I (QMHA-I),                 |
|                           | Qualified Mental Health Associate II (QMHA-II),               |
|                           | Qualified Mental Health Professional - Registrant (QMHP-R),   |
|                           | Qualified Mental Health Professional - Certification (QMHP-C) |
|                           | M.D./D.O. License,  |
| Dationt Cove              | Physician Associate License,                                  |
|                           | Board Certified Psychiatrist,                                 |
|                           | Licensed Psychologist,  |
|                           | Psychologist Associate License,                               |
| Patient Care              | Nurse Intern License,<br>Licensed Practical Nurse (LPN),      |
|                           | Registered Nurse (RN) License,                                |
|                           | Nurse Practitioner (APRN-NP),                                 |
|                           | Clinical Nurse Specialist (APRN-CNS) License,                 |
|                           | Certified Nurse Assistant (CNA)                               |
|                           | Certified Recovery Mentor I (CRM-I),                          |
| Peer                      | Certified Recovery Mentor II (CRM-II),                        |
|                           | Certified Gambling Recovery Mentor (CGRM)                     |
| Prevent Disease, Illness, | M.D./D.O. License,  |
| Injury, and Physical      | Physician Associate License,                                  |
| Conditions                | Nurse Practitioner (APRN-NP)                                  |
|                           | Certified Alcohol and Drug Counselor I (CADC-I),              |
| Prevention Techniques     | Certified Alcohol and Drug Counselor II (CADC-II),            |
|                           | Certified Alcohol and Drug Counselor III (CADC-III),          |
|                           | Certified Gambling Addiction Counselor - Registrant, (CGAC-R) |
|                           | Certified Gambling Addiction Counselor I (CGAC-I),            |
|                           | Certified Gambling Addiction Counselor II (CGAC-II),          |
|                           | Certified Gambling Consultant and Supervisor,                 |
|                           | Certified Gambling Recovery Mentor (CGRM),                    |
|                           | Certified Prevention Specialist (CPS)                         |
| Psychiatric Evaluation    | Board Certified Psychiatrist                                  |
| Psychological Assessment  | Licensed Psychologist,  |
| Psychological Assessment  | Psychologist Associate License,                               |



| Professional Counselor Registered Associate, Professional School Psychologist License Board Certified Psychiatrist, |
|---|
|   |
| Doard Certified Esychiatrist.   |
| Licensed Psychologist,  |
| Psychologist Associate License,   |
| Psychotherapy Marriage and Family Therapist Registered Associate,   |
| Licensed Marriage and Family Therapist (LMFT),  |
| Professional Counselor Registered Associate,  |
| Licensed Professional Counselor (LPC)   |
| Certified Sexual Offense Therapist Intern,  |
| Certified Associate Sexual Offense Theranist  |
| Sexual Offense Therapy  Certified Secondary Clinical Sexual Offense Therapist,                                      |
| Certified Clinical Sexual Offense Therapist,  |
| Licensed Psychologist,  |
| Psychologist Associate License,   |
|   |
| Marriage and Family Therapist Registered Associate, Licensed Marriage and Family Therapist (LMFT),                  |
| Professional Counselor Registered Associate,  |
| Licensed Professional Counselor (LPC),  |
| Stress Management Registered Baccalaureate Social Worker License (RBSW),  |
| Clinical Social Work Associate License (CSWA),  |
| Licensed Clinical Social Worker (LCSW),   |
| Licensed Master of Social Work (LMSW),  |
| Preliminary School Psychologist License,  |
| Professional School Psychologist License  |
| Certified Alcohol & Drug Counselor,   |
| Certified Alcohol & Drug Counselor - Candidate (CADC-R),  |
| Substance Use Counseling Certified Alcohol and Drug Counselor I (CADC-I),   |
| Certified Alcohol and Drug Counselor II (CADC-II),  |
| Certified Alcohol and Drug Counselor III (CADC-III)   |
| M.D./D.O. License,  |
| Physician Associate License,  |
| Board Certified Psychiatrist,   |
| Licensed Psychologist,  |
| Psychologist Associate License,   |
| Nurse Practitioner (APRN-NP),   |
| Marriage and Family Therapist Registered Associate,   |
| Licensed Marriage and Family Therapist (LMFT),  |
| Professional Counselor Registered Associate,  |
| Licensed Professional Counselor (LPC),  |
| Clinical Social Work Associate License (CSWA),  |
| Licensed Clinical Social Worker (LCSW)  |
| SUD Assessment  Licensed Master of Social Work (LMSW),  |
| Certified Sexual Offense Therapist Intern,  |
| Certified Associate Sexual Offense Therapist,   |
| Certified Secondary Clinical Sexual Offense Therapist,  |
| Certified Clinical Sexual Offense Therapist,  |
| Certified Alcohol & Drug Counselor,   |
| Certified Alcohol & Drug Counselor - Candidate (CADC-R),  |
| Certified Alcohol and Drug Counselor I (CADC-I),  |
| Certified Alcohol and Drug Counselor II (CADC-II),  |
| Certified Alcohol and Drug Counselor III (CADC-III),  |
| Certified Recovery Mentor I (CRM-I),  |
|   |



|                                 | M.D./D.O. License, Physician Associate License,               |
|---------------------------------|---|
|                                 | Nurse Intern License,   |
|                                 | Licensed Practical Nurse (LPN),                               |
|                                 | · /:  |
|                                 | Registered Nurse (RN) License,                                |
|                                 | Registered Baccalaureate Social Worker License (RBSW),        |
| Team Collaboration              | Clinical Social Work Associate License (CSWA),                |
| Touri Conaboration              | Licensed Clinical Social Worker (LCSW),                       |
|                                 | Licensed Master of Social Work (LMSW),                        |
|                                 | Preliminary School Social Worker License,                     |
|                                 | Professional School Social Worker License,                    |
|                                 | Certified Nurse Assistant (CNA),                              |
|                                 | Traditional Health Worker (THW),                              |
|                                 | Professional Development Certification (PDC)                  |
|                                 | Professional Counselor Registered Associate,                  |
|                                 | Licensed Professional Counselor (LPC),                        |
|                                 | Registered Baccalaureate Social Worker License (RBSW),        |
|                                 | Clinical Social Work Associate License (CSWA),                |
|                                 | Licensed Clinical Social Worker (LCSW),                       |
|                                 | Licensed Master of Social Work (LMSW),                        |
|                                 | Preliminary School Social Worker License,                     |
|                                 | Professional School Social Worker License,                    |
|                                 | Certified Sexual Offense Therapist Intern,                    |
|                                 | Certified Associate Sexual Offense Therapist,                 |
|                                 | Certified Secondary Clinical Sexual Offense Therapist,        |
|                                 | Certified Clinical Sexual Offense Therapist,                  |
| Trauma-Informed Care            | Licensed Art Therapist,                                       |
| Trauma-imormed Care             | Licensed Certified Art Therapist,                             |
|                                 | Certified Alcohol & Drug Counselor,                           |
|                                 | Certified Alcohol & Drug Counselor - Candidate (CADC-R),      |
|                                 | Certified Alcohol and Drug Counselor I (CADC-I),              |
|                                 | Certified Alcohol and Drug Counselor II (CADC-II),            |
|                                 | Certified Alcohol and Drug Counselor III (CADC-III),          |
|                                 | Certified Recovery Mentor I (CRM-I),                          |
|                                 | Certified Recovery Mentor II (CRM-II),                        |
|                                 | Certified Gambling Addiction Counselor - Registrant, (CGAC-R) |
|                                 | Certified Gambling Addiction Counselor I (CGAC-I),            |
|                                 | Certified Gambling Addiction Counselor II (CGAC-II),          |
|                                 | Certified Gambling Consultant and Supervisor,                 |
|                                 | Certified Gambling Recovery Mentor (CGRM)                     |
| Treet Disease Illness Injeres   | M.D./D.O. License,  |
| Treat Disease, Illness, Injury, | Physician Associate License,                                  |
| and Physical Conditions         | Nurse Practitioner (APRN-NP)                                  |
|                                 | Board Certified Psychiatrist,                                 |
|                                 | Licensed Psychologist,  |
| Treat Psychological and         | Psychologist Associate License,                               |
| Interpersonal Problems          | Licensed Marriage and Family Therapist (LMFT),                |
|                                 | Professional Counselor Registered Associate,                  |
|                                 | Licensed Professional Counselor (LPC)                         |



M.D./D.O. License, Physician Associate License. Board Certified Psychiatrist, Registered Nurse (RN) License, Nurse Practitioner (APRN-NP), Clinical Nurse Specialist (APRN-CNS) License, Marriage and Family Therapist Registered Associate, Licensed Marriage and Family Therapist (LMFT), Licensed Clinical Social Worker (LCSW), Licensed Master of Social Work (LMSW), Preliminary School Psychologist License, Professional School Psychologist License, Behavior Analysis Interventionist. Licensed Assistant Behavior Analyst, Licensed Behavior Analyst, Qualified Mental Health Associate (QMHA). Certified Alcohol & Drug Counselor, **Treatment Planning** Certified Alcohol & Drug Counselor - Candidate (CADC-R), Certified Alcohol and Drug Counselor I (CADC-I), Certified Alcohol and Drug Counselor II (CADC-II), Certified Alcohol and Drug Counselor III (CADC-III), Certified Recovery Mentor I (CRM-I), Certified Recovery Mentor II (CRM-II), Registered Qualified Mental Health Associate (QMHA-R). Qualified Mental Health Associate I (QMHA-I), Qualified Mental Health Associate II (QMHA-II), Qualified Mental Health Professional - Registrant (QMHP-R), Qualified Mental Health Professional - Certification (QMHP-C), Certified Gambling Addiction Counselor - Registrant, (CGAC-R) Certified Gambling Addiction Counselor I (CGAC-I), Certified Gambling Addiction Counselor II (CGAC-II), Certified Gambling Consultant and Supervisor, Certified Gambling Recovery Mentor (CGRM), Certified Prevention Specialist (CPS)



Table A2. Behavioral Health Credentials and License Assessment

| BH Credentials/Licenses        | Skills Linked to BH Credentials/Licenses  |
|--------------------------------|---|
| Dif Credefitials/Licenses      |   |
| M.D./D.O. License              | Client Advocacy, Diagnose Disease, Illness, Injury, and Physical Conditions, Health Monitoring, Mental Health Assessment, Patient Care, Prevent Disease, Illness, Injury, and Physical Conditions, SUD Assessment, Team Collaboration Treat Disease, Illness, Injury, and Physical Conditions, Treatment Planning                               |
| Physician Associate License    | Client Advocacy, Diagnose Disease, Illness, Injury, and Physical Conditions, Health Monitoring, Mental Health Assessment, Patient Care, Prevent Disease, Illness, Injury, and Physical Conditions, SUD Assessment, Team Collaboration, Treat Disease, Illness, Injury, and Physical Conditions, Treatment Planning                              |
| Board Certified Psychiatrist   | Behavioral Health Support, Behavioral Therapy, Client Advocacy, Crisis Intervention, Diagnose Psychological and Interpersonal Problems, Diagnosis of Mental Health Disorders, Mental Health Assessment, Patient Care, Psychiatric Evaluation, Psychotherapy, SUD Assessment, Treat Psychological and Interpersonal Problems, Treatment Planning |
| Licensed Psychologist          | Behavioral Therapy, Crisis Intervention, Diagnose Psychological and Interpersonal Problems, Diagnosis of Mental Health Disorders, Mental Health Assessment, Patient Care, Psychological Assessment, Psychotherapy, SUD Assessment, Stress Management, Treat Psychological and Interpersonal Problems  |
| Psychologist Associate License | Behavioral Therapy, Counseling Techniques, Crisis Intervention, Mental Health Assessment, Patient Care, Psychological Assessment, Psychotherapy,  |



|   | CLID Assessment   |
|---|---|
|   | SUD Assessment, Stress Management,                          |
|   | Treat Psychological and Interpersonal Problems              |
|   | Behavioral Health Support,                                  |
| Nurse Intern License                                  | Client Advocacy,  |
|   | Evaluate Patient Progress,                                  |
|   | Health Monitoring,  |
|   | Health Promotion and Wellness,                              |
|   | Implementation of Care Plan,                                |
|   | Patient Care,   |
|   | Team Collaboration  |
|   | Client Advocacy,  |
|   | Evaluate patient progress,                                  |
|   | Health Monitoring,  |
|   | Health Promotion and Wellness,                              |
| Licensed Practical Nurse (LPN)                        | Implementation of Care Plan,                                |
|   | Medication Management,                                      |
|   | Patient Care,   |
|   | Team Collaboration  |
|   | Behavioral Health Support,                                  |
|   | Client Advocacy,  |
|   | Evaluate patient progress,                                  |
|   | Health Monitoring,  |
| Devictored Nurse (DN) License                         | Health Promotion and Wellness,                              |
| Registered Nurse (RN) License                         | Implementation of Care Plan,                                |
|   | Medication Management,                                      |
|   | Patient Care,   |
|   | Team Collaboration,   |
|   | Treatment Planning  |
|   | Client Advocacy,  |
|   | Diagnose Disease, Illness, Injury, and Physical Conditions, |
|   | Health Monitoring,  |
|   | Health Promotion and Wellness,                              |
| Nurse Practitioner (APRN-NP)                          | Mental Health Assessment,                                   |
| ,   | Patient Care,   |
|   | Prevent Disease, Illness, Injury, and Physical Conditions,  |
|   | SUD Assessment,   |
|   | Treat Disease, Illness, Injury, and Physical Conditions,    |
|   | Treatment Planning Client Advocacy,                         |
|   | Counseling Techniques,                                      |
|   | Crisis Counseling,  |
| Clinical Nurse Specialist (APRN-CNS)                  | Health Promotion and Wellness,                              |
| License   | Implementation of Care Plan,                                |
|   | Mental Health Assessment, Patient Care,                     |
|   | Treatment Planning  |
|   | Behavioral Health Support,                                  |
| Marriage and Family Therapist<br>Registered Associate | Behavioral Therapy,   |
|   | Counseling Techniques,                                      |
|   | Crisis Counseling,  |
|   | Crisis Intervention,  |
|   | Family Support,   |
|   | Family Therapy,   |
|   | Mental Health Assessment,                                   |
|   | Psychotherapy,  |



|   | OUD A   |
|---|---|
|   | SUD Assessment,   |
|   | Stress Management,  |
|   | Treatment Planning  |
|   | Behavioral Health Support,<br>Behavioral Therapy,                   |
|   | Client Advocacy,  |
|   |   |
|   | Counseling Techniques, Crisis Intervention,                         |
|   | Diagnose Psychological and Interpersonal Problems,                  |
| Licensed Marriage and Family                  | Family Support,   |
| Therapist (LMFT)                              | Family Therapy,   |
|   | Mental Health Assessment,   |
|   | Psychotherapy,  |
|   | SUD Assessment,   |
|   | Stress Management,  |
|   | Treat Psychological and Interpersonal Problems,                     |
|   | Treatment Planning  |
|   | Behavioral Therapy,   |
|   | Counseling Techniques,  |
|   | Crisis Counseling,  |
|   | Emotional Support,  |
| Professional Counselor Registered             | Psychological Assessment,   |
| Associate                                     | Psychotherapy,  |
|   | SUD Assessment,   |
|   | Stress Management,  |
|   | Trauma-Informed Care,   |
|   | Treat Psychological and Interpersonal Problems  Behavioral Therapy, |
|   | Counseling Techniques,  |
|   | Crisis Counseling,  |
|   | Diagnose Psychological and Interpersonal Problems,                  |
| Licensed Professional Counselor               | Emotional Support,  |
| (LPC)   | Psychotherapy,  |
| (=: 5)  | SUD Assessment,   |
|   | Stress Management,  |
|   | Trauma-Informed Care,   |
|   | Treat Psychological and Interpersonal Problems                      |
|   | Behavioral Health Support,  |
|   | Client Advocacy,  |
| Registered Baccalaureate Social               | Crisis Intervention,  |
| Worker License (RBSW)                         | Stress Management,  |
|   | Team Collaboration,   |
|   | Trauma-Informed Care  |
|   | Behavioral Therapy  |
| Clinical Social Work Associate License (CSWA) | Behavioral Therapy,<br>Client Advocacy,                             |
|   | Crisis Intervention,  |
|   | Mental Health Counseling,   |
|   | SUD Assessment,   |
|   | Stress Management,  |
|   | Team Collaboration,   |
|   | Trauma-Informed Care  |
| Licensed Clinical Social Warker               | Behavioral Health Support,  |
| Licensed Clinical Social Worker               | Behavioral Therapy,   |
| (LCSW)  | Client Advocacy,  |



|   | 0::1:                                 |
|---|---------------------------------------|
|   | Crisis Intervention,                  |
|   | Diagnosis of Mental Health Disorders, |
|   | Mental Health Counseling,             |
|   | SUD Assessment,                       |
|   | Stress Management,                    |
|   | Team Collaboration,                   |
|   | Trauma-Informed Care,                 |
|   | Treatment Planning                    |
|   | Behavioral Health Support,            |
|   | Behavioral Therapy,                   |
|   | Client Advocacy,                      |
|   | Crisis Intervention,                  |
|   | Diagnosis of Mental Health Disorders, |
| Licensed Master of Social Work              | Mental Health Counseling,             |
| (LMSW)                                      | SUD Assessment,                       |
|   | Stress Management,                    |
|   |                                       |
|   | Team Collaboration,                   |
|   | Trauma-Informed Care,                 |
|   | Treatment Planning                    |
|   | Client Advocacy,                      |
|   | Counseling Techniques,                |
| Restricted School Counselor License         | Crisis Counseling,                    |
|   | Education,                            |
|   | Emotional Support                     |
|   | Client Advocacy,                      |
|   | Counseling Techniques,                |
| Preliminary School Counselor License        | Crisis Counseling,                    |
|   | Education,                            |
|   | Emotional Support                     |
|   | Client Advocacy,                      |
| Duefoccional Cabasi Cassas des              | Counseling Techniques,                |
| Professional School Counselor               | Crisis Counseling,                    |
| License                                     | Education,                            |
|   | Emotional Support                     |
|   | Behavioral Health Support,            |
|   | Counseling Techniques,                |
|   | Crisis Counseling,                    |
| Preliminary School Psychologist             | Education,                            |
| License                                     | Emotional Support,                    |
| LICCHISC                                    | Mental Health Counseling,             |
|   | Stress Management,                    |
|   | Treatment Planning                    |
|   |                                       |
|   | Behavioral Health Support,            |
| Professional School Psychologist<br>License | Counseling Techniques,                |
|   | Crisis Counseling,                    |
|   | Education,                            |
|   | Emotional Support,                    |
|   | Mental Health Counseling,             |
|   | Psychological Assessment,             |
|   | Stress Management,                    |
|   | Treatment Planning                    |
|   | Behavioral Health Support,            |
| Preliminary School Social Worker            | Client Advocacy,                      |
| License                                     | Crisis Intervention,                  |
|   | Education,                            |
| ·   | ,                                     |



|  | For all or all Command                                      |
|--|---|
|  | Emotional Support,  |
|  | Team Collaboration, Trauma-Informed Care                    |
|  |   |
|  | Behavioral Health Support,<br>Client Advocacy,              |
|  | Crisis Intervention,  |
| Professional School Social Worker<br>License   | Education,  |
|  | Emotional Support,  |
|  | Team Collaboration,   |
|  | Trauma-Informed Care  |
|  | Behavioral Health Support,                                  |
|  | Behavioral Therapy,   |
|  | Client Advocacy,  |
|  | Counseling Techniques,                                      |
|  | Crisis Counseling,  |
| Certified Sexual Offense Therapist             | Crisis Intervention,  |
| Intern   | Emotional Support,  |
|  | Mental Health Assessment,                                   |
|  | SUD Assessment,   |
|  | Sexual Offense Therapy,                                     |
|  | Trauma-Informed Care  |
|  | Behavioral Health Support,                                  |
|  | Behavioral Therapy,   |
|  | Client Advocacy,  |
|  | Counseling Techniques,                                      |
| Certified Associate Sexual Offense             | Crisis Counseling,  |
| Therapist                                      | Crisis Intervention,  |
| , , , , , , , , , , , , , , , , , , ,          | Emotional Support,  |
|  | Mental Health Assessment,                                   |
|  | SUD Assessment,   |
|  | Sexual Offense Therapy, Trauma-Informed Care                |
|  | Behavioral Health Support,                                  |
|  | Behavioral Therapy,   |
|  | Client Advocacy,  |
|  | Counseling Techniques,                                      |
|  | Crisis Counseling,  |
| Certified Secondary Clinical Sexual            | Crisis Intervention,  |
| Offense Therapist                              | Diagnosis of Mental Health Disorders,                       |
| ·  | Emotional Support,  |
|  | Mental Health Assessment,                                   |
|  | SUD Assessment,   |
|  | Sexual Offense Therapy,                                     |
|  | Trauma-Informed Care  |
|  | Behavioral Health Support,                                  |
| Certified Clinical Sexual Offense<br>Therapist | Behavioral Therapy,   |
|  | Client Advocacy,  |
|  | Counseling Techniques,                                      |
|  | Crisis Counseling,  |
|  | Crisis Intervention,  |
|  | Diagnosis of Mental Health Disorders,<br>Emotional Support, |
|  | Mental Health Assessment,                                   |
|  | SUD Assessment,   |
|  | Sexual Offense Therapy,                                     |
|  | Ochdai Olielise Hielapy,                                    |



|                                     | Trauma-Informed Care  |
|-------------------------------------|---|
| Licensed Art Therapist              | Art Therapy, Behavioral Health Support, Client Advocacy, Counseling Techniques, Trauma-Informed Care  |
| Licensed Certified Art Therapist    | Art Therapy, Behavioral Health Support, Behavioral Therapy, Client Advocacy, Counseling Techniques, Trauma-Informed Care  |
| Behavior Analysis Interventionist   | Behavior Analysis, Behavioral Health Support, Behavioral Support, Client Advocacy, Data Collection, Functional Behavioral Assessment, Treatment Planning                              |
| Licensed Assistant Behavior Analyst | Behavior Analysis, Behavioral Health Support, Behavioral Support, Client Advocacy, Data Collection, Functional Behavioral Assessment, Implementation of Care Plan, Treatment Planning |
| Licensed Behavior Analyst           | Behavior Analysis, Behavioral Health Support, Behavioral Support, Client Advocacy, Data Collection, Functional Behavioral Assessment, Implementation of care plan, Treatment Planning |
| Qualified Health Care Interpreter   | Client Advocacy, Cultural Competency, Health Communication, Language Translation, Medical Terminology   |
| Certified Health Care Interpreter   | Client Advocacy, Cultural Competency, Health Communication, Language Translation, Medical Terminology   |
| Early Childhood Educator            | Behavioral Support, Child Development, Classroom Management, Developmental Assessment, Developmental Milestones, Education, Emotional Support, Instructional Support                  |



| Child Care Development Specialist                          | Behavior Management, Behavioral Support, Child Development, Classroom Management, Developmental Assessment, Developmental Milestones, Education, Emotional Support, Instructional Support   |
|--|---|
| Certified Nurse Assistant (CNA)                            | Behavioral Health Support, Client Advocacy, Health Monitoring, Patient Care, Team Collaboration   |
| Qualified Mental Health Associate (QMHA)                   | Behavioral Health Support,<br>Client Advocacy,<br>Mental Health Counseling,<br>Treatment Planning   |
| Certified Alcohol & Drug Counselor (CADC)                  | Addiction Recovery, Behavioral Health Support, Client Advocacy, Crisis Counseling, Crisis Intervention, SUD Assessment, Substance Use Counseling, Trauma-Informed Care, Treatment Planning  |
| Certified Alcohol & Drug Counselor -<br>Candidate (CADC-R) | Addiction Recovery, Behavioral Health Support, Behavioral Therapy, Client Advocacy, Crisis Counseling, Crisis Intervention, SUD Assessment, Substance Use Counseling, Trauma-Informed Care, Treatment Planning                        |
| Certified Alcohol and Drug Counselor I (CADC-I)            | Addiction Recovery, Behavioral Health Support, Behavioral Therapy, Client Advocacy, Crisis Counseling, Crisis Intervention, Prevention Techniques, SUD Assessment, Substance Use Counseling, Trauma-Informed Care, Treatment Planning |
| Certified Alcohol and Drug<br>Counselor II (CADC-II)       | Addiction Recovery, Behavioral Health Support, Behavioral Therapy, Client Advocacy, Crisis Counseling, Crisis Intervention, Prevention Techniques,  |



|   | OUD 4                          |
|---|--------------------------------|
|   | SUD Assessment,                |
|   | Substance Use Counseling,      |
|   | Trauma-Informed Care,          |
|   | Treatment Planning             |
|   | Addiction Recovery,            |
|   | Behavioral Health Support,     |
|   | Behavioral Therapy,            |
|   | Client Advocacy,               |
| Certified Alcohol and Drug                                    | Crisis Counseling,             |
| Counselor III (CADC-III)                                      | Crisis Intervention,           |
| (   | Prevention Techniques,         |
|   | SUD Assessment,                |
|   | Substance Use Counseling,      |
|   | Trauma-Informed Care,          |
|   | Treatment Planning             |
|   | Addiction Recovery,            |
|   | Behavioral Health Support,     |
|   | Client Advocacy,               |
|   | Crisis Counseling,             |
| Certified Recovery Mentor I (CRM-I)                           | Cultural Competency,           |
|   | Emotional Support, Peer,       |
|   | SUD Assessment,                |
|   | Trauma-Informed Care,          |
|   | Treatment Planning             |
|   | Addiction Recovery,            |
|   | Behavioral Health Support,     |
|   | Client Advocacy,               |
|   | Crisis Counseling,             |
|   | Cultural Competency,           |
| Certified Recovery Mentor II (CRM-II)                         | Emotional Support,             |
|   | Peer,                          |
|   | SUD Assessment,                |
|   | Trauma-Informed Care,          |
|   | Treatment Planning             |
|   | Behavioral Health Support,     |
| Registered Qualified Mental Health                            | Client Advocacy,               |
| Associate (QMHA-R)  | Mental Health Counseling,      |
|   | Treatment Planning             |
|   | Behavioral Health Support,     |
| Qualified Mental Health Associate I                           | Client Advocacy,               |
| (QMHA-I)  | Crisis Intervention,           |
| (Minit IZ I)  | Mental Health Counseling,      |
|   | Treatment Planning             |
| Qualified Mental Health Associate II<br>(QMHA-II)             | Behavioral Health Support,     |
|   | Client Advocacy,               |
|   | Crisis Counseling,             |
|   | Crisis Intervention,           |
|   | Mental Health Counseling,      |
|   | Treatment Planning             |
| Qualified Mental Health Professional -<br>Registrant (QMHP-R) | Behavioral Health Support,     |
|   | Client Advocacy,               |
|   | Crisis Counseling,             |
|   | Crisis Intervention,           |
|   | Health Promotion and Wellness, |



|  | <b>NA</b> ( 111 101 A                         |
|--|---|
|  | Mental Health Assessment,                     |
|  | Mental Health Counseling,                     |
|  | Treatment Planning Behavioral Health Support, |
| Qualified Mental Health Professional -<br>Certification (QMHP-C) | Client Advocacy,                              |
|  | Crisis Counseling,                            |
|  | Crisis Intervention,                          |
|  | Health Promotion and Wellness,                |
|  | Mental Health Assessment.                     |
|  | Mental Health Counseling,                     |
|  | Treatment Planning                            |
|  | Addiction Recovery,                           |
|  | Behavioral Health Support,                    |
|  | Crisis Counseling,                            |
| Certified Gambling Addiction                                     | Cultural Competency,                          |
| Counselor - Registrant (CGAC-R)                                  | Emotional Support,                            |
|  | Prevention Techniques,                        |
|  | Trauma-Informed Care,                         |
|  | Treatment Planning                            |
|  | Addiction Recovery,                           |
|  | Behavioral Health Support,                    |
|  | Behavioral Therapy,                           |
| Certified Gambling Addiction<br>Counselor I (CGAC-I)             | Crisis Counseling,                            |
|  | Cultural Competency,                          |
|  | Emotional Support,                            |
|  | Prevention Techniques,                        |
|  | Trauma-Informed Care, Treatment Planning      |
|  | Addiction Recovery,                           |
|  | Behavioral Health Support,                    |
|  | Behavioral Therapy,                           |
|  | Crisis Counseling,                            |
| Certified Gambling Addiction                                     | Cultural Competency,                          |
| Counselor II (CGAC-II)   | Emotional Support,                            |
|  | Prevention Techniques,                        |
|  | Trauma-Informed Care,                         |
|  | Treatment Planning                            |
|  | Addiction Recovery,                           |
|  | Behavioral Health Support,                    |
|  | Behavioral Therapy,                           |
| Certified Gambling Consultant and                                | Crisis Counseling,                            |
| Supervisor   | Cultural Competency,                          |
|  | Emotional Support, Prevention Techniques,     |
|  | Trauma-Informed Care,                         |
|  | Treatment Planning                            |
| Certified Gambling Recovery Mentor (CGRM)                        | Addiction Recovery,                           |
|  | Behavioral Health Support,                    |
|  | Behavioral Therapy,                           |
|  | Crisis Counseling,                            |
|  | Cultural Competency,                          |
|  | Emotional Support, Peer,                      |
|  | Prevention Techniques,                        |
|  | Trauma-Informed Care,                         |
|  | Treatment Planning                            |



| Certified Prevention Specialist (CPS)        | Behavioral Health Support, Client Advocacy, Crisis Intervention, Prevention Techniques, Treatment Planning |  |
|--|--|--|
| Traditional Health Worker (THW)              | Behavioral Health Support, Cultural Competency, Health Promotion and Wellness, Team Collaboration          |  |
| Professional Development Certification (PDC) | Behavioral Health Support, Cultural Competency, Health Promotion and Wellness, Team Collaboration          |  |



## **Acknowledgements**

## **Oregon Higher Education Coordinating Commission Staff**

**Maggie Foree**, Healthcare Industry Consortium Strategist, Future Ready Oregon, Office of the Executive Director

Shanda Haluapo, Senior Policy Analyst, Office of Research and Data

Shalee Hodgson, Policy Advisor, Office of Community Colleges and Workforce Development

**Clay Martin**, Workforce and Talent Development Board (WTDB) Initiatives Analyst, Office of Workforce Investments

Jennifer Purcell, Director, Future Ready Oregon, Office of the Executive Director

Emily Zuber, Office Specialist, Future Ready Oregon, Office of the Executive Director

## **Steering Committee Members**

Jill Archer, Care Oregon

Alicia Beymer, Peace Health

Gerardo Cifuentes, Portland Community College

Jon Collins, Oregon Health Authority

Heather DeSart, Northwest Oregon Works

Heather Ficht, East Cascade Works

Sarah Foster, Governor's Office

Andrew Garland-Forshee, Portland Community College

Heather Jefferis, Oregon Council for Behavioral Health

Kim Parker-Llerenas, Willamette Workforce Partnership

Jason Payton, Oregon Employment Department

Maureen Zalewski Regnier, University of Oregon and Ballmer Institute

Robin Sansing, Southern Oregon University

Yvonne Smith, Clackamas Community College

Monica Vines, Central Oregon Community College

Kortnie Williams, Northwest Oregon Works

Dr. Rob Winningham, Western Oregon University

Evaon Wong, Portland State University

## **Advocates for Human Potential, Inc.**

Erin Allain, staff consultant

Jolie Black, research assistant

Gideon Cunningham, data and economic analyst

Martina Durant, project director and workforce (WF) subject matter expert (SME)

Allen Fowler, WF SME and technical writer

Susan Lange, WF SME

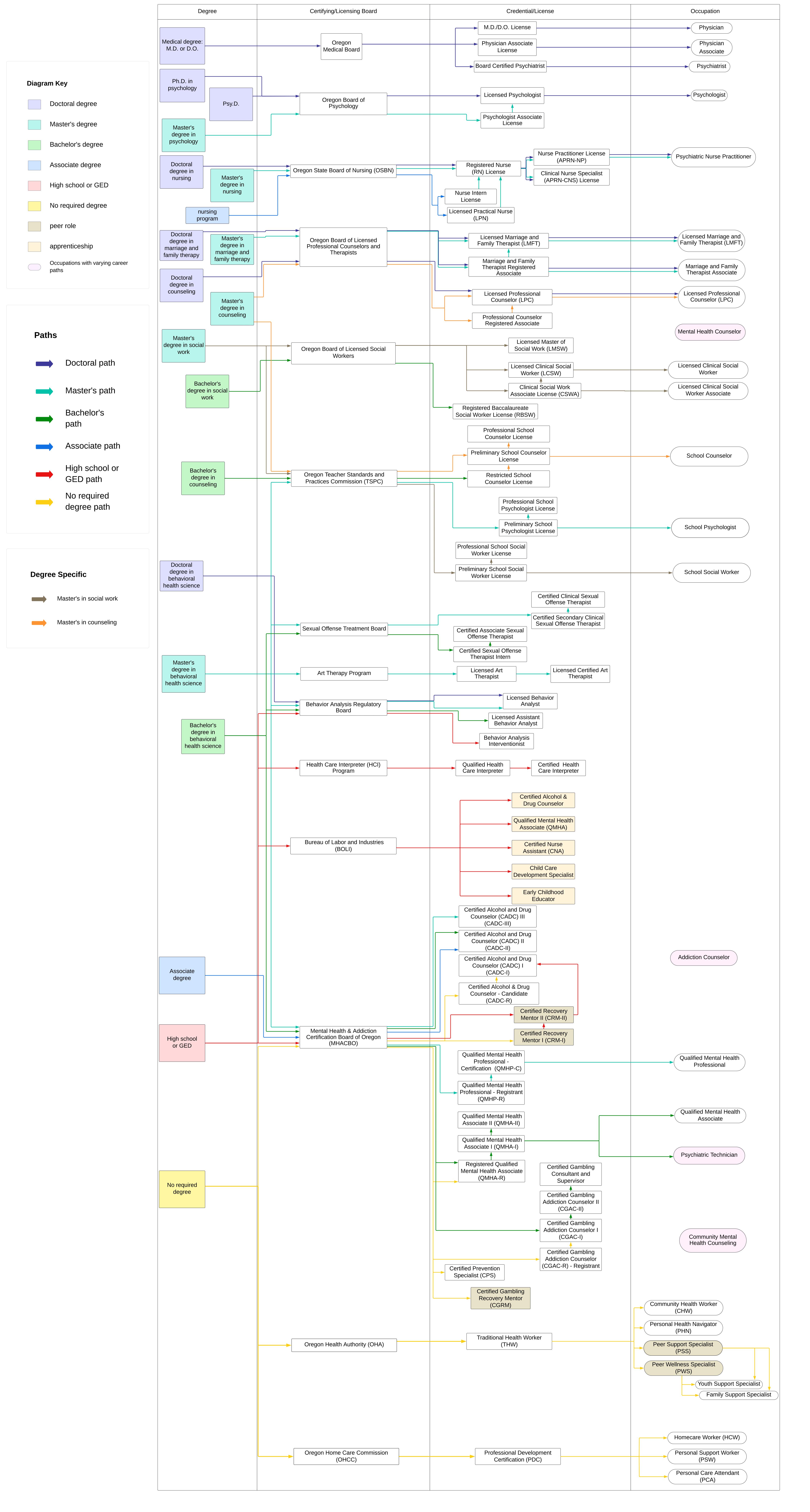
Maurizio Martinez, senior program associate

Michael Sofis, senior scientist

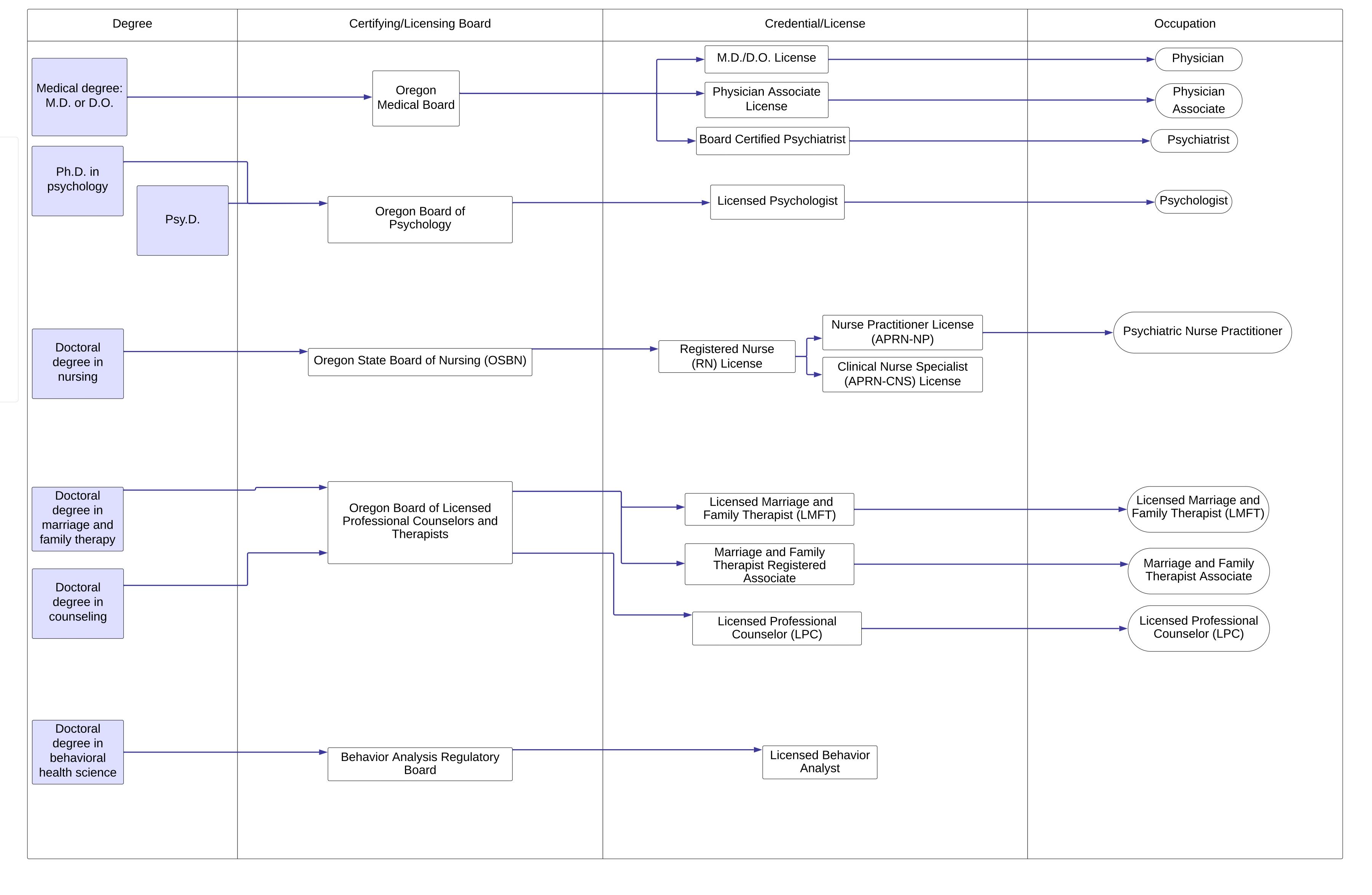
John Starkel, program associate

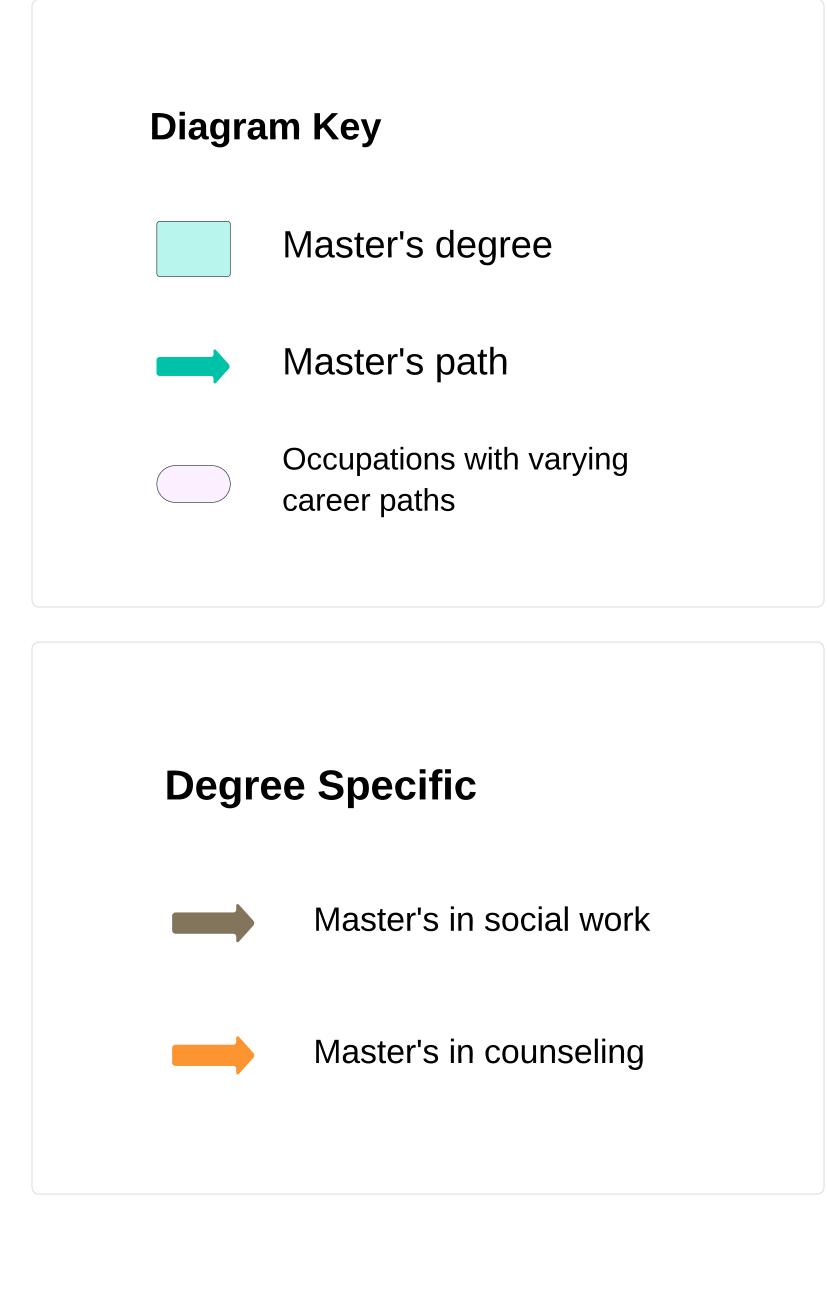
Meme Wang-Schweig, senior scientist

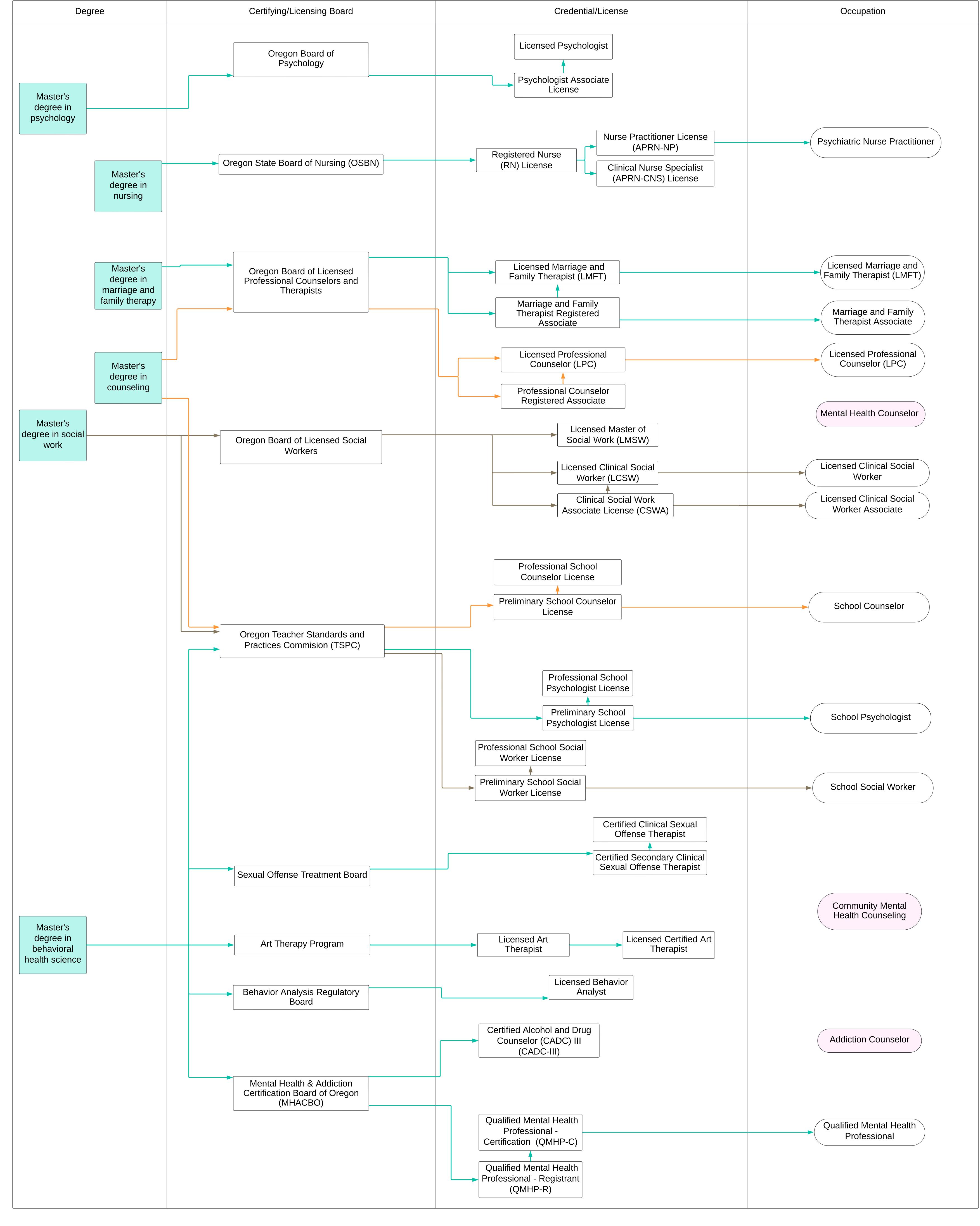




# Diagram Key Doctoral degree Doctoral path





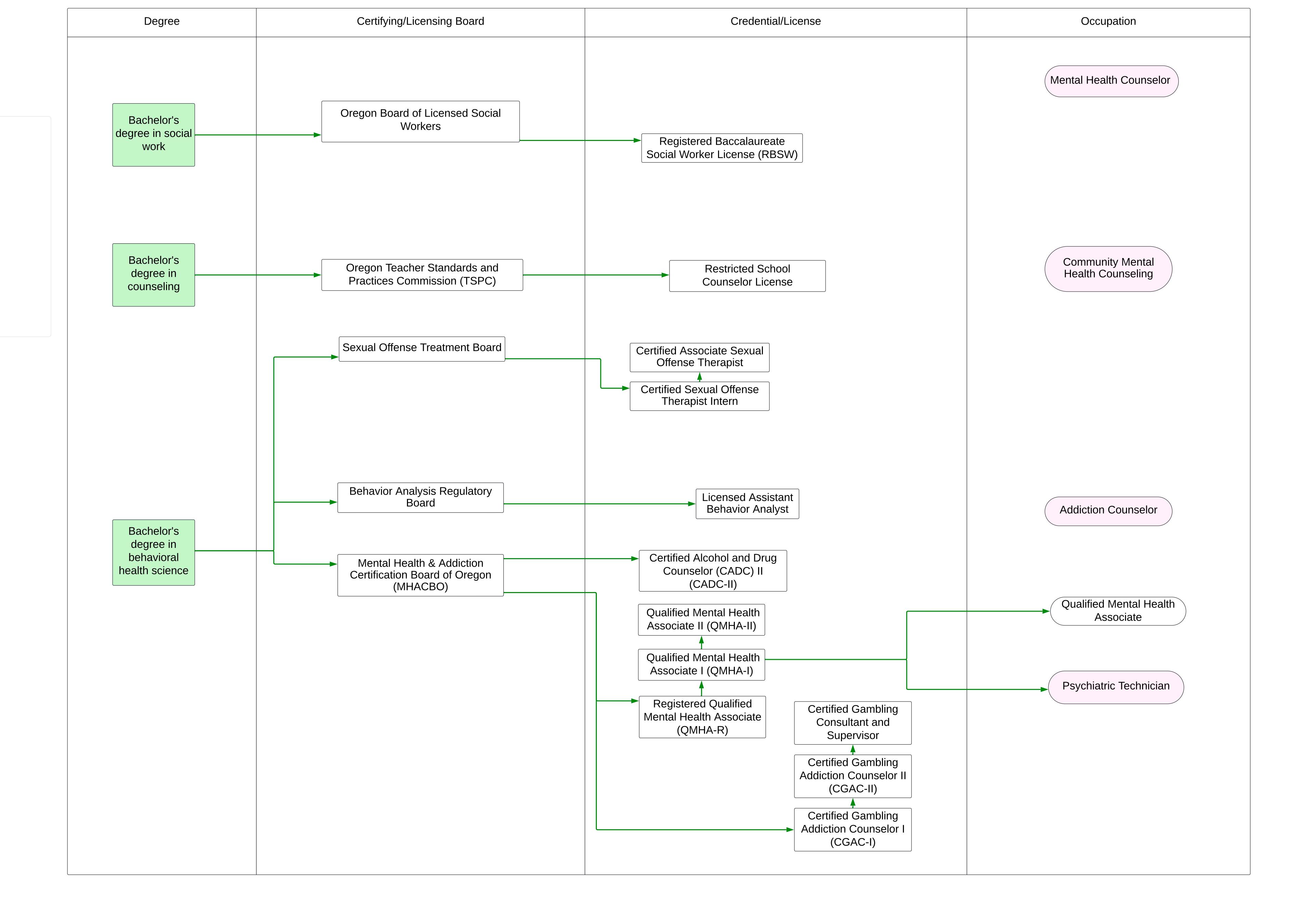


## **Diagram Key**

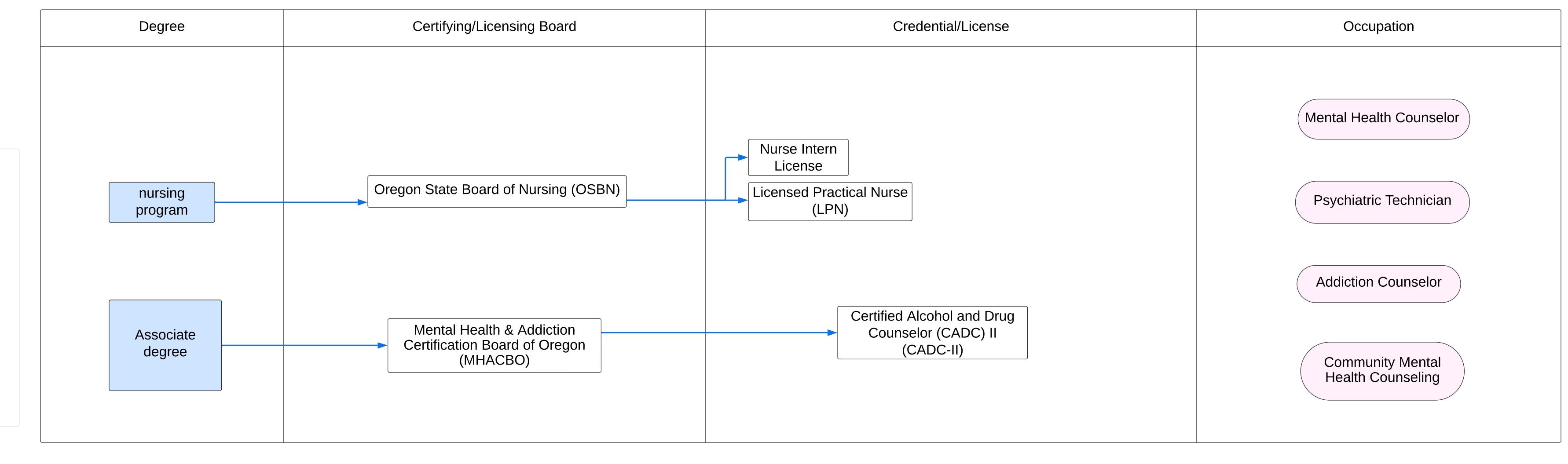
Bachelor's degree

Bachelor's path

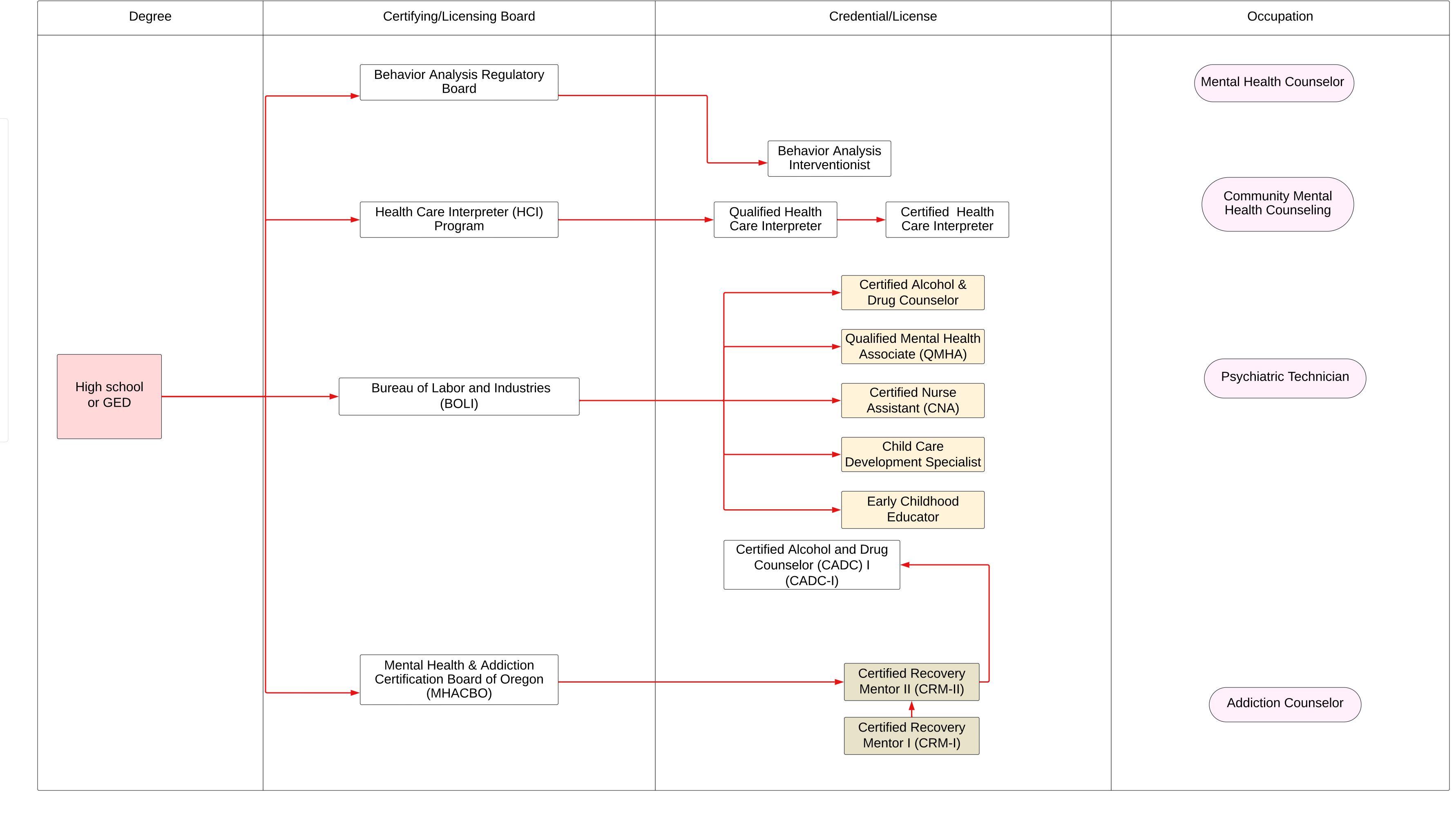
Occupations with varying career paths

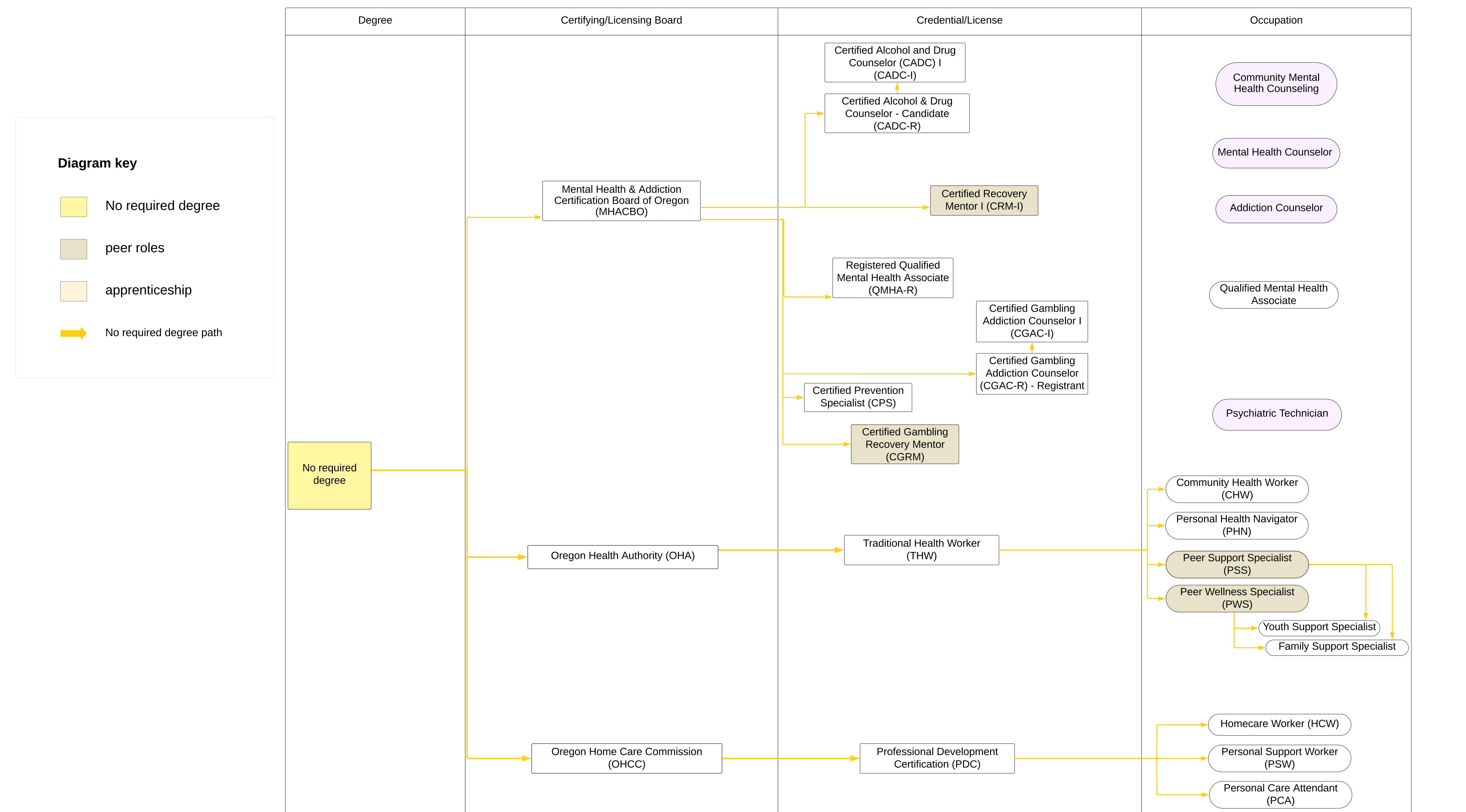


## Diagram Key Associate degree peer roles Associate path Occupations with varying career



## Diagram Key High school or GED peer role apprenticeship High school or GED path





## ATTACHMENT G

## BACKGROUND CHECK REQUIREMENTS AND SAMPLE REQUIRED INSURANCE FOR SUBCONTRACTORS AND/OR SUBGRANTEES

(These will be included in the Grant Agreement)

## SECTION 11: BACKGROUND CHECK/CRIMINAL HISTORY VERIFICATION

This Section 11 is only applicable to Grantee if their employee, potential employee, or volunteer will be interacting unsupervised and in-person with "Vulnerable Populations" (defined as minors, elderly, and persons with disabilities) in the completion of the Project Activities under this Agreement.

- **11.1** To the extent permitted by law, Grantee shall obtain a criminal history record check on any employee, potential employee or volunteer working with Vulnerable Populations and funded with resources from this Grant, as follows:
  - **11.1.1** By having the applicant as a condition of employment or volunteer service, apply for and receive a criminal history check from a local Oregon State Police office and furnish a copy thereof to Grantee; or
  - **11.1.2** As the employer, by contacting a local Oregon State Police office for an "Oregon only" criminal history check on the applicant/employee/volunteer; or
  - 11.1.3 By use of another method of criminal history verification that is at least as comprehensive as those described in Sections 11.1.1 and 11.1.2 above.

    A criminal record check will indicate convictions of child abuse, offenses against persons, sexual offenses, child neglect, or any other offense bearing a substantial relation to the qualifications, functions or duties of an employee or volunteer scheduled to work with Vulnerable Populations.
- 11.2 To the extent permitted by law, in addition to information resulting from checks or screening required by applicable federal, state, tribal, or local law, and/or by Grantee's written policies and procedures, current and appropriate information includes the results of public sex offender and child abuse websites/registries. A search (by current name, and, if applicable, by previous name(s) or aliases), of the pertinent and reasonably- accessible federal, state, and (if applicable) local and tribal sex offender and child abuse websites/public registries, including:
  - **11.2.1** The Dru Sjodin National Sex Offender Public Website (<a href="www.nsopw.gov">www.nsopw.gov</a>);
  - **11.2.2** The website/public registry for each state (and/or tribe, if applicable) in which the individual lives, works, or goes to school, or has lived, worked, or gone to school at any

- time during the past five years; and
- **11.2.3** The website/public registry for each state (and/or tribe, if applicable) in which the individual is expected to, or reasonably likely to, interact with a participating Vulnerable Populations in the course of activities under the award.
- **11.3** Grantee shall develop a policy or procedures to review criminal arrests or convictions of employees, potential employees or volunteers. The review must examine:
  - **11.3.1** The severity and nature of the crime;
  - **11.3.2** The number of criminal offenses;
  - **11.3.3** The time elapsed since commission of the crime;
  - **11.3.4** The circumstances surrounding the crime;
  - **11.3.5** The subject individual's participation in counseling, therapy, education or employment evidencing rehabilitation or a change in behavior; and
  - **11.3.6** The police or arrest report confirming the subject individual's explanation of the crime.
- 11.4 Grantee must determine after receiving the criminal history check whether the employee, potential employee or volunteer has been convicted of child abuse, offenses against persons, sexual offenses, child neglect, or any other offense bearing a substantial relation to the qualifications, functions or duties of an employee, or volunteer scheduled to work with Vulnerable Populations, and whether based upon the conviction the person poses a risk to working safely with Vulnerable Populations. If Grantee intends to hire or retain the employee, potential employee, or volunteer, Grantee must confirm in writing the reasons for hiring or retaining the individual. These reasons must address how the applicant, employee, or volunteer is presently suitable or able to work with Vulnerable Populations in a safe and trustworthy manner, based on the policy or procedure described in the preceding paragraphs of this Section. Grantee will ensure that all information related to the criminal background check of the applicant, employee, or volunteer is filed and retained in the appropriate file.
- **11.5** Grantee must make determinations of suitability, in advance, before individuals may interact with participating Vulnerable Populations, regardless of the individual's employment status.

All required background check information must be completed before the determination regarding suitability.

## SAMPLE REQUIRED INSURANCE FOR SUBCONTRACTORS AND/OR SUBGRANTEES

Grantee shall obtain at Grantee's expense the insurance specified in this Exhibit prior to performing under this Grant Agreement. Grantee shall maintain such insurance in full force and at its own expense throughout the duration of this Grant Agreement, as required by any extended reporting period or continuous claims made coverage requirements, and all warranty periods that apply. Grantee shall obtain the following insurance from insurance companies or entities that are authorized to transact the business of insurance and issue coverage in the State of Oregon and that are acceptable to HECC. All coverage shall be primary and non-contributory with any other insurance and self-insurance, with the exception of Professional Liability and Workers' Compensation. Grantee shall pay for all deductibles, self-insured retention, and self-insurance, if any.

If Grantee maintains broader coverage and/or higher limits than the minimums shown in this Exhibit, HECC requires and shall be entitled to the broader coverage and/or higher limits maintained by Grantee.

## **WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY:**

All employers, including Grantee, that employ subject workers, as defined in ORS 656.027, shall comply with ORS 656.017, and provide Workers' Compensation Insurance coverage for those workers, unless they meet the requirement for an exemption under ORS 656.126(2). Grantee shall require and ensure that each of its subcontractors complies with these requirements. If Grantee is a subject employer, as defined in ORS 656.023, Grantee shall also obtain Employers' Liability insurance coverage with limits not less than \$500,000 each accident.

If Grantee is an employer subject to any other state's workers' compensation law, Contactor shall provide Workers' Compensation Insurance coverage for its employees as required by applicable workers' compensation laws including Employers' Liability Insurance coverage with limits not less than \$500,000 and shall require and ensure that each of its out-of-state subcontractors complies with these requirements.

As applicable, Grantee shall obtain coverage to discharge all responsibilities and liabilities that arise out of or relate to the Jones Act with limits of no less than \$5,000,000 and/or the Longshoremen's and Harbor Workers' Compensation Act.

## **COMMERCIAL GENERAL LIABILITY:**

Grantee shall provide Commercial General Liability Insurance covering bodily injury and property damage in a form and with coverage that are satisfactory to the State of Oregon.

This insurance must include personal and advertising injury liability, products and completed operations, contractual liability coverage for the indemnity provided under this Grant Agreement, and have no limitation of coverage to designated premises, project, or operation. Coverage must be written on an occurrence basis in an amount of not less than \$1,000,000 per occurrence and not less than \$3,000,000 annual aggregate limit.

## **AUTOMOBILE LIABILITY INSURANCE:**

| Requi | red 🗌 | Not re | quired |
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Grantee shall provide Automobile Liability Insurance covering Grantee's business use including coverage for all owned, non-owned, or hired vehicles with a combined single limit of not less than \$1,000,000 for bodily injury and property damage. This coverage may be written in combination with the Commercial General Liability Insurance (with separate limits for Commercial General Liability and Automobile Liability). Use of personal Automobile Liability insurance coverage may be acceptable if evidence that the policy includes a business use endorsement is provided.

## **PROFESSIONAL LIABILITY:**

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Grantee shall provide Professional Liability Insurance covering any damages caused by an error, omission or any negligent acts related to the services to be provided under this Grant Agreement by the Grantee and Grantee's subcontractors, agents, officers or employees in an amount not less than \$1,000,000 per claim and not less than \$3,000,000 annual aggregate limit.

If coverage is provided on a claims made basis, then either an extended reporting period of not less than 24 months shall be included in the Professional Liability insurance coverage, or the Grantee shall provide Continuous Claims Made coverage as stated below.

## **EXCESS/UMBRELLA INSURANCE:**

A combination of primary and Excess/Umbrella Insurance may be used to meet the required limits of insurance. When used, all of the primary and Excess or Umbrella policies must provide all of the insurance coverages required herein, including, but not limited to, primary and non-contributory, additional insured, Self-Insured Retentions (SIRs), indemnity, and defense requirements. The Excess or Umbrella or policies must be provided on a true "following form" or broader coverage basis, with coverage at least as broad as provided on the underlying insurance. No insurance policies maintained by the Additional Insureds, whether primary or excess, and which also apply to a loss covered hereunder, must be called upon to contribute to a loss until the Grantee's primary and excess liability policies are exhausted.

If Excess/Umbrella Insurance is used to meet the minimum insurance requirement, the Certificate of Insurance must include a list of all policies that fall under the Excess/Umbrella insurance.

## ADDITIONAL INSURED:

All liability insurance, except for Workers' Compensation, Professional Liability, Directors and Officers Liability and Network Security and Privacy Liability (if applicable), required under this Grant Agreement must include an Additional Insured endorsement specifying the State of Oregon, its officers, employees, and agents as Additional Insureds, but only with respect to Grantee's activities to be performed under this Grant Agreement. Coverage shall be primary and non-contributory with any other insurance and self-insurance.

Regarding Additional Insured status under the General Liability policy, HECC requires Additional Insured status with respect to liability arising out of ongoing operations and completed operations, but only with respect to Grantee's activities to be performed under this Grant Agreement. The Additional Insured endorsement with respect to liability arising out of Grantee's ongoing operations must be on, or at least as broad as, ISO Form CG 20 10 and the Additional Insured endorsement with respect to completed operations must be on, or at least as broad as, ISO form CG 20 37.

## WAIVER OF SUBROGATION:

Grantee shall waive rights of subrogation which Grantee or any insurer of Grantee may acquire against HECC or State of Oregon by virtue of the payment of any loss. Grantee shall obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not HECC has received a Waiver of Subrogation endorsement from the Grantee or the Grantee's insurer(s).

## **CONTINUOUS CLAIMS MADE COVERAGE:**

If any of the required liability insurance is on a claims made basis and does not include an extended reporting period of at least 24 months, then Grantee shall maintain continuous claims made liability coverage, provided the effective date of the continuous claims made coverage is on or before the effective date of the Grant Agreement, for a minimum of 24 months following the later of:

- (i) Grantee's completion and HECC's acceptance of all Services required under the Grant Agreement, or
- (ii) HECC or Grantee termination of this Grant Agreement, or
- (iii) The expiration of all warranty periods provided under this Grant Agreement.

## **CERTIFICATE(S) AND PROOF OF INSURANCE:**

Grantee shall provide to HECC Certificate(s) of Insurance for all required insurance before delivering any goods and performing any Services required under this Grant Agreement. The Certificate(s) of Insurance must list the State of Oregon, its officers, employees, and agents as a Certificate holder and as an endorsed Additional Insured. The Certificate(s) of insurance must also include all required endorsements or copies of the applicable policy language effecting coverage required by this Grant Agreement. If Excess/Umbrella Insurance is used to meet the minimum insurance requirement, the Certificate(s) of Insurance must include a list of all policies that fall under the Excess/Umbrella Insurance. As proof of insurance, HECC has the right to request copies of insurance policies and endorsements relating to the insurance requirements in this Exhibit.

## NOTICE OF CHANGE OR CANCELLATION:

Grantee or its insurer must provide at least 30 calendar days' written notice to HECC before cancellation of, material change to, potential exhaustion of aggregate limits of, or non-renewal of the required insurance coverage(s).

## **INSURANCE REQUIREMENT REVIEW:**

Grantee agrees to periodic review of insurance requirements by HECC under this Grant Agreement and to provide updated requirements as mutually agreed upon by Grantee and HECC.

## **STATE ACCEPTANCE:**

All insurance providers are subject to HECC acceptance. If requested by HECC, Grantee shall provide complete copies of insurance policies, endorsements, self-insurance documents and related insurance documents to HECC's representatives responsible for verification of the insurance coverages required under this Exhibit.

## Additional Coverages That May Apply: PHYSICAL ABUSE AND MOLESTATION INSURANCE: ☐ Required ◯ Not required

Grantee shall provide Physical Abuse and Molestation Insurance in a form and with coverage that are satisfactory to the State covering damages arising out of actual, perceived, or threatened physical abuse, mental injury, sexual molestation, negligent: hiring, employment, supervision, training, investigation, reporting to proper authorities, and retention of any person for whom the Grantee is responsible including but not limited to Grantee and Grantee's employees and volunteers. Policy endorsement's definition of an insured must include the Grantee, and the Grantee's employees and volunteers. Coverage must be written on an occurrence basis in an amount of not less than \$1,000,000 per occurrence and not less than \$3,000,000 annual aggregate. Coverage can be provided by a separate policy or as an endorsement to the Commercial General Liability or Professional Liability policies. The limits must be exclusive to this required coverage. Incidents related to or arising out of physical abuse, mental injury, or sexual molestation, whether committed by one or more individuals, and irrespective of the number of incidents or injuries or the time period or area over which the incidents or injuries occur, shall be treated as a separate occurrence for each victim. Coverage must include the cost of defense and the cost of defense shall be provided outside the coverage limit.