

August 20, 2025

*Future Ready Oregon
Manufacturing Industry Consortium*

High-Skill, High-Wage, High-Demand Manufacturing Occupation Profiles



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The information in this document has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#) in response to the statutory requirements of [House Bill 3306 \(2023, ORS 660.410 \(3\(a\)\)\)](#).

Future Ready Oregon
Manufacturing Industry Consortium
High-Skill, High-Wage, High-Demand
Manufacturing Occupation Profiles

July 24, 2025

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Executive Summary

This packet of occupation and wage data fulfills the wage transparency requirements for skilled occupations set forth by [House Bill \(HB\) 3306 \(2023\)](#). Higher Education Coordinating Commission (HECC) staff prepared the full wage data tables found in [Appendix III](#) using data that the Oregon Employment Department (OED) prepared for each of three industry sectors (healthcare, manufacturing, and technology). These industry sectors correspond to the HECC's statewide, sector-specific Industry Consortia.

The purpose of this packet is to provide data that supports and advances the Industry Consortia's sector-specific workforce development strategies. Additionally, it may support policymakers, education and training providers, local workforce development boards, and other workforce planners and talent developers who wish to create or maintain accessible career training pathways.

This packet also includes detailed, individual occupation and wage profiles for a subset of the high-skill occupations found in the wage data tables ([Appendix III](#)). HECC staff prepared the individual profiles using data provided by OED. The individual occupation profiles included in this packet represent occupations that are in high demand and offer a high wage in addition to being high skill occupations. OED uses the following definitions:

- *High-skill* occupations typically require some form of postsecondary training and/or credential.
- *High-wage* occupations have a median annual wage greater than \$51,563 statewide as of 2023.¹
- *High-demand* occupations are projected to have more than 620 openings statewide.

HECC staff compared each occupation's current sector-specific employment to the total projected openings statewide over the next decade.² HECC staff then created individual occupation profiles for occupations whose current employment within their sector represents at least 3 percent of the total projected openings across all industries over the next decade. These occupations may indicate a strategic priority for the Consortium.

These individual occupation profiles provide information about education and credentials, wages, and employment demand in each of Oregon's workforce regions.

This packet also contains a [glossary](#) of key terms used in each profile, a [reference list](#), and a description of the [methodology](#) OED used to collect and calculate the data. A summary of [Oregon's Employability Skills](#) is included in [Appendix II](#) and offers insight into the critical skills and knowledge needed to support learners' transitions from school and training to the workforce. The Workforce Talent and Development Board's Essential Employability Skills Taskforce issued its final report and recommendations, which included the Oregon Employability Skills curriculum, in December 2020.

This packet represents only manufacturing occupations.

¹ See the [Glossary](#) for expanded definitions; see [Appendix III](#) for a comprehensive overview of the wage data.

² The OED projections used in this packet are from 2023-2033.

Legislative Background

In 2023, the Oregon Legislature enacted [HB 3306 \(2023\)](#), which amended Oregon Revised Statute ([ORS](#)) [660.410](#) to include a new requirement for Future Ready Oregon’s Industry Consortia.³ HB 3306 (2023) mandates that each Industry Consortium publish localized wage rate standards for skilled occupations within the sectors they represent—healthcare, manufacturing, and technology—using available OED data. Additionally, every two years, each Consortium is required to recalculate these wage standards using relevant and available OED economic and employment data.

HECC Staff Implementation

HECC staff began implementing [HB 3306 \(2023\)](#) in December 2023. The HECC consulted OED staff on the meaning of “locality” and “skilled occupation”—terms used in HB 3306 (2023) but not defined in HB 3306 (2023) or SB 1545 (2022). Following presentations to the Industry Consortia in late 2024, HECC staff adopted definitions aligned with existing OED data. “Locality” was defined as local workforce development board regions, and “skilled occupation” as high-skill occupations.⁴ These choices fulfill the requirement to use “relevant economic and employment data” from OED. These Consortia-approved definitions were then used to generate the final wage data table that appears in [Appendix III](#).

In early 2025, Industry Consortia members informed the content, layout, and readability of the profile packets. They also considered how the individual occupation profiles could be used to advance workforce and economic development efforts in the corresponding sector. HECC staff revised the profiles to reflect Consortia input and facilitated Consortia conversations with each iteration.

Methodology and Data Sources

The information presented in this packet uses data from publicly available OED and Bureau of Labor Statistics sources as suggested by OED. Neither wage data table in [Appendix III](#) nor the individual occupation profiles use primary research conducted by HECC staff. A methodology statement from OED on how this data was collected and calculated can be found in [Appendix I](#).

Next Steps

HECC’s Industry Consortia will use the information published in this packet to advance sector-specific workforce development strategies, including:

- Publishing wage rate standards by locality for skilled occupations within each of the Industry Consortium sectors to improve wage transparency for training program participants.
- Using the occupation and wage profiles to facilitate supply and demand data gathering.
- Developing an accurate inventory of occupation-relevant credentials across Oregon.
- Creating career ladder infographics using occupation profiles.

³ In 2022 the Oregon Legislature passed [Senate Bill \(SB\) 1545](#), a comprehensive \$200 million workforce investment package also known as Future Ready Oregon. SB 1545 also established Industry Consortia for Oregon’s healthcare, manufacturing, and technology sectors. Future Ready Oregon is now codified in Oregon Revised Statutes 660.380-410.

⁴ The workforce regions used in OED datasets represent Oregon’s nine local workforce development board regions, excepting the combined regions of Worksystems, Inc. and Clackamas Workforce Partnership.

Glossary

Unless otherwise indicated, the following definitions have been sourced from the Oregon Employment Department (OED) or the United States Bureau of Labor Statistics (BLS).

<i>Term</i>	<i>Definition</i>
Competitive Education	“Competitive education provides an indicator of what education attainment potential workers may need in order to compete with workers across the state who are already in a given career. It identifies what education attainment most workers who are working in a given career have attained by analyzing 5-year American Community Survey estimates of occupational employment and education attainment” <i>Please note: This definition provided by OED staff by request. No publicly available document is available for this definition.</i> (OED).
Employment	“The Occupational Employment and Wage Statistics survey defines employment as workers covered by unemployment insurance. This may exclude the self-employed, owners or partners of unincorporated firms, unpaid family workers, and some commission-based sales agents” (OED).
Entry-Level Wage Range	OED provides “wage ranges by publishing a series of percentiles for each occupation. A percentile wage shows the percentage of workers in an occupation that earn less than a given wage and the percentage that earn more. In most cases, wages in the 10th or 25th percentile likely reflect workers just entering a career, or who have less education attainment than others performing similar work” (OED) .
High-Demand Occupations	High-demand occupations have “more than the median number of total (growth plus replacement) openings for statewide or a particular area. An occupation is considered to be high-demand as of 2023 if it is projected to have more than 620 total annual openings” statewide (OED).
High-Skill Occupations	High-skill occupations are “occupations with a typical educational level needed for entry of postsecondary training (non-degree) or higher or; Occupations with an apprenticeship as the typical on-the-job training level; or occupations typically needing related work experience or long-term on-the-job-training for entry and postsecondary training (non-degree) or above as competitive” (OED).
High-Wage Occupations	High-wage occupations are “occupations paying more than the all-occupation, all-ownership median wage for statewide or a particular area. An occupation is considered to be high-wage as of 2023 if it has a median annual wage greater than \$51,563” statewide (OED).

Industries of Employment	The Occupational Employment and Wage Statistics (OEWS) survey classifies occupations into industries of employment based on the North American Industry Classification System (NAICS). “NAICS groups establishments into specific industries based on the similarities in their production processes. In cases where an establishment may have two different economic activities, NAICS generally uses revenue data to determine an establishment’s primary activity in an industry” (United States Census Bureau).
N/A	“An N/A listed for employment or wage information on any workforce region indicates that there is insufficient data for the Employment Department to produce an estimate. Either data for that region and/or occupation has been intentionally suppressed due to confidentiality requirements, or the error range for an estimate is too large to meet data quality standards. This does not necessarily indicate that there is no employment or wages for that particular occupation and/or region.” <i>Please note: This definition provided by OED staff by request. No publicly available document is available for this definition.</i> (OED).
Occupation	The Bureau of Labor Statistics’ Standard Occupation Classification System (SOC) defines occupation as a “grouping of a number of similar individual jobs. The SOC organizes millions of jobs into discrete occupations based on their similarities as determined by work performed and, in some cases, on the skills, education and/or training needed to perform the work” (BLS).
Occupation Description	An occupational definition is a “collective description of a number of similar individual jobs performed, with minor variations, in different establishments. Occupational classification schemes such as the SOC organize millions of jobs into discrete occupations on the basis of their similarities as determined by the schemes’ classification principles” (BLS).
Occupational Employment and Wage Statistics Survey (OEWS)	“The OEWS program uses a semiannual survey to measure occupational employment and wage rates for payroll workers. In Oregon, the survey samples more than 6,000 establishments each year, taking three years to fully collect the sample of more than 18,000 establishments. Each year, one-third of the establishments are surveyed, with all industries covered each year of the three-year cycle. The OEWS survey is sent to Oregon employers. The Bureau of Labor Statistics requires at least a 75 percent response rate” (OED).
Projected Growth Openings	“Growth openings are due to employment growth within an occupation and represent the difference between the current and projected employment in the occupation” (OED).
Projected Replacement Openings	“A replacement opening is a job opening caused by an existing worker leaving an occupation. Reasons for leaving an occupation include retirement, major occupational changes, disability, death, or caring for family. More job openings are created due to turnover caused by people who change jobs while remaining within the occupation. Turnover openings are not included in replacement openings” (OED).
Relative Standard Error	“The relative standard error is a measure of the reliability of a survey statistic. The smaller the relative standard error, the more precise the estimate” (OED).

Total Annual Openings	<p>“Total job openings are the sum of change openings and replacement openings. Occupational employment projections are based primarily on four sets of data: (1) industrial employment projections, which include covered and non-covered employment (where available), (2) an annual occupational survey of employers, (3) national change factors (data used to identify economic changes not captured in the first two sets of data), and (4) national self-employment ratios (data used to estimate the number of jobs from self-employment in each occupation)” (OED).</p>
Typical Entry-Level Education	<p>“The typical entry-level education is the education OED expects employers across the state to require in order for an applicant to submit their résumé. These levels are developed by looking at education requirements estimated by the US Bureau of Labor Statistics, evaluating state licensing requirements, and aggregating Oregon job postings found through the National Labor Exchange” (OED). <i>Please note: This definition provided by OED staff by request. No publicly available document is available for this definition.</i></p>

Manufacturing Sector Occupation Profile *Aircraft Mechanics and Service Technicians (49-3011)*

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Excludes Avionics Technicians (49-2091).”

Illustrative examples: Aircraft Engine Specialist, Airframe Mechanic, Flight Test Mechanic, Helicopter Engine Mechanic

Education and Credentials

Typical entry-level: Postsecondary training (non-degree). (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Associate’s degree.

Licenses and Certifications:

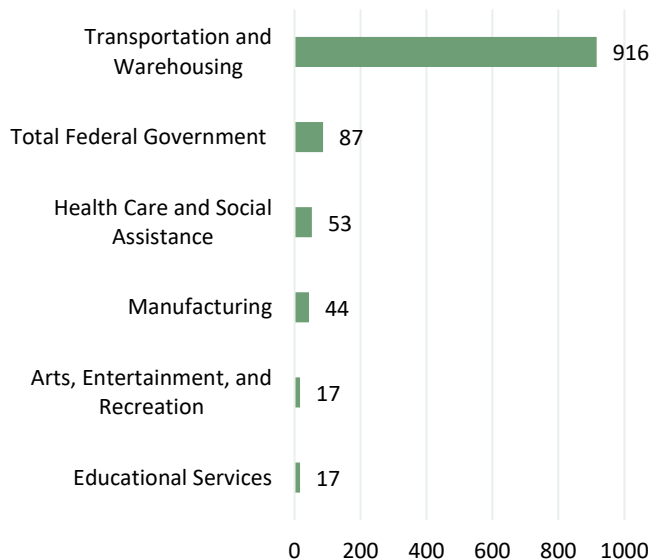
[Apprentice, Registered \(Industrial Trades\)](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$25.16 - \$31.98

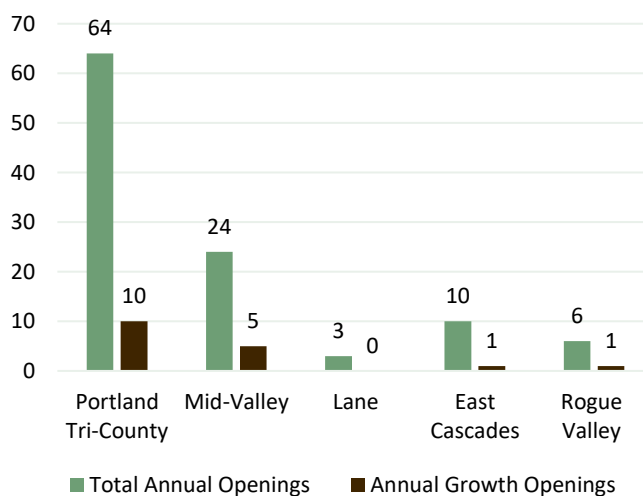
**Total Number Employed
(2023)**
1,172

**Projected Job Openings
Per Year (2023-2033)**
111

Industries of Employment (2023)



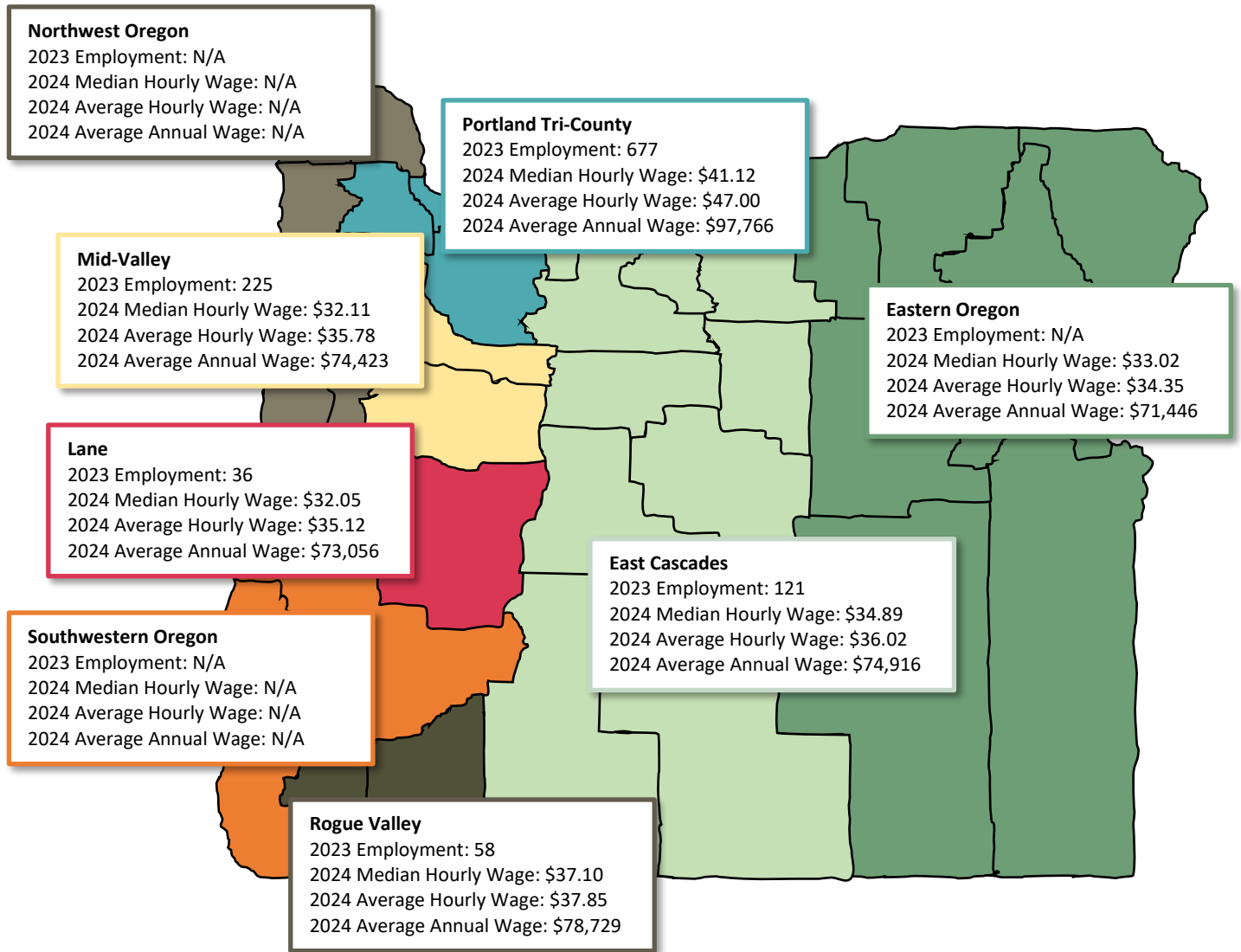
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile *Architectural and Civil Drafters (17-3011)*

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. Use knowledge of building materials, engineering practices, and mathematics to complete drawings.”

Education and Credentials

Typical entry-level: Postsecondary training (non-degree). (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Associate’s degree.

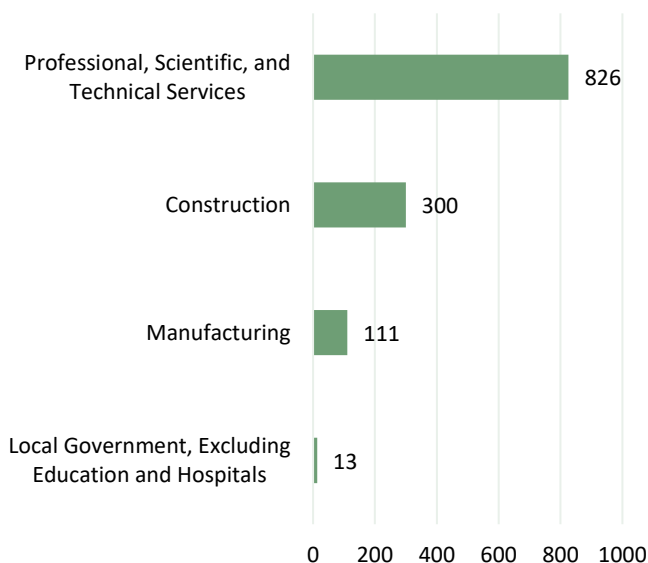
Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$23.88 - \$27.97

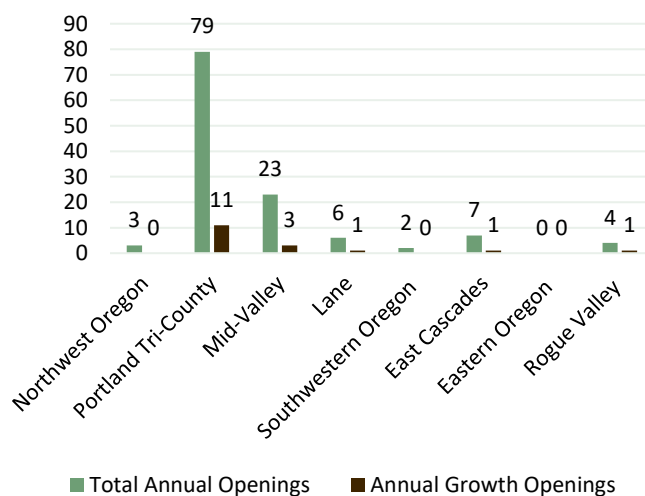
**Total Number Employed
(2023)**
1,321

**Projected Job Openings
Per Year (2023-2033)**
130

Industries of Employment (2023)



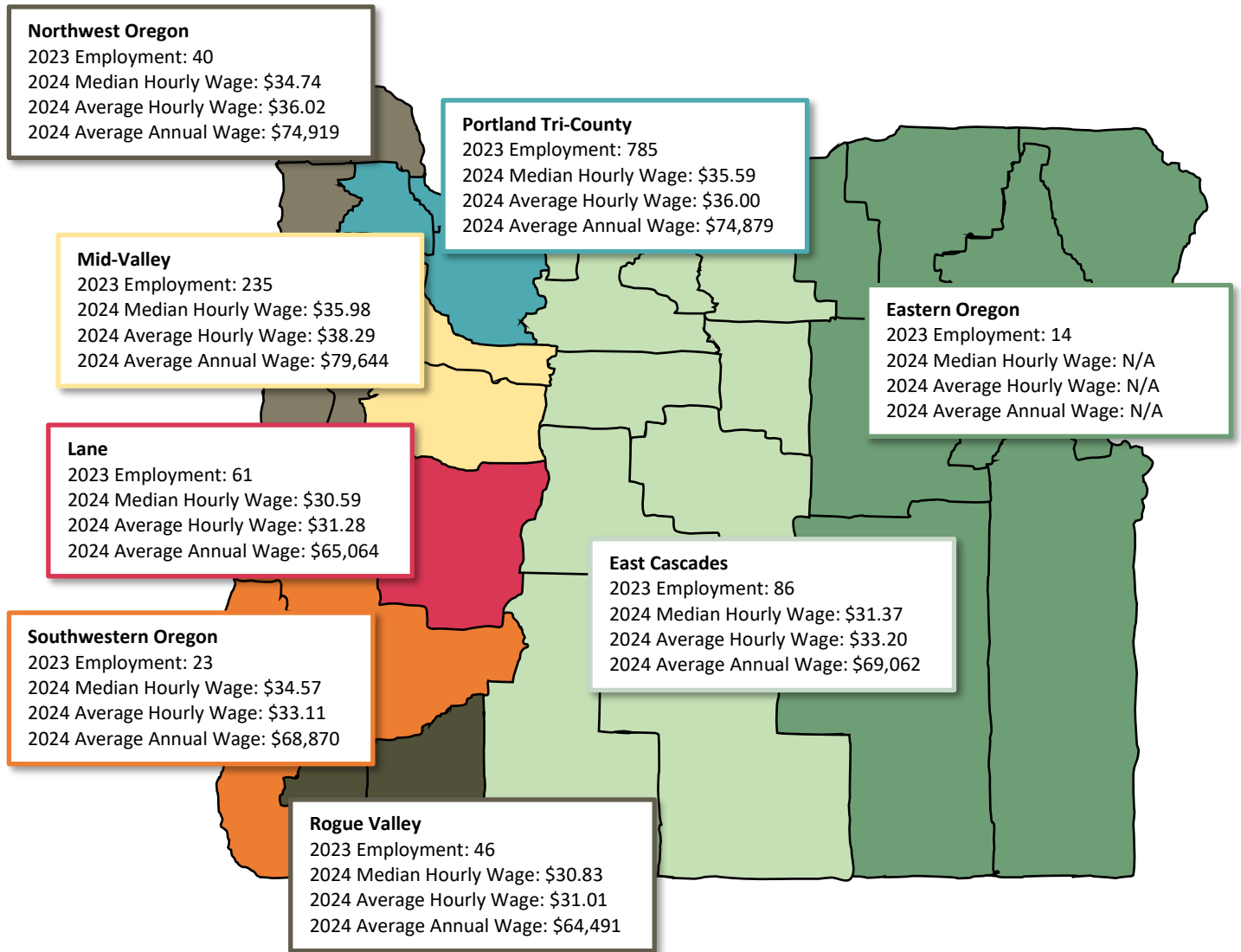
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile Carpenters (47-2031)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Construct, erect, install, or repair structures and fixtures made of wood and comparable materials, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; and wood stairways, window and door frames, and hardwood floors. May also install cabinets, siding, drywall, and batt or roll insulation. Includes brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways.”

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree).

Licenses and Certifications:

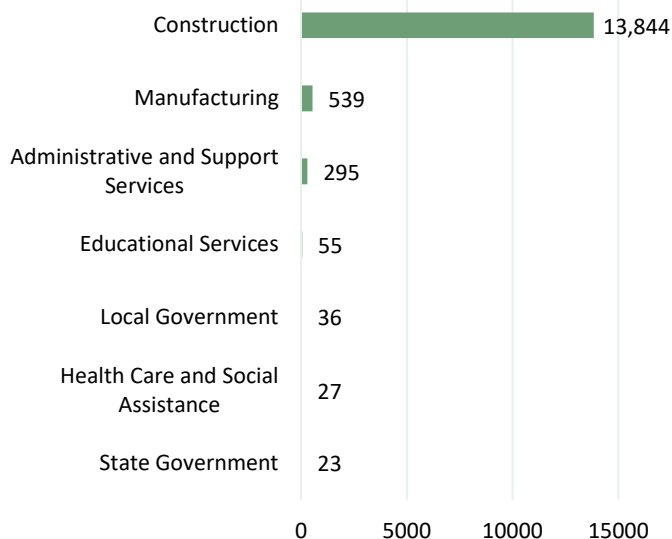
[Apprenticeship, Registered \(Construction Trades\)](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$19.57 - \$23.89

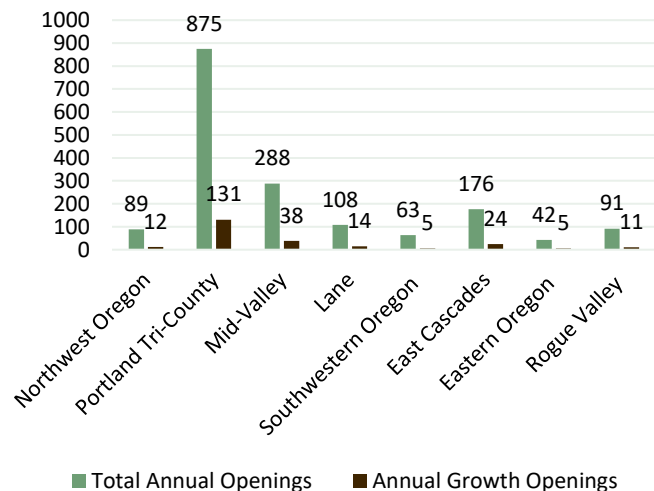
**Total Number Employed
(2023)**
19,753

**Projected Job Openings
Per Year (2023-2033)**
1,856

Industries of Employment (2023)



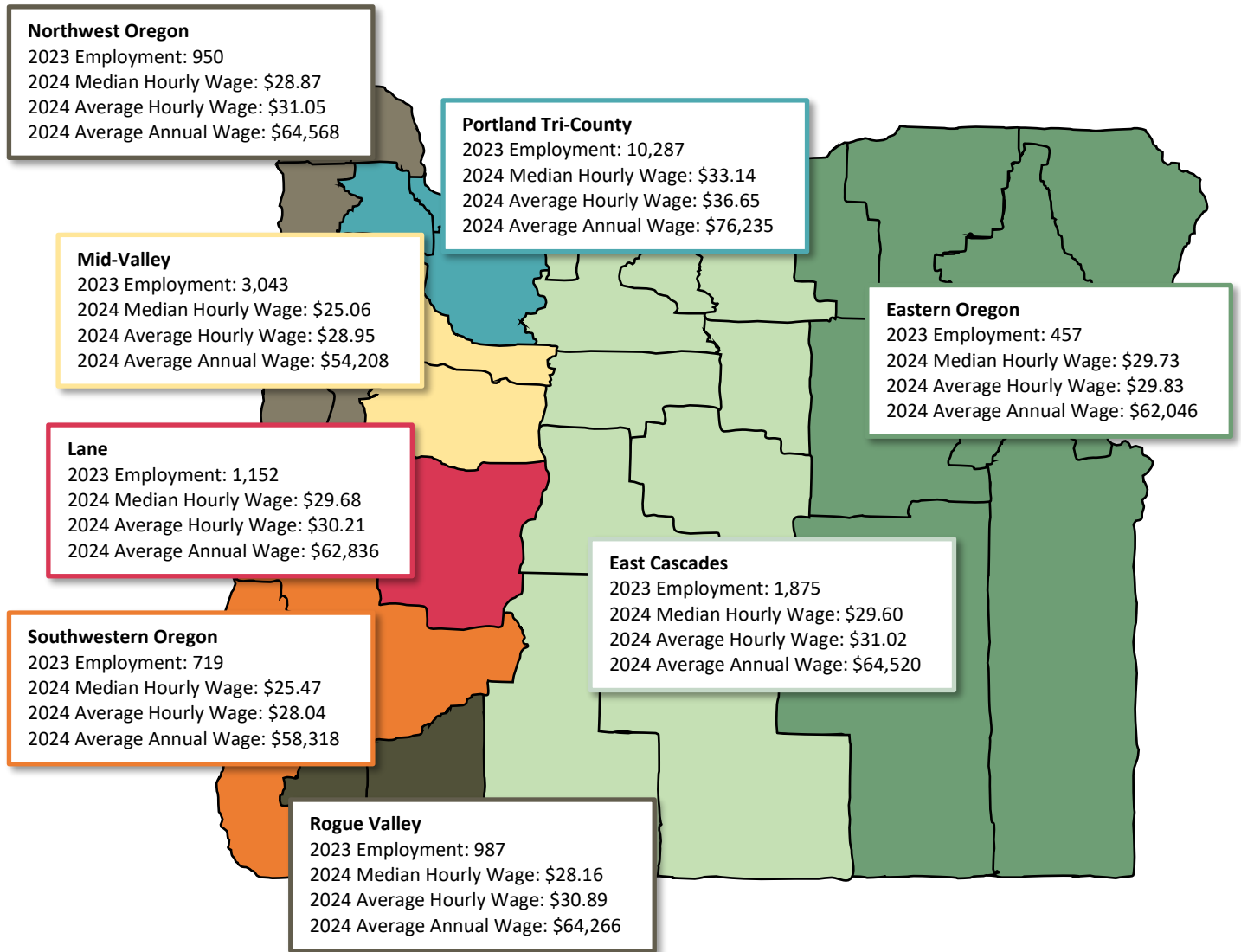
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile Chemical Equipment Operators and Tenders (51-9011)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Operate or tend equipment to control chemical changes or reactions in the processing of industrial or consumer products. Equipment used includes devulcanizers, steam-jacketed kettles, and reactor vessels. Excludes Chemical Plant and System Operators (51-8091).”

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: High school diploma or equivalent.

Licenses and Certifications:

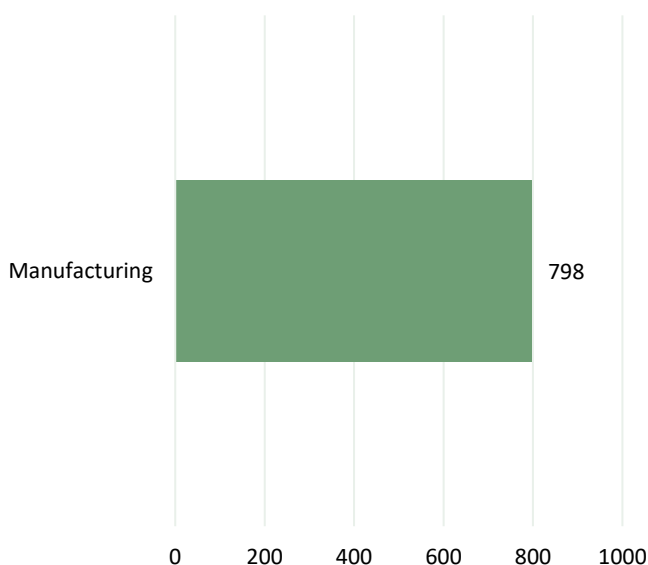
No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$21.05 - \$23.27

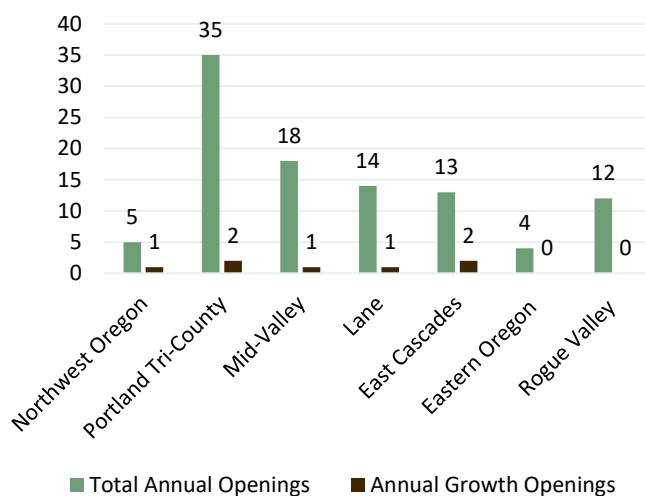
**Total Number Employed
(2023)**
941

**Projected Job Openings
Per Year (2023-2033)**
99

Industries of Employment (2023)



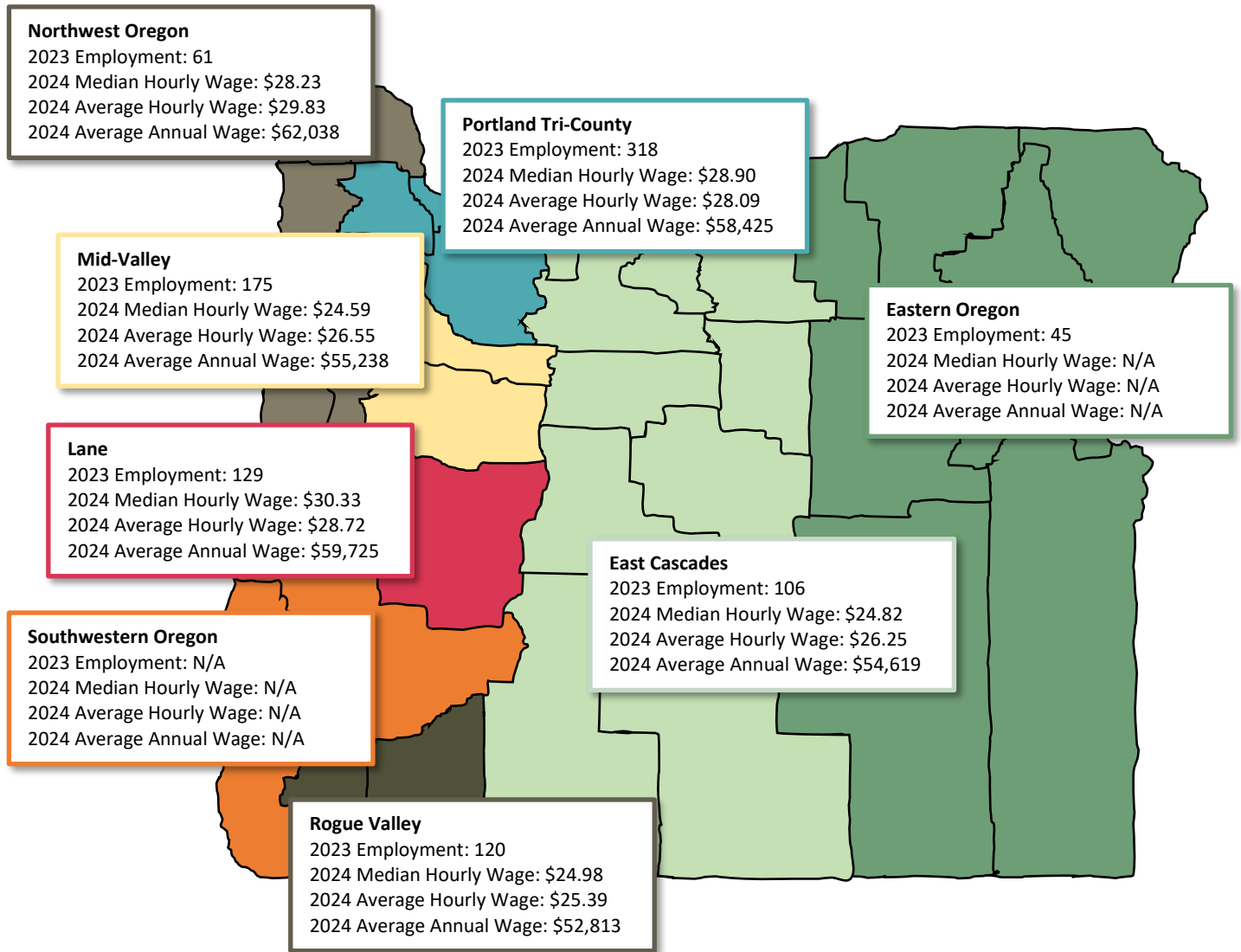
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹. Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

². Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile Computer Numerically Controlled Tool Programmers (51-9162)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Develop programs to control machining or processing of materials by automatic machine tools, equipment, or systems. May also set up, operate, or maintain equipment.”

Education and Credentials

Typical entry-level: Post-secondary training (non-degree). (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Post-secondary training (non-degree).

Licenses and Certifications:

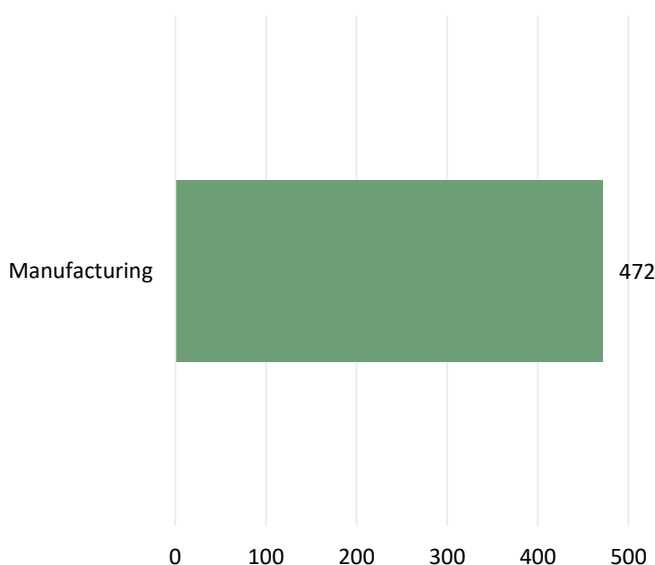
No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$25.49 - \$30.59

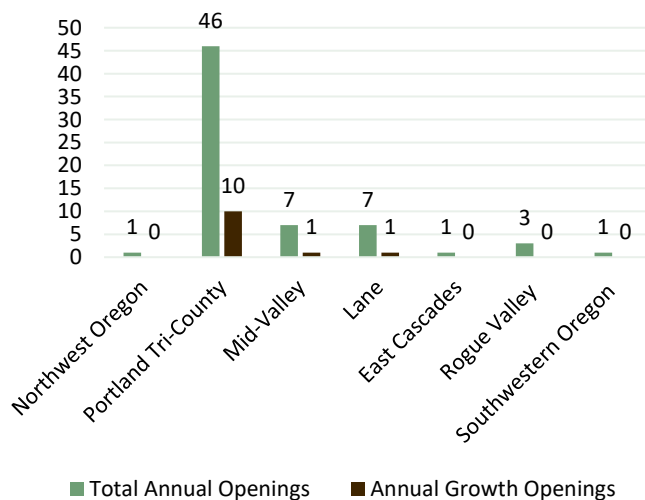
**Total Number Employed
(2023)**
521

**Projected Job Openings
Per Year (2023-2033)**
69

Industries of Employment (2023)



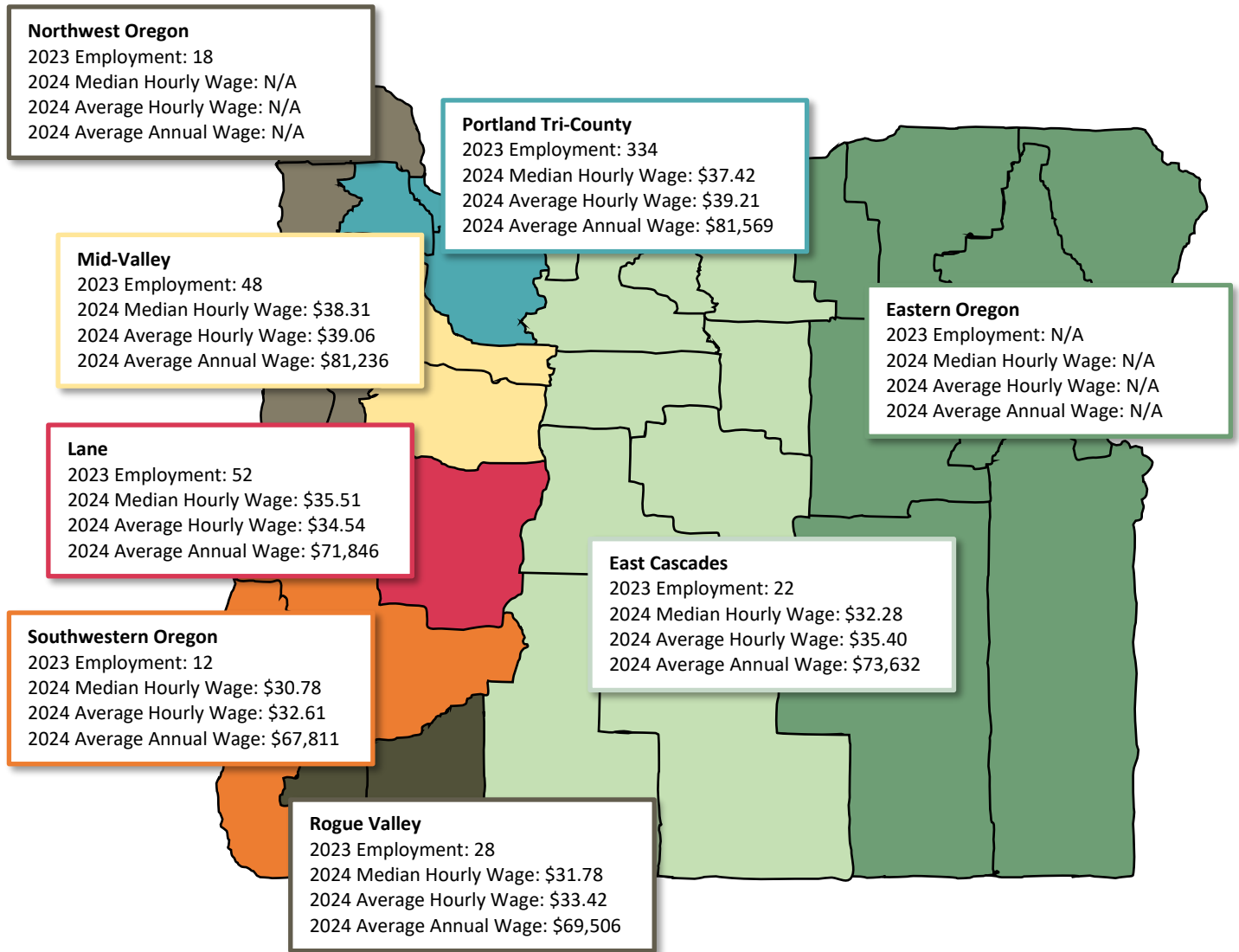
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹. Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

². Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile Drafters, All Other (17-3019)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“All drafters not listed separately.”

Illustrative examples: *Blueprint Tracer*,
Geological Drafter, *Marine Drafter*

Education and Credentials

Typical entry-level: Postsecondary training (non-degree). (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Associate’s degree.

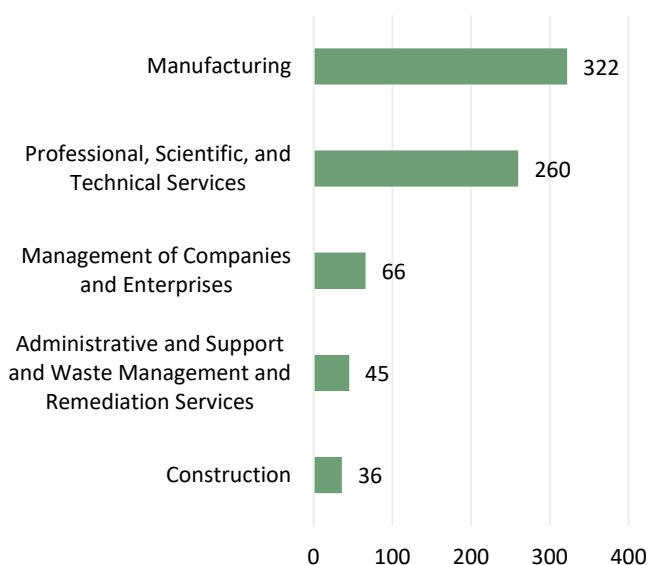
Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$22.29 - \$24.35

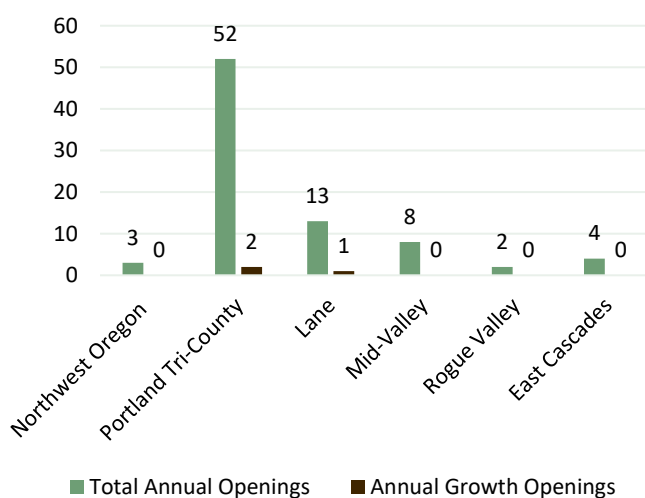
**Total Number Employed
(2023)**
936

**Projected Job Openings
Per Year (2023-2033)**
86

Industries of Employment (2023)



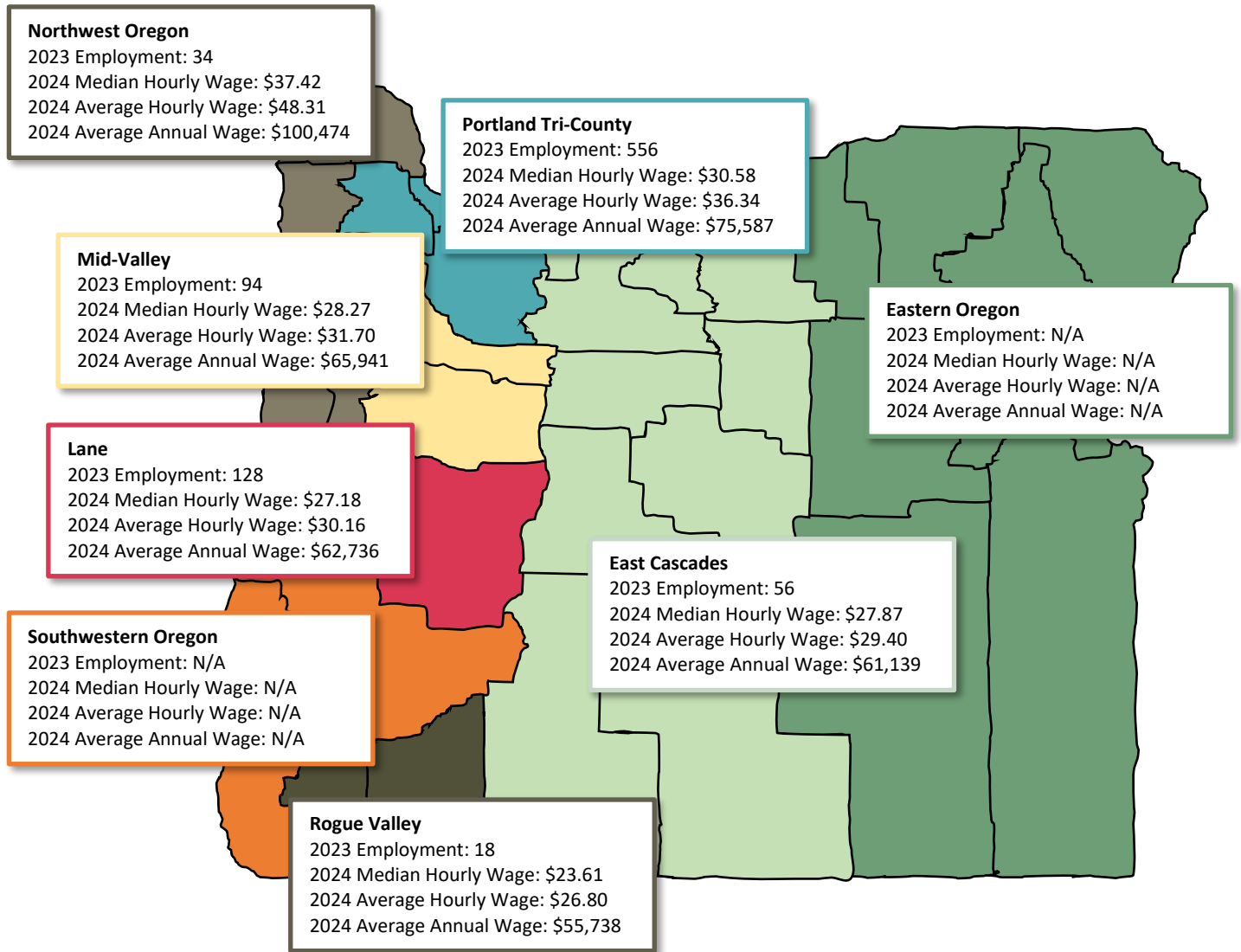
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Electrical and Electronic Engineering Technologists and Technicians (17-3023)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, adjust, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use by engineering staff in making engineering design decisions. Excludes Broadcast Technicians (27-4012).”

Education and Credentials

Typical entry-level: Associate’s degree. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Associate’s degree.

Licenses and Certifications:

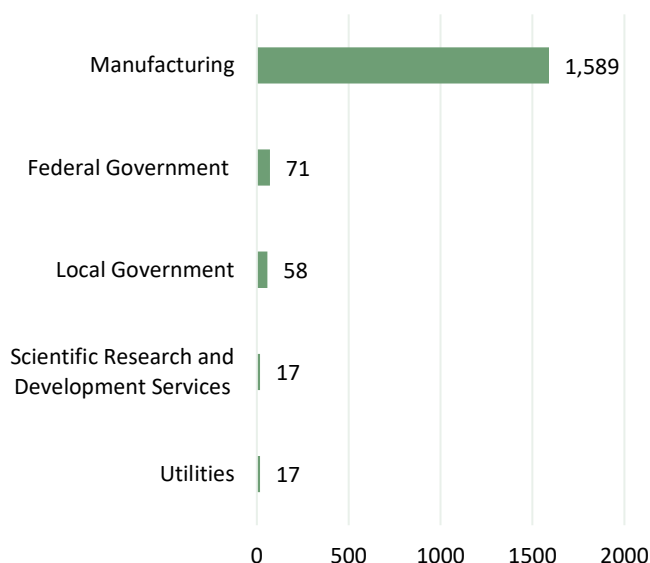
No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$27.79 - \$32.16

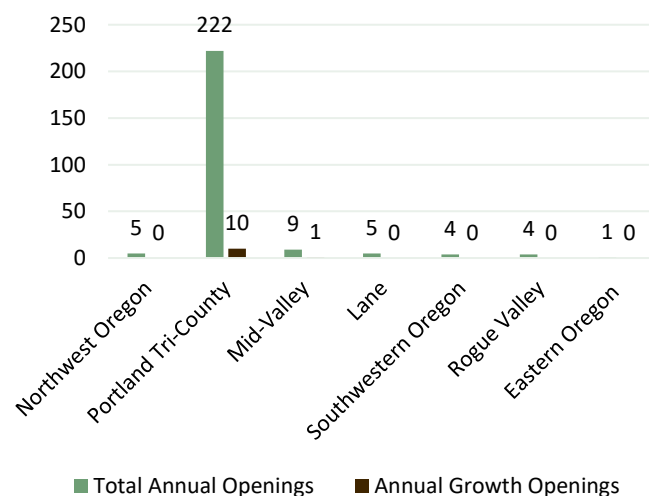
**Total Number Employed
(2023)**
2,651

**Projected Job Openings
Per Year (2023-2033)**
257

Industries of Employment (2023)



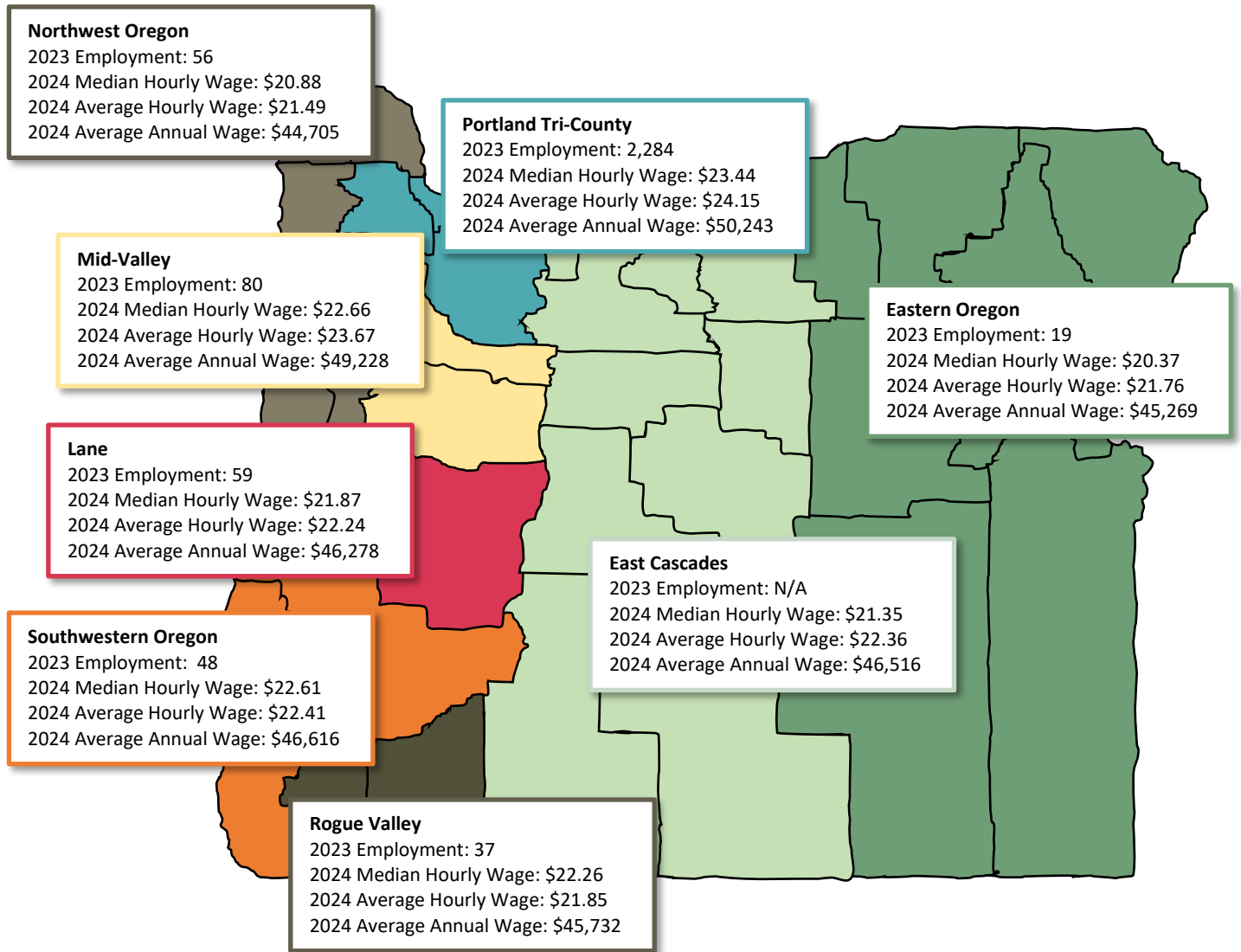
Projected Employment Change by Local Workforce Development Board Region (2023-2033)²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are 13 the sum of growth openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use. Excludes Computer Hardware Engineers (17-2061).”

Education and Credentials

Typical entry-level: Bachelor’s degree. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Master’s degree.

Licenses and Certifications:

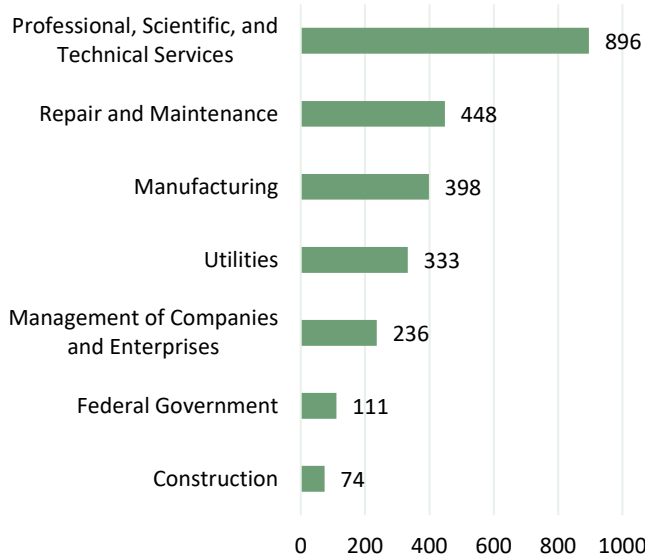
[Engineer, Licensed Professional](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$39.00 - \$45.87

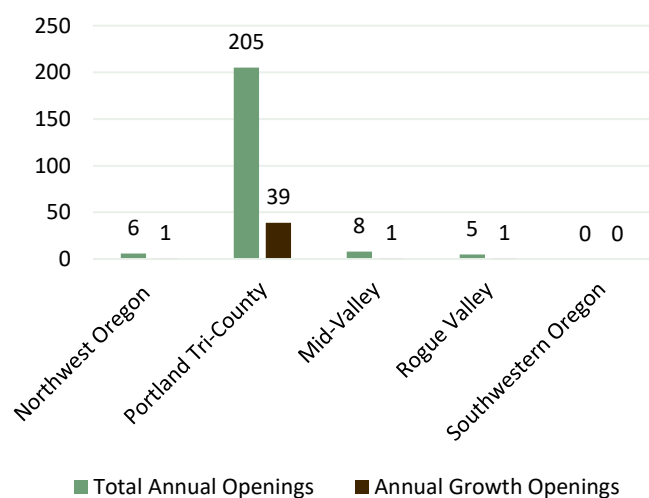
**Total Number Employed
(2023)**
3,438

**Projected Job Openings
Per Year (2023-2033)**
240

Industries of Employment (2023)



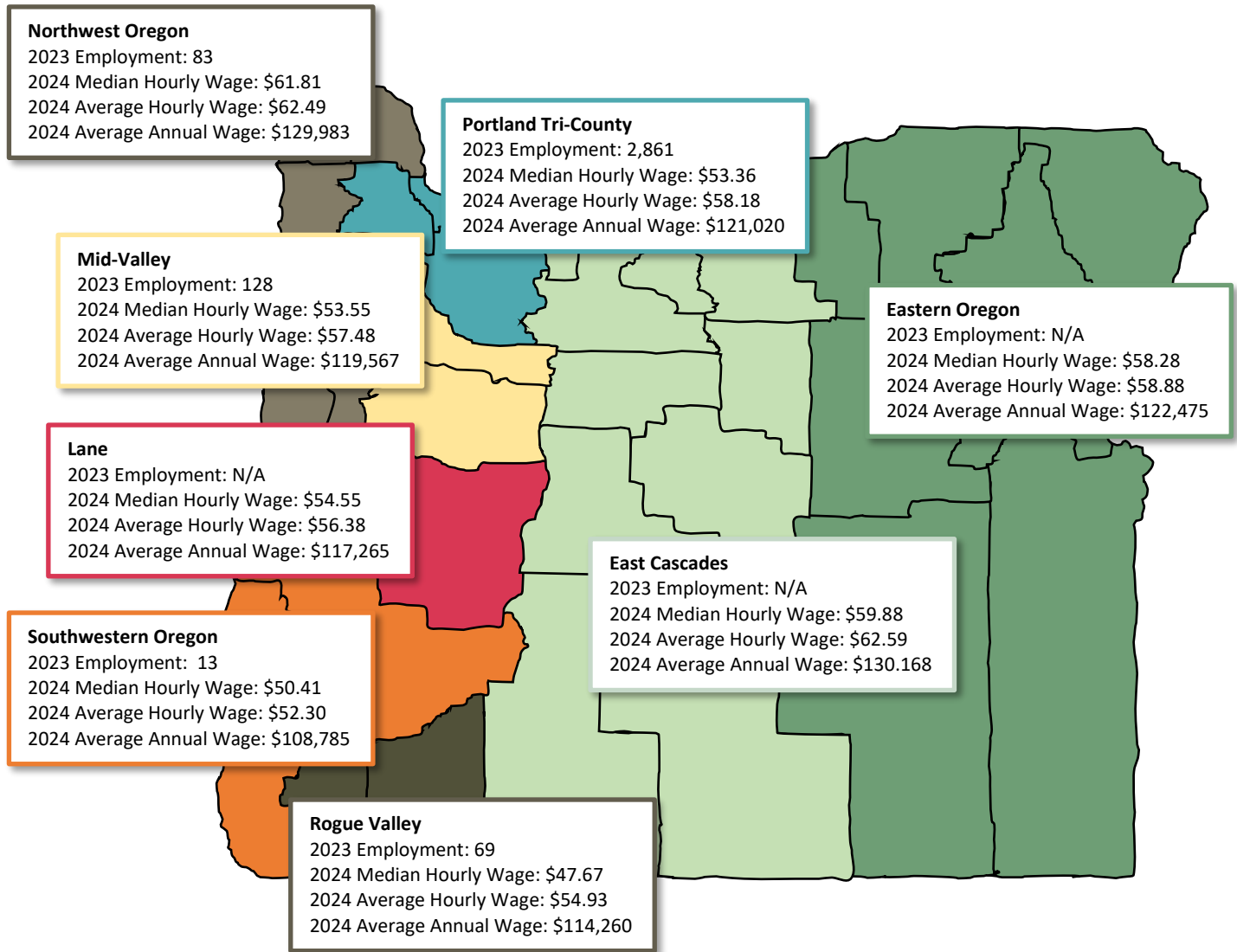
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ¹⁵ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems. Excludes Security and Fire Alarm Systems Installers (49-2098).”

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree).

Licenses and Certifications:

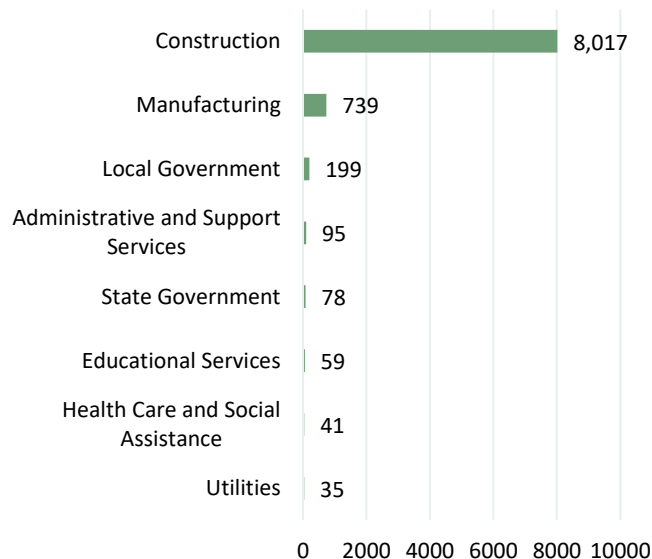
[Visit Qualityinfo.org](#) to view all credentials, licenses, or certifications for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$25.61 - \$34.98

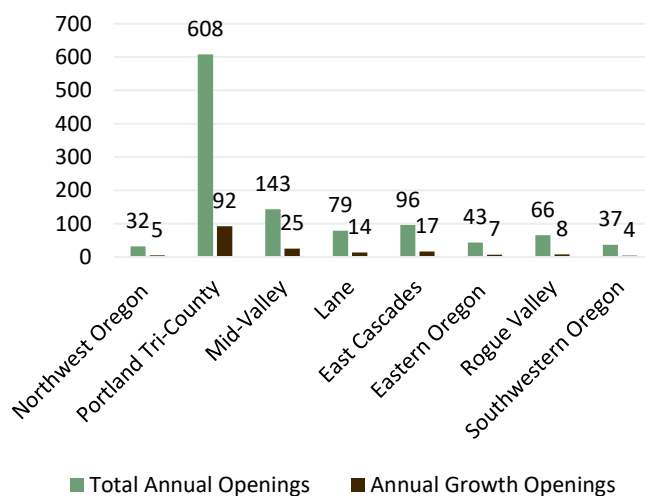
**Total Number Employed
(2023)**
10,029

**Projected Job Openings
Per Year (2023-2033)**
1,162

Industries of Employment (2023)



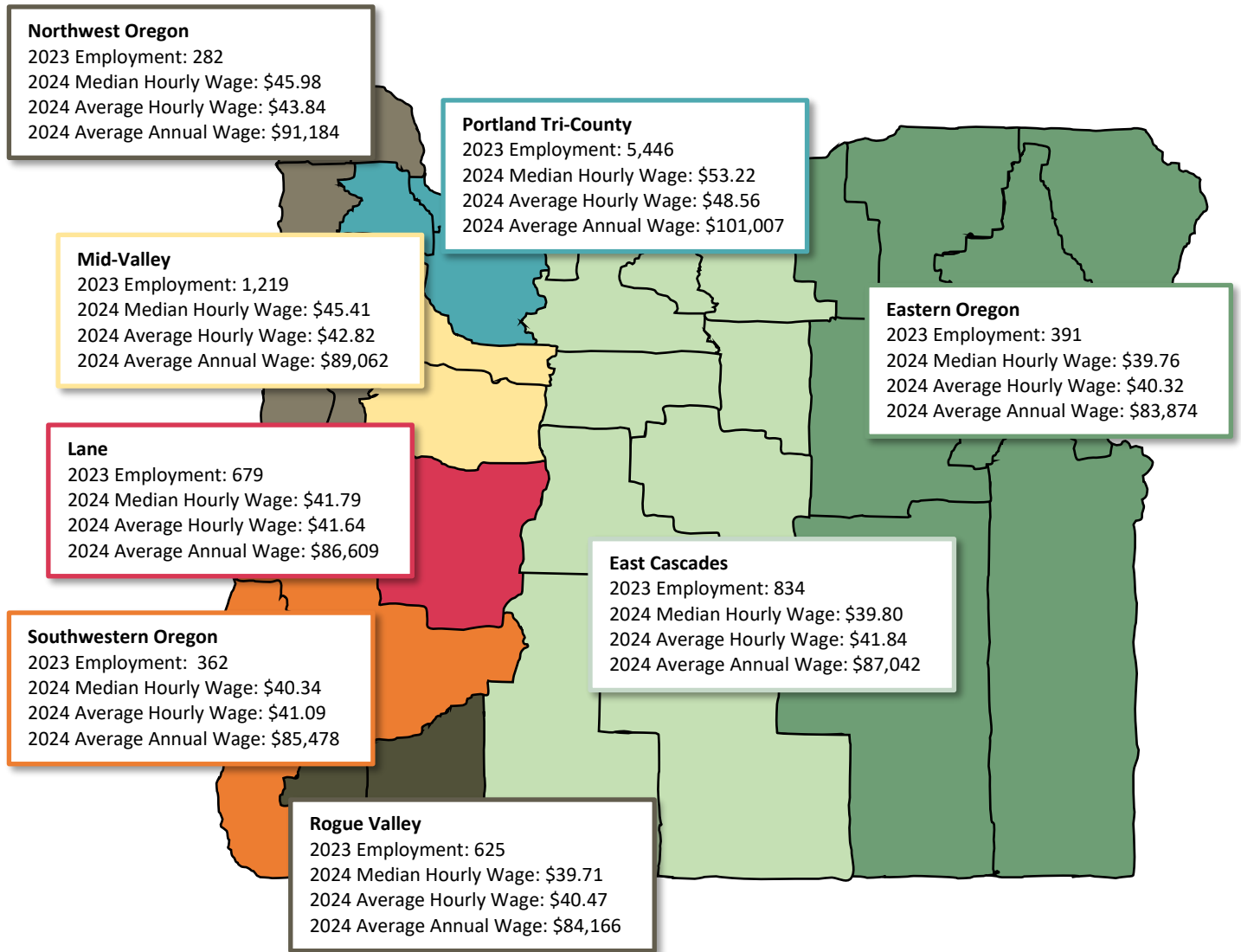
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ¹⁷ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Engineering Technologists and Technicians, Except Drafters, All Other (17-3029)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“All engineering technologists and technicians, except drafters, not listed separately.”

Illustrative examples: Agricultural Engineering Technician, Biomedical Engineering Technician, Metallurgical Engineering Technician, Optical Engineering Technician, Radar Technicians, Sonar Technicians

Education and Credentials

Typical entry-level: Bachelor’s degree. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Master’s degree.

Licenses and Certifications:

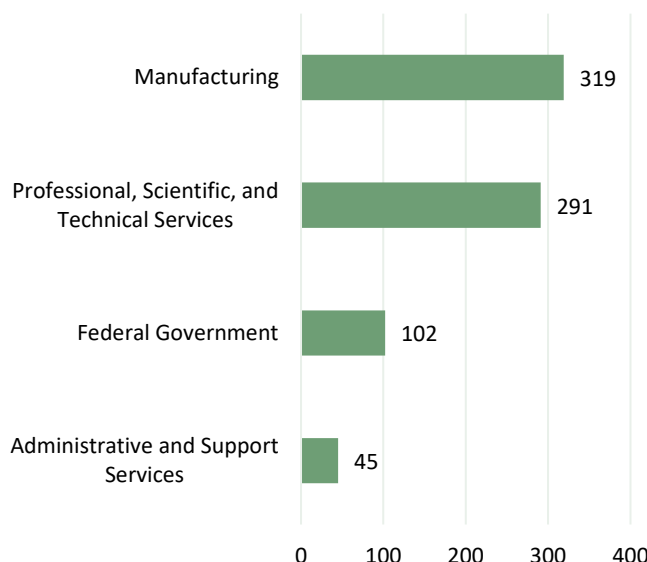
[Engineer, Licensed Professional](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$22.52 - \$26.71

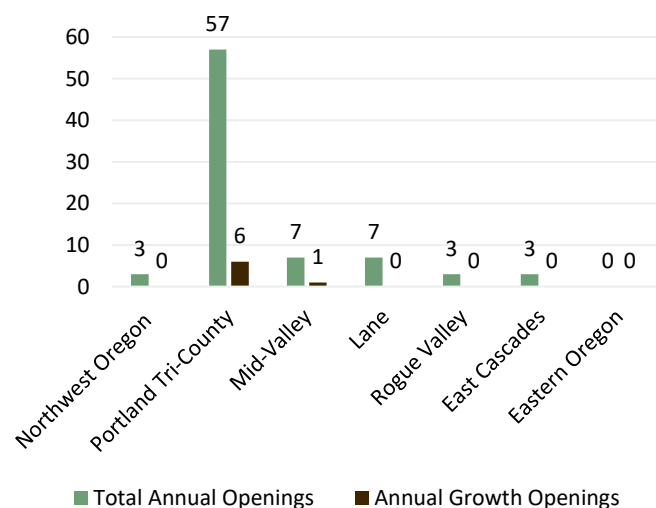
**Total Number Employed
(2023)**
880

**Projected Job Openings
Per Year (2023-2033)**
86

Industries of Employment (2023)



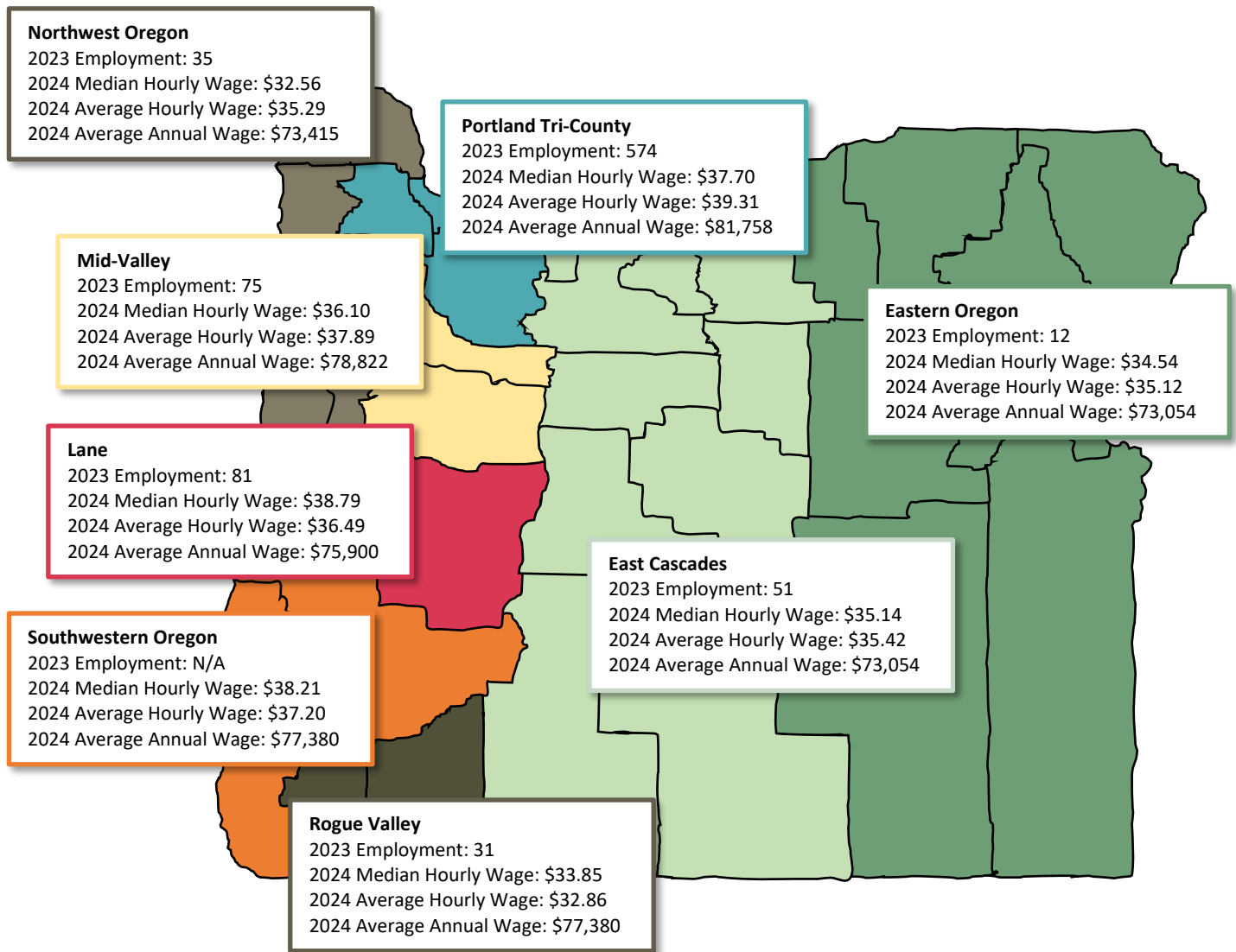
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“All engineers not listed separately. Excludes Sales Engineers (41-9031), Locomotive Engineers (53-4011), and Ship Engineers (53-5031).”

Illustrative examples: Calibration Engineer, Metrologist, Optical Engineer, Ordnance Engineer, Photonics Engineer, Salvage Engineer

Education and Credentials

Typical entry-level: Bachelor’s degree. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Master’s degree.

Licenses and Certifications:

[Engineer, Licensed Professional](#)

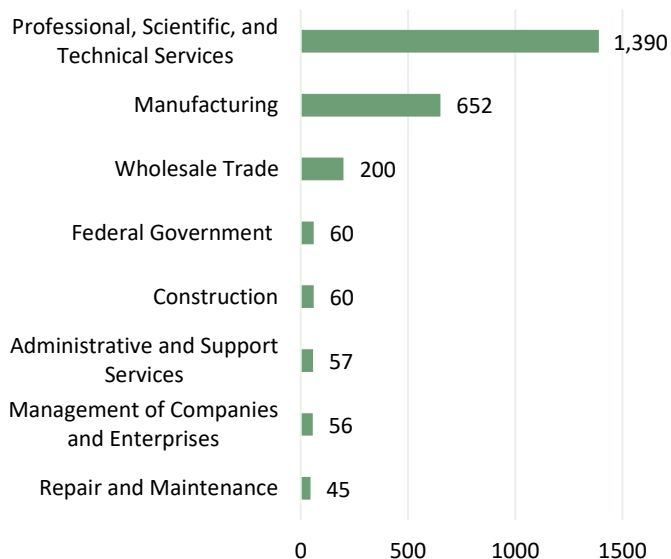
[Water Rights Examiner, Certified](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$36.90 - \$46.90

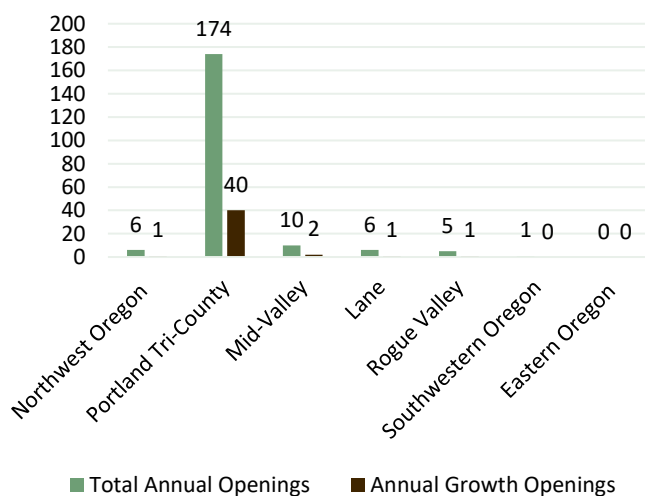
**Total Number Employed
(2023)**
2,787

**Projected Job Openings
Per Year (2023-2033)**
218

Industries of Employment (2023)



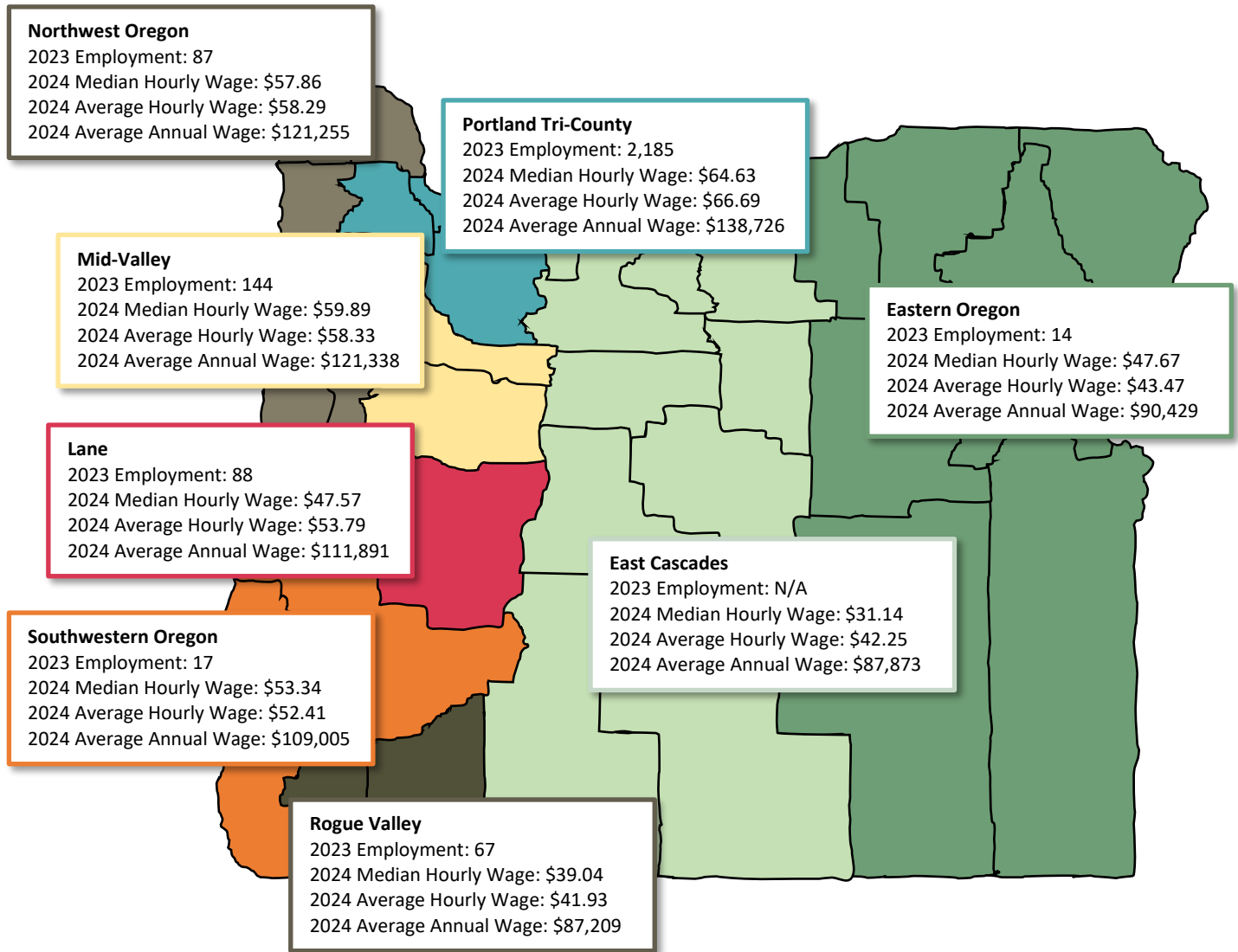
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹. Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

². Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

First-Line Supervisors of Mechanics, Installers, and Repairers (49-1011)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Directly supervise and coordinate the activities of mechanics, installers, and repairers. May also advise customers on recommended services. Excludes team or work leaders.”

Illustrative examples: Automobile Body Repair Supervisor, Fleet Maintenance Supervisor, Railroad Car Repair Supervisor

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree).

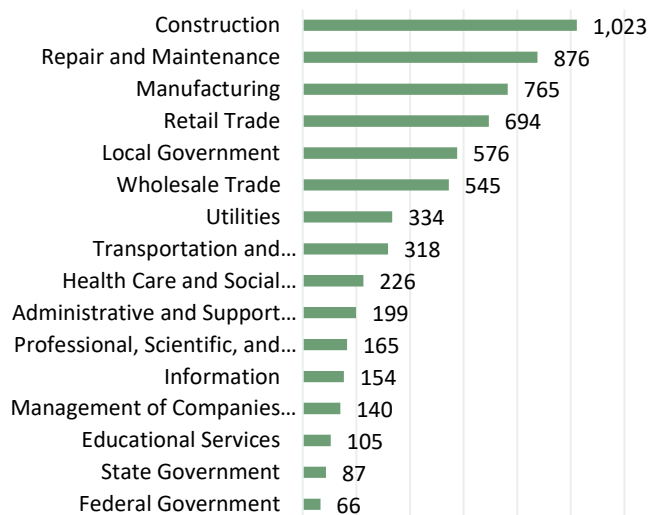
Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$27.88 - \$31.06

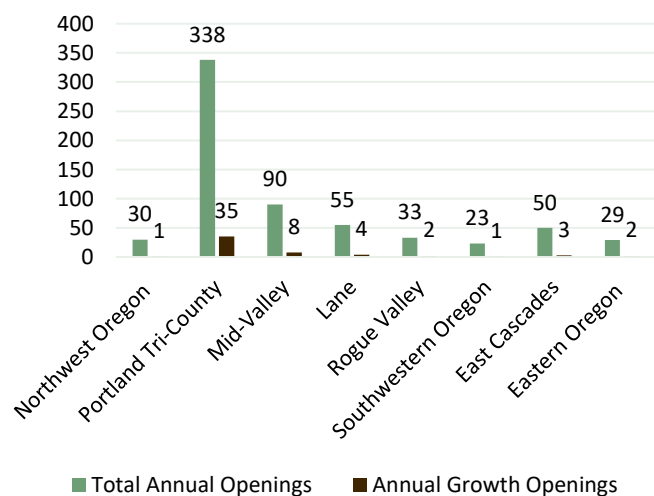
**Total Number Employed
(2023)**
7,404

**Projected Job Openings
Per Year (2023-2033)**
664

Industries of Employment (2023)



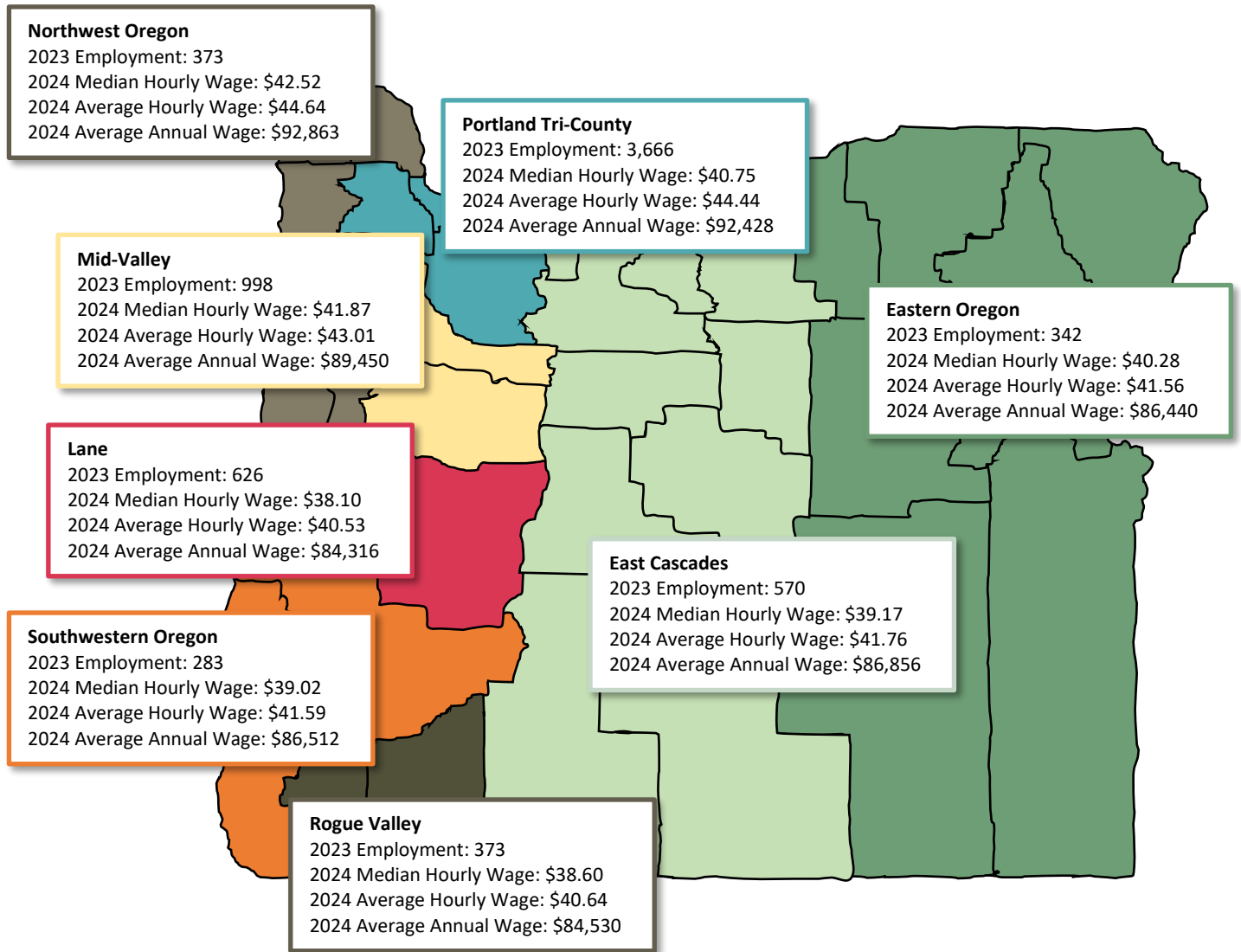
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ²³ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

First-Line Supervisors of Production and Operating Workers (511011)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Directly supervise and coordinate the activities of production and operating workers, such as inspectors, precision workers, machine setters and operators, assemblers, fabricators, and plant and system operators. Excludes team or work leaders.”

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Bachelor’s degree.

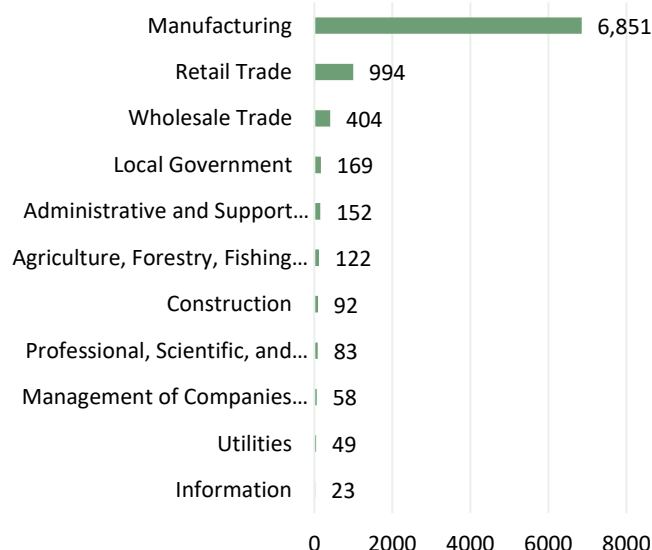
Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$27.88 - \$31.06

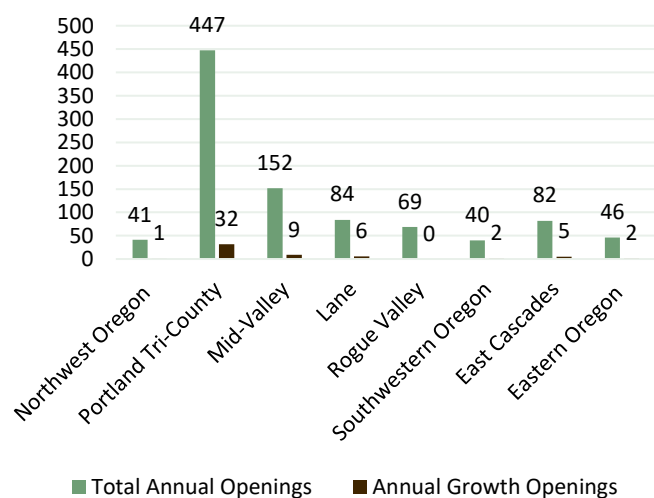
**Total Number Employed
(2023)**
9,529

**Projected Job Openings
Per Year (2023-2033)**
967

Industries of Employment (2023)



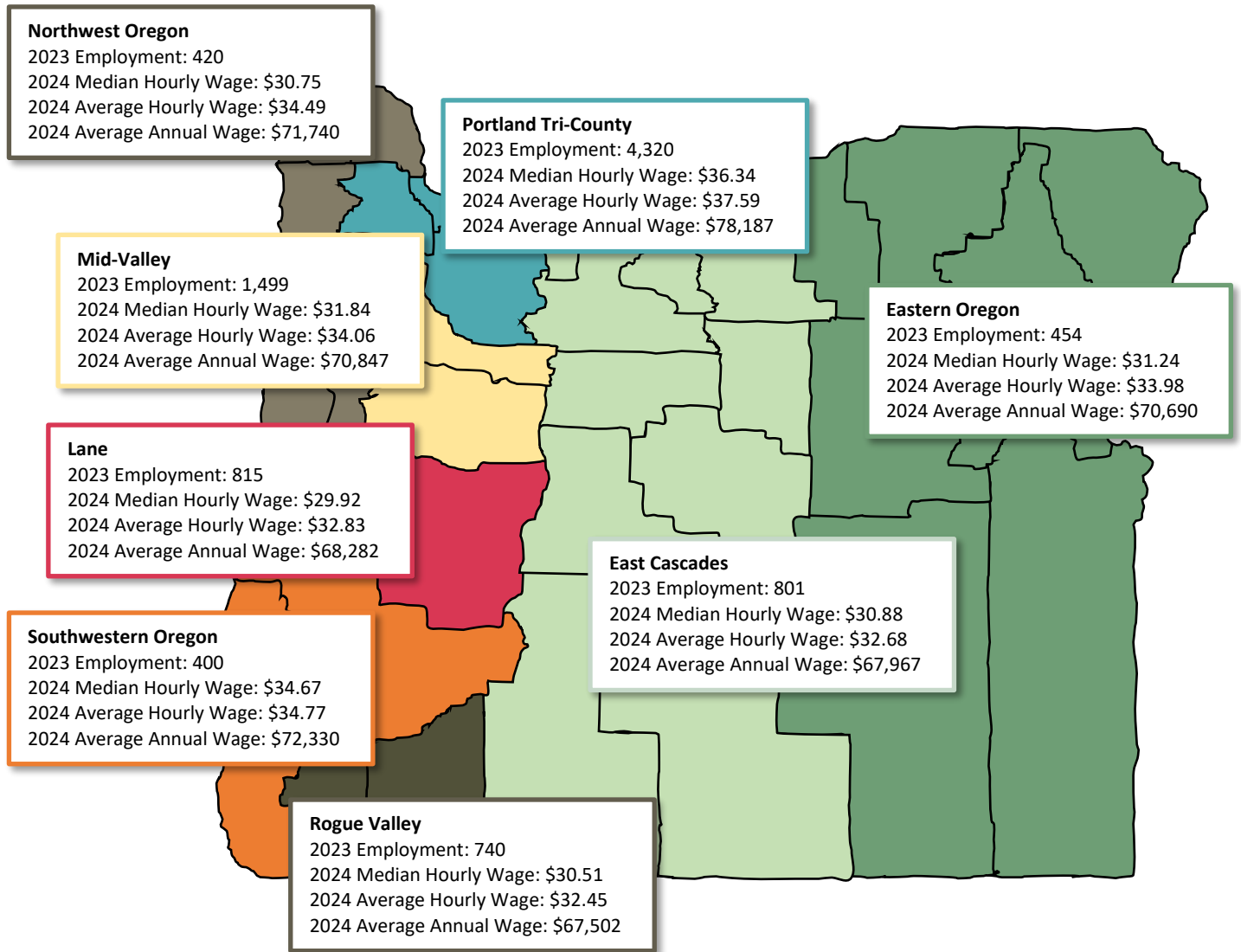
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ²⁵ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic (51-4033)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Set up, operate, or tend grinding and related tools that remove excess material or burrs from surfaces, sharpen edges or corners, or buff, hone, or polish metal or plastic work pieces.”

Illustrative examples: Aluminum Polisher, Jewel Bearing Facer, Metal Grinder, Tool Polishing Machine Operator

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: High school diploma or equivalent.

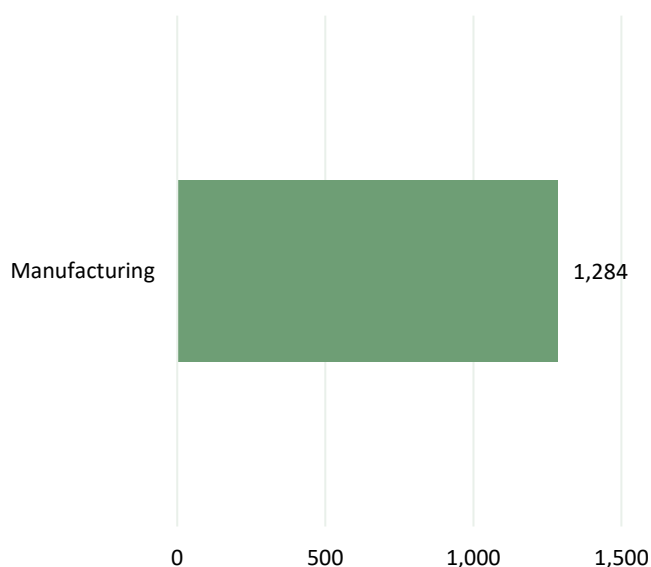
Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$27.88 - \$31.06

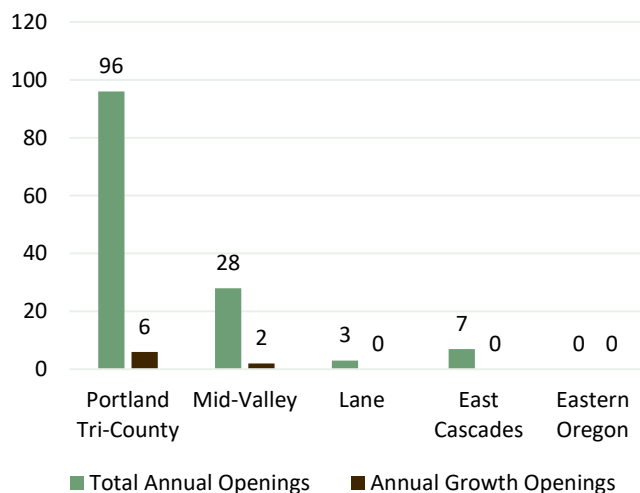
**Total Number Employed
(2023)**
1,324

**Projected Job Openings
Per Year (2023-2033)**
146

Industries of Employment (2023)



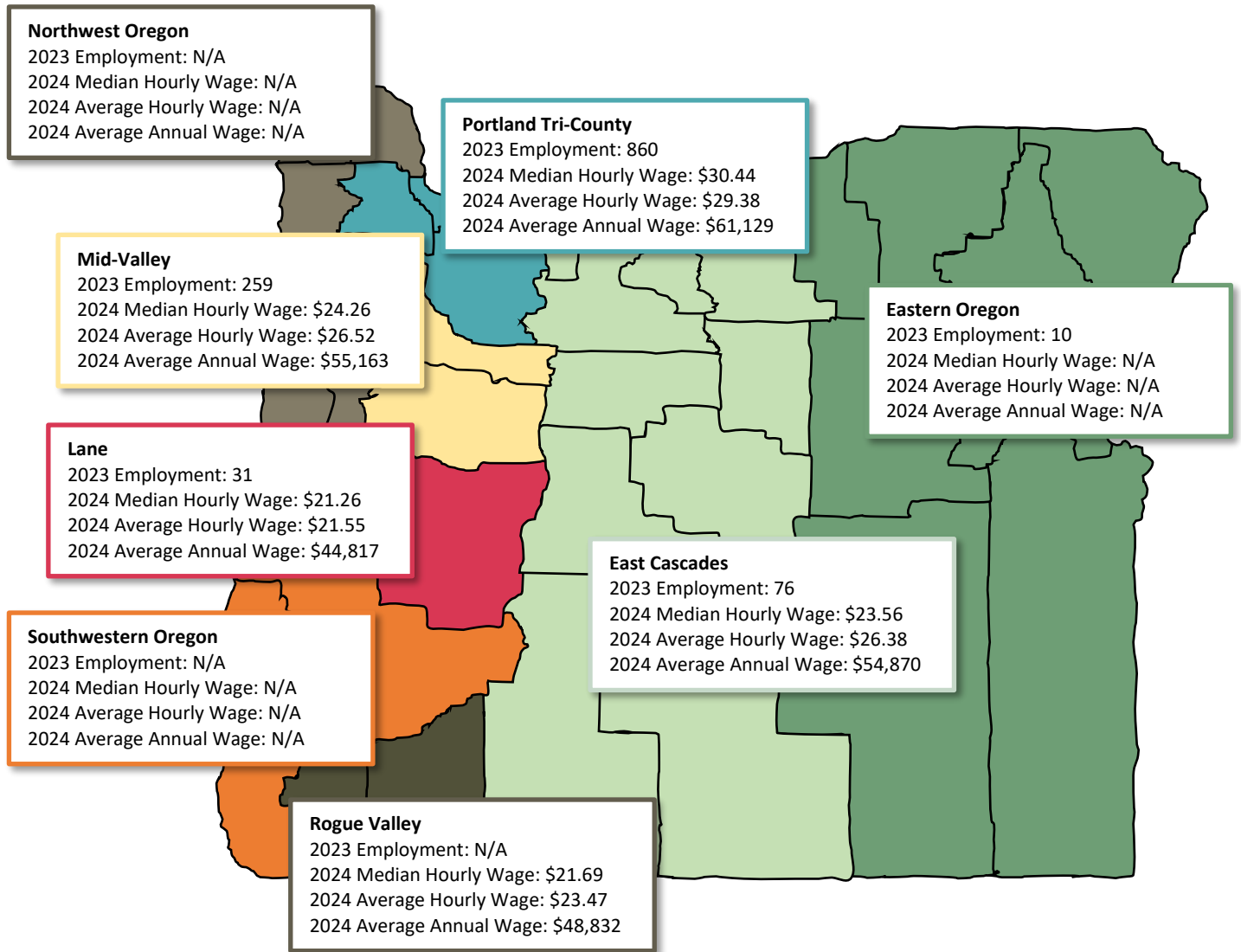
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Heating, Air Conditioning, and Refrigeration Mechanics and Installers (49-9021)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Install or repair heating, central air conditioning, HVAC, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.”

Illustrative examples: Gas Furnace Installer , Heating, Ventilation, and Air Conditioning (HVAC) Mechanic , Oil Burner Repairer

Education and Credentials

Typical entry-level: Postsecondary training (non-degree). (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree) and/or certified apprenticeship.

Licenses and Certifications:

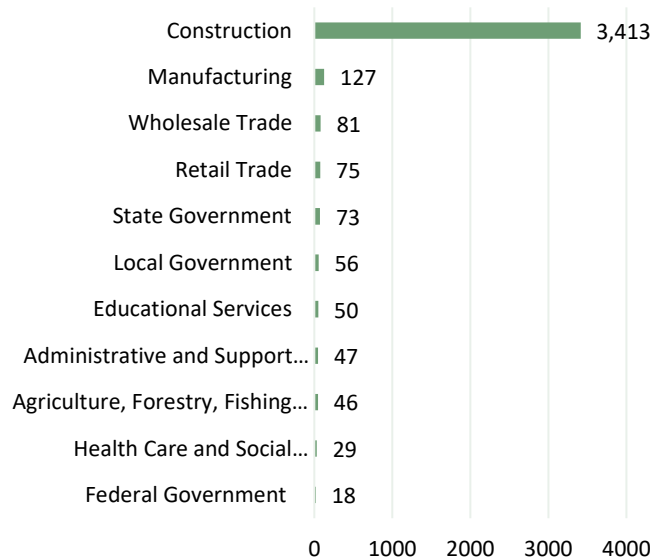
[Apprentice, Registered \(Industrial Trades\)](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$22.41 - \$24.37

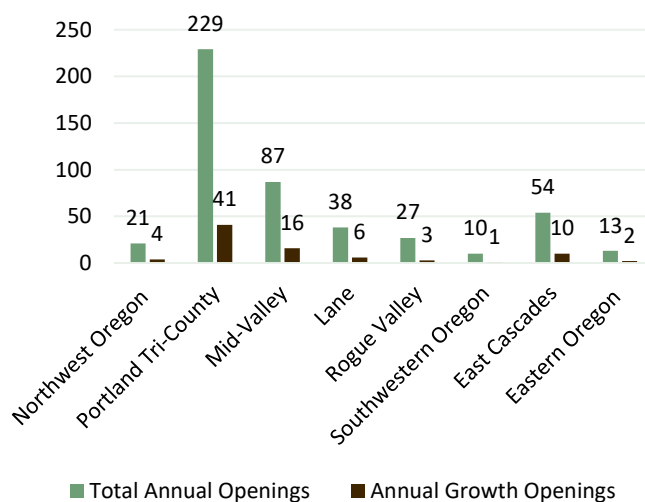
**Total Number Employed
(2023)**
4,373

**Projected Job Openings
Per Year (2023-2033)**
483

Industries of Employment (2023)



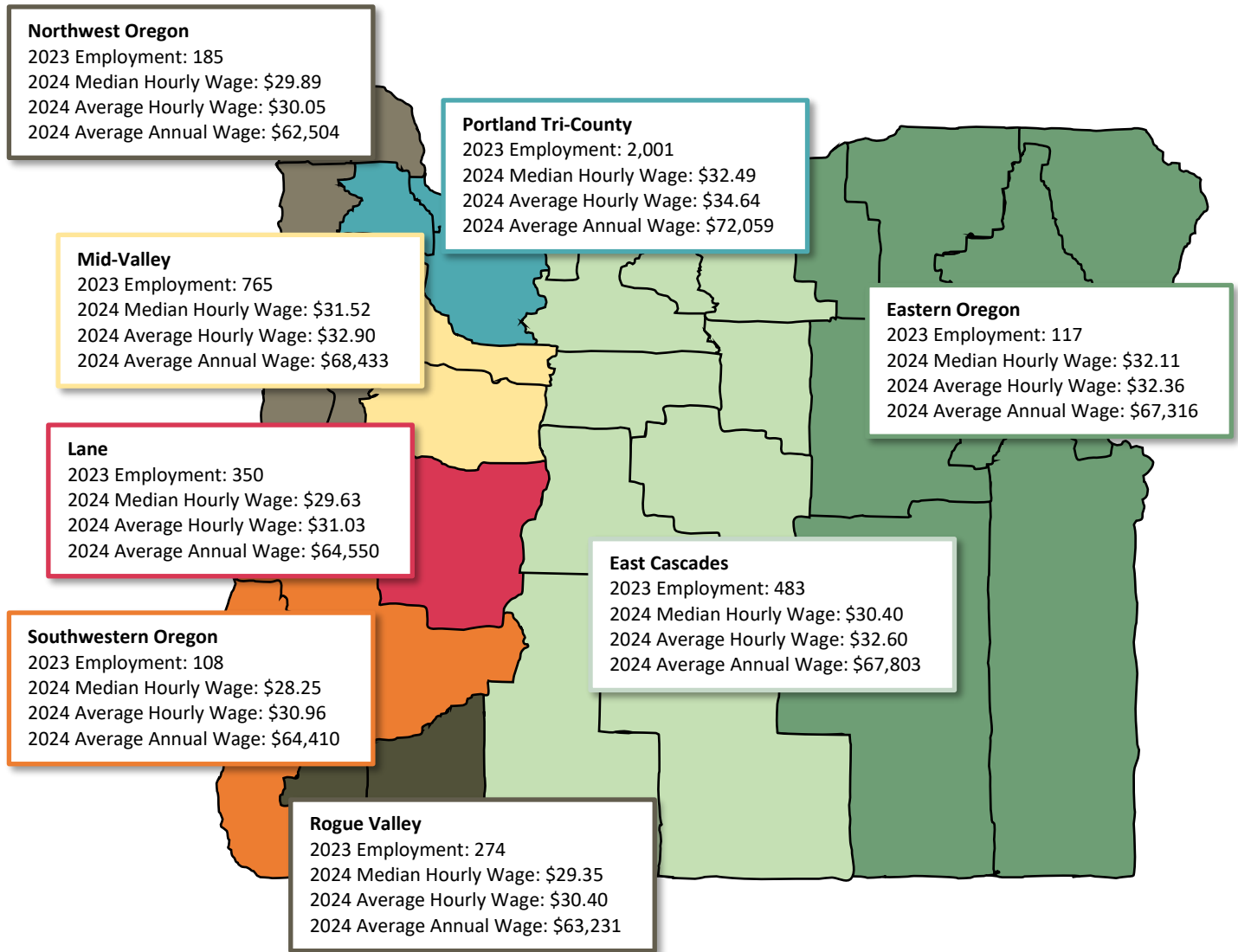
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ²⁹ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Heavy and Tractor-Trailer Truck Drivers (53-3032)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Drive a tractor-trailer combination or a truck with a capacity of at least 26,001 pounds Gross Vehicle Weight (GVW). May be required to unload truck. Requires commercial drivers license. Includes tow truck drivers. Excludes Refuse and Recyclable Material Collectors (53-7081).”

Education and Credentials

Typical entry-level: Postsecondary training (non-degree). (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree) and/or certified apprenticeship.

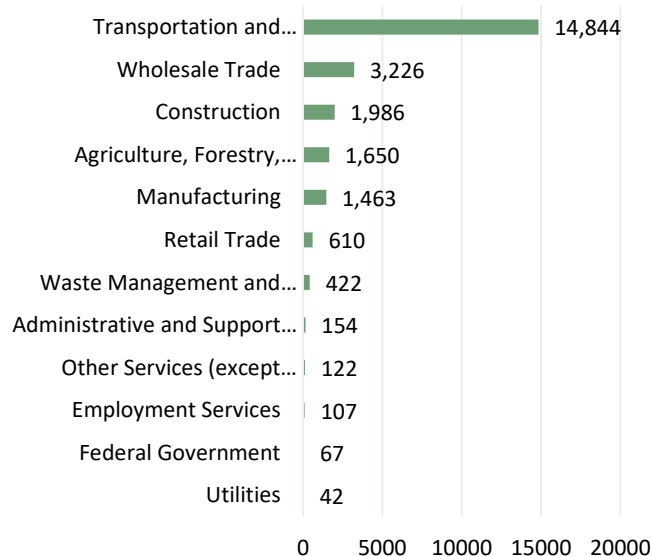
Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$23.45 - \$25.86

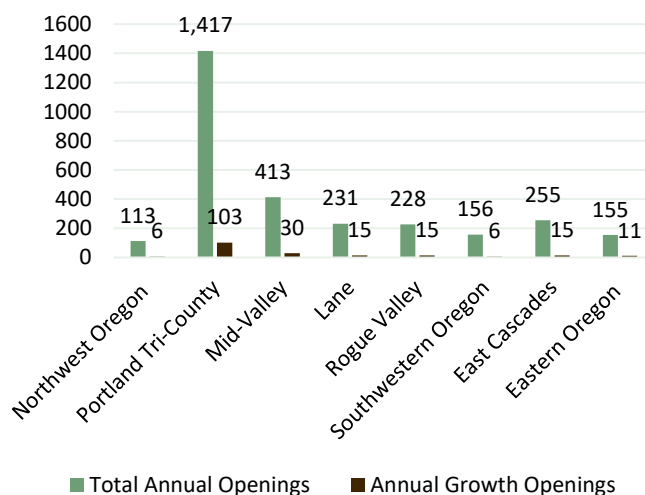
**Total Number Employed
(2023)**
27,138

**Projected Job Openings
Per Year (2023-2033)**
3,042

Industries of Employment (2023)



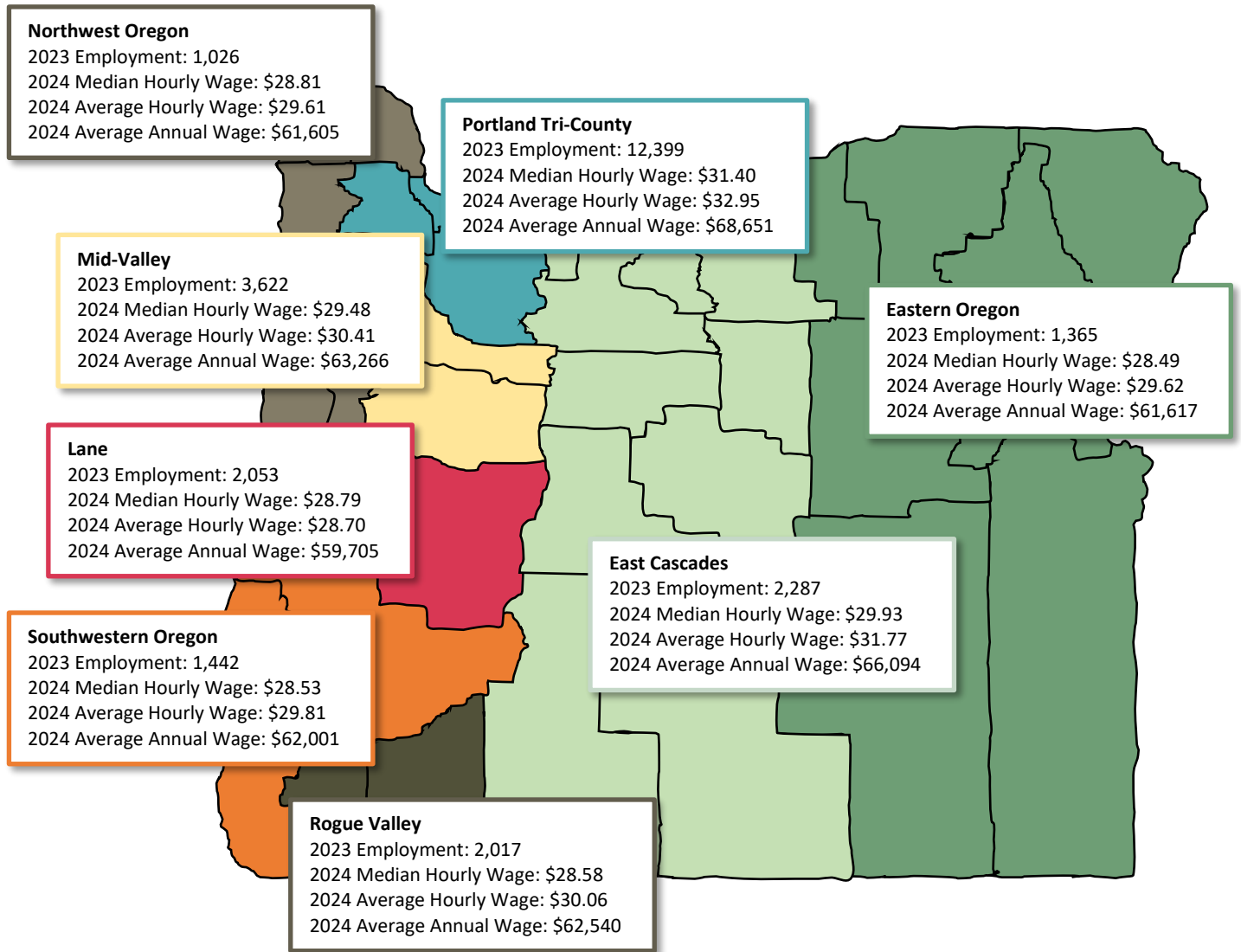
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile *Industrial Engineering Technologists and Technicians (17-3026)*

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. May perform time and motion studies on worker operations in a variety of industries for purposes such as establishing standard production rates or improving efficiency.”

Education and Credentials

Typical entry-level: Associate’s degree. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Associate’s degree.

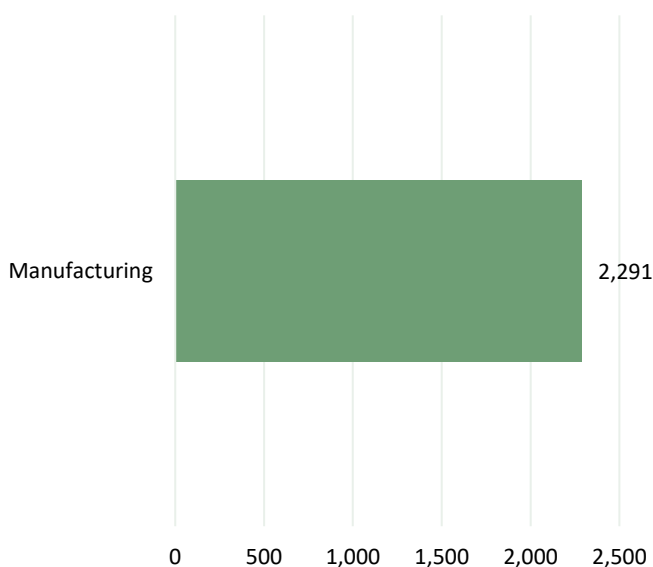
Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$26.53 - \$30.35

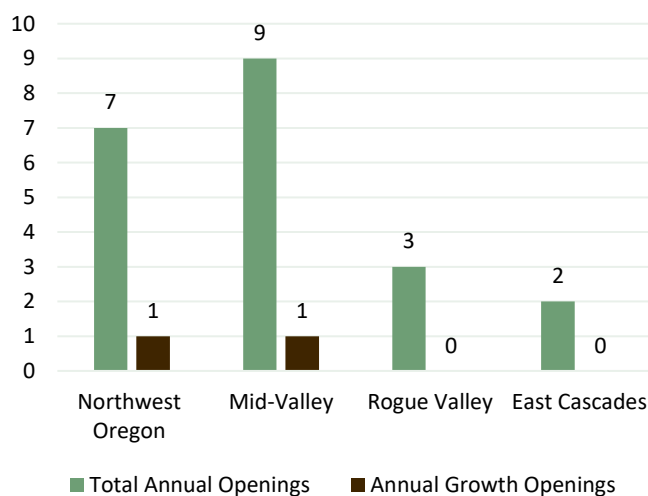
**Total Number Employed
(2023)**
2,432

**Projected Job Openings
Per Year (2023-2033)**
235

Industries of Employment (2023)



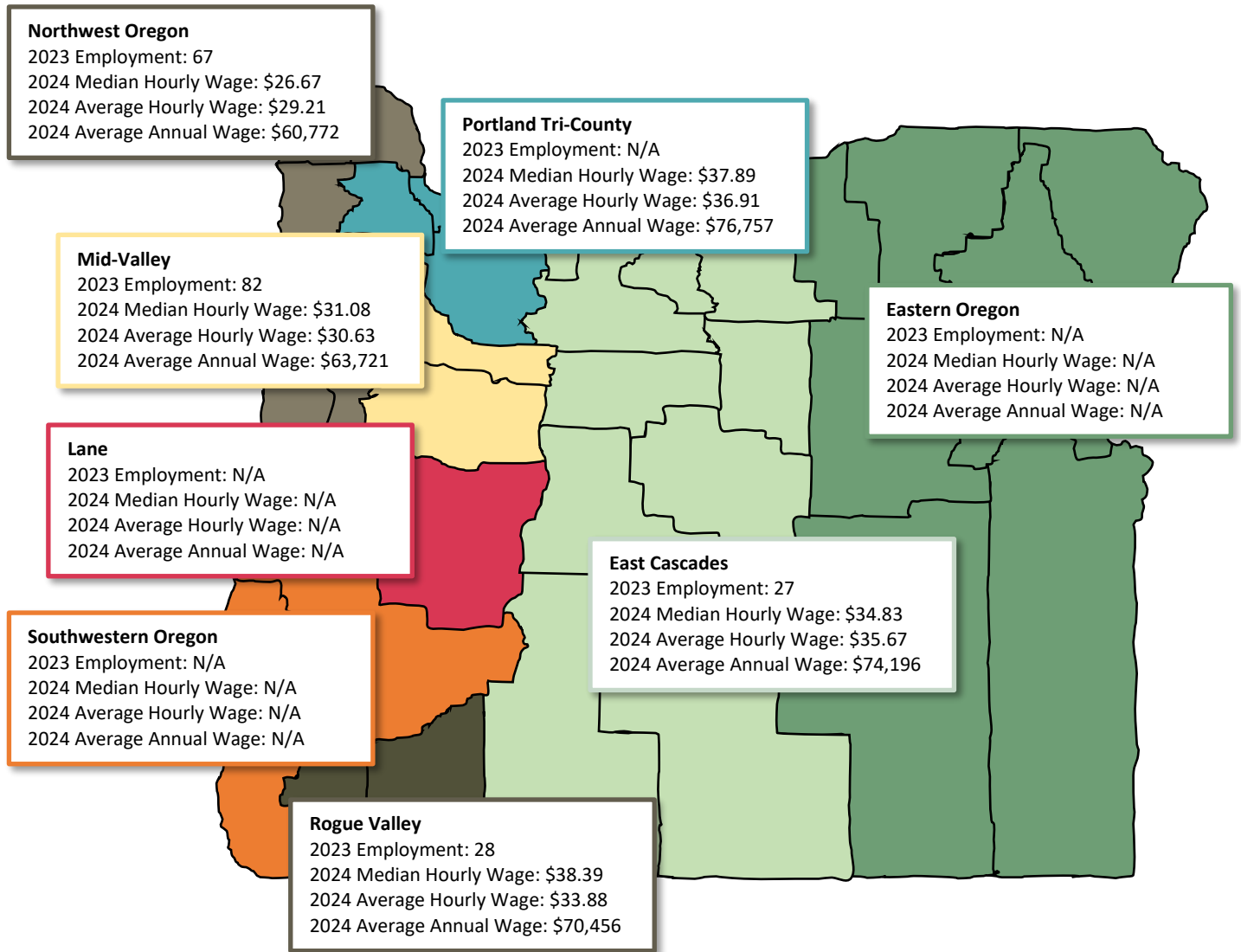
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹. Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

². Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are³³ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination. Excludes Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111).”

Education and Credentials

Typical entry-level: Bachelor’s degree. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Master’s degree.

Licenses and Certifications:

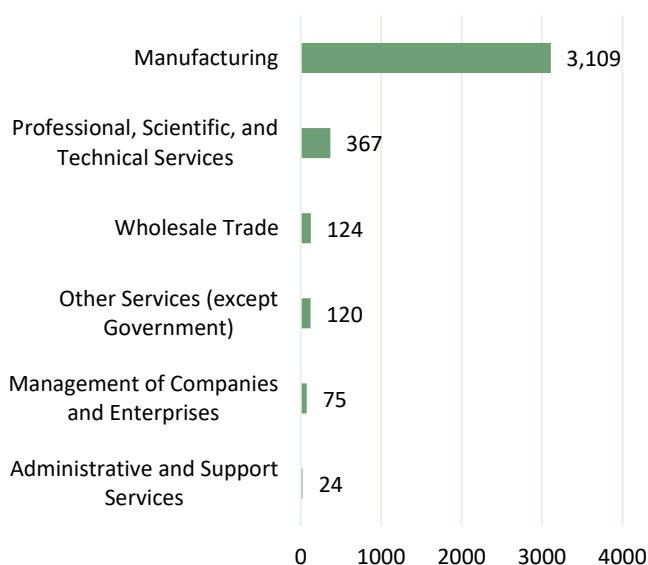
[Engineer, Licensed Professional](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$39.17 - \$48.26

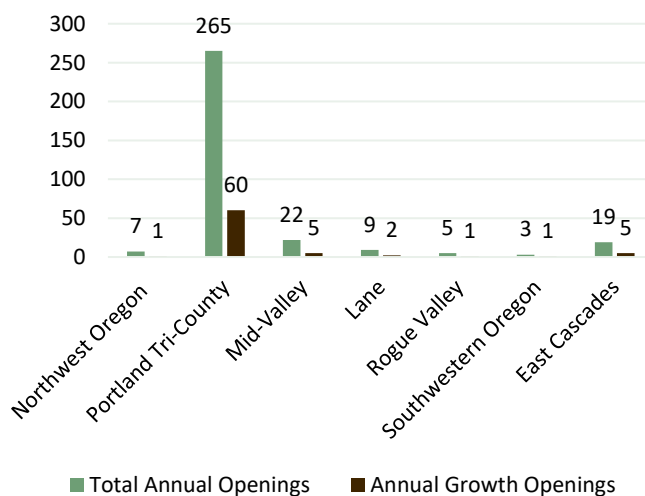
**Total Number Employed
(2023)**
4,049

**Projected Job Openings
Per Year (2023-2033)**
338

Industries of Employment (2023)



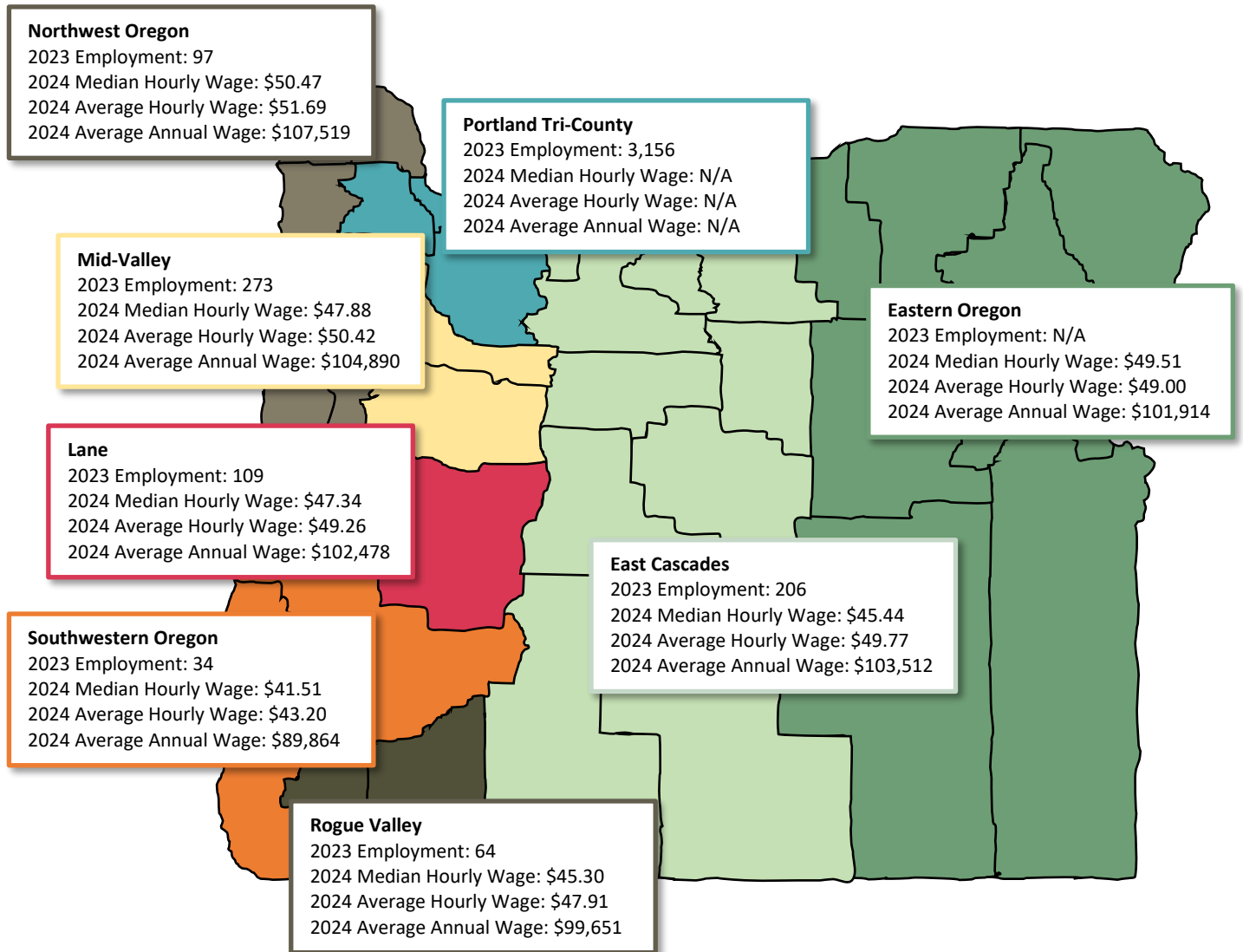
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ³⁵ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Industrial Machinery Mechanics (49-9041)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems. May also install, dismantle, or move machinery and heavy equipment according to plans. Excludes Mobile Heavy Equipment Mechanics, Except Engines (49-3042), and Maintenance Workers, Machinery (49-9043).”

Education and Credentials

Typical entry-level: High-school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree) and/or certified apprenticeship.

Licenses and Certifications:

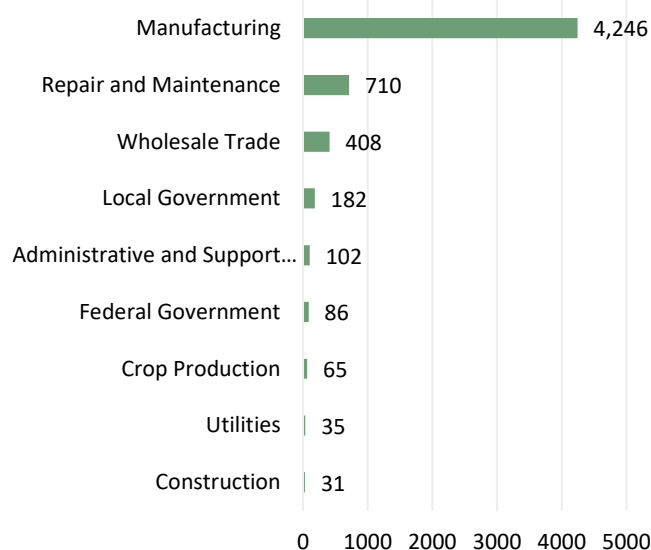
[Apprentice, Registered \(Industrial Trades\)](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$24.90 - \$29.95

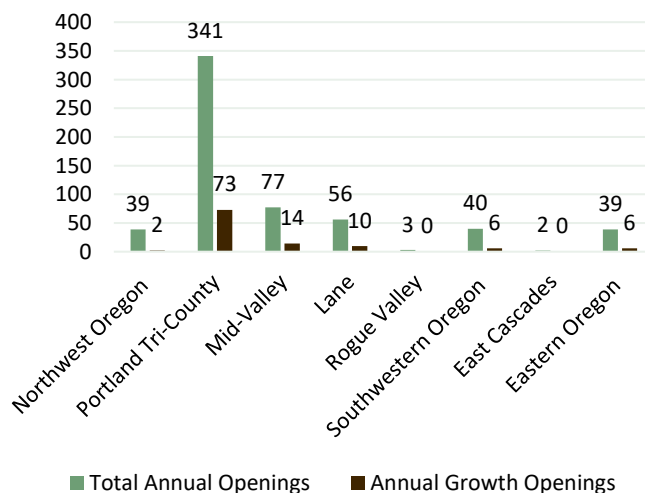
**Total Number Employed
(2023)**
6,365

**Projected Job Openings
Per Year (2023-2033)**
665

Industries of Employment (2023)



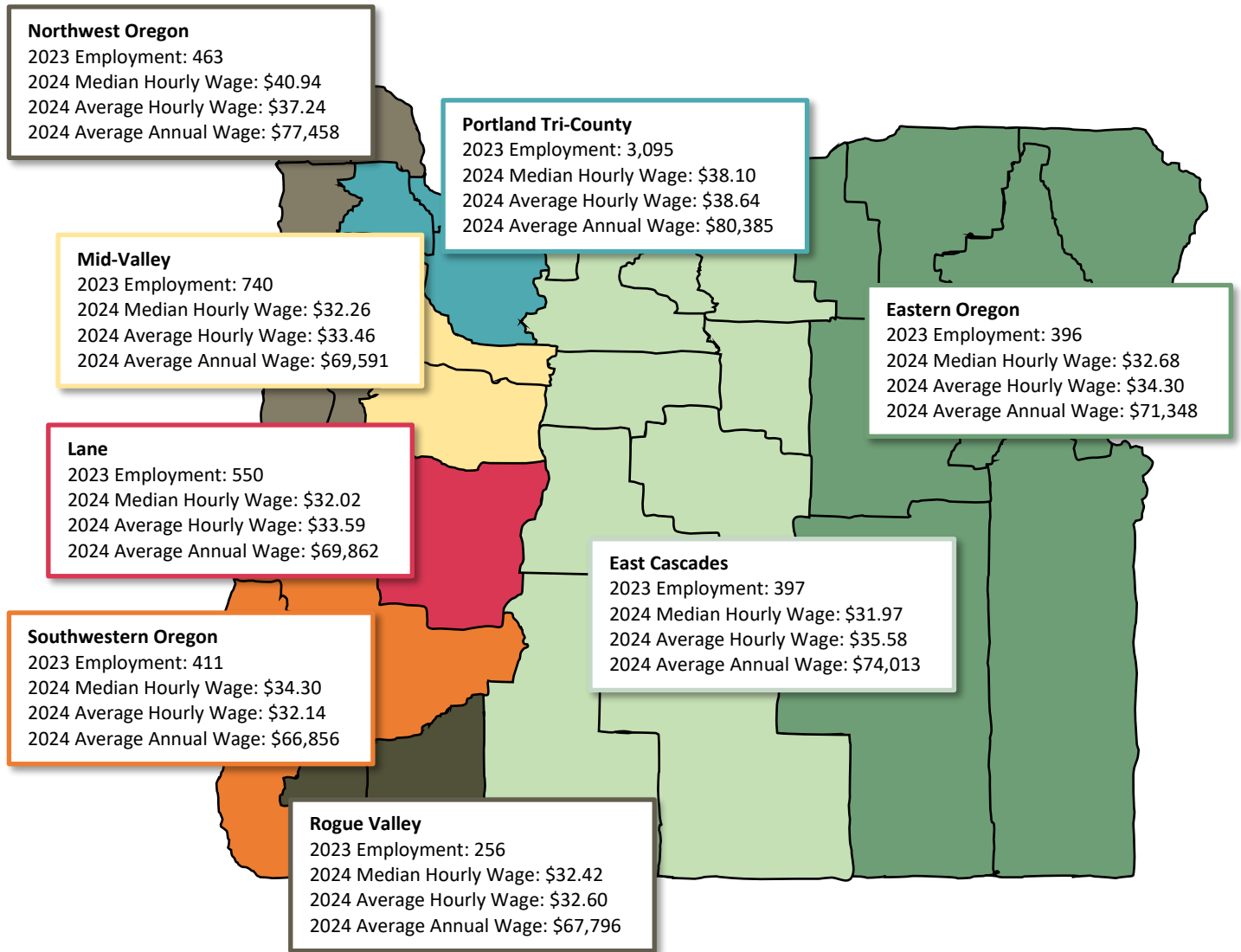
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Logging Equipment Operators (45-4022)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Drive logging tractor or wheeled vehicle equipped with one or more accessories, such as bulldozer blade, frontal shear, grapple, logging arch, cable winches, hoisting rack, or crane boom, to fell tree; to skid, load, unload, or stack logs; or to pull stumps or clear brush. Includes operating stand-alone logging machines, such as log chippers. Logging truck drivers are included in Heavy and Tractor-Trailer Truck Drivers (53-3032).”

Education and Credentials

Typical entry-level: High-school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree).

Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$23.28 - \$25.22

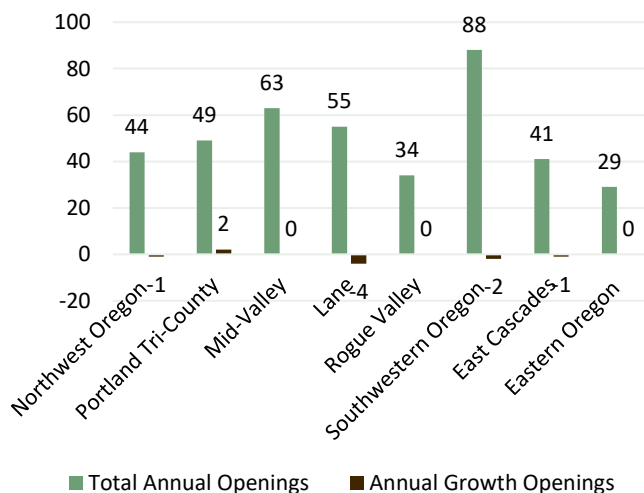
**Total Number Employed
(2023)**
3,293

**Projected Job Openings
Per Year (2023-2033)**
463

Industries of Employment (2023)



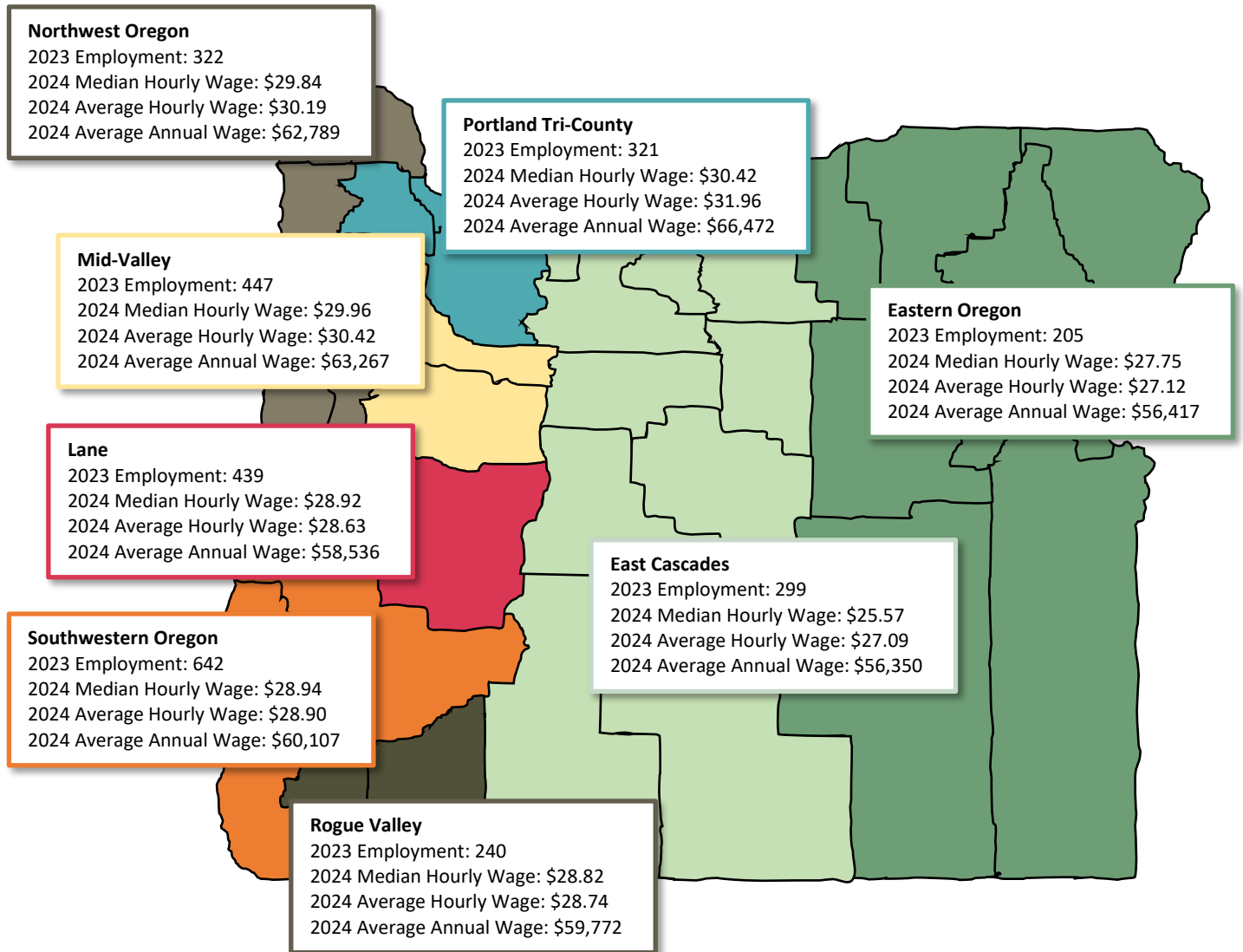
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Set up and operate a variety of machine tools to produce precision parts and instruments out of metal. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.

Education and Credentials

Typical entry-level: High-school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree) and/or certified apprenticeship.

Licenses and Certifications:

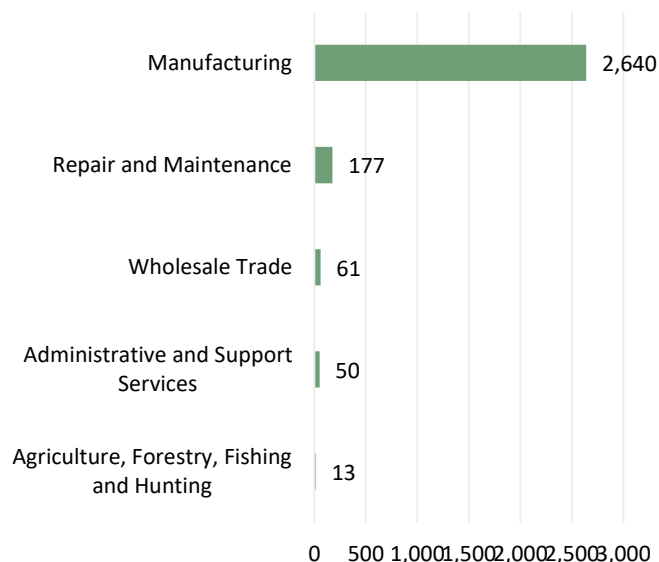
[Apprentice, Registered \(Industrial Trades\)](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$21.48 - \$24.43

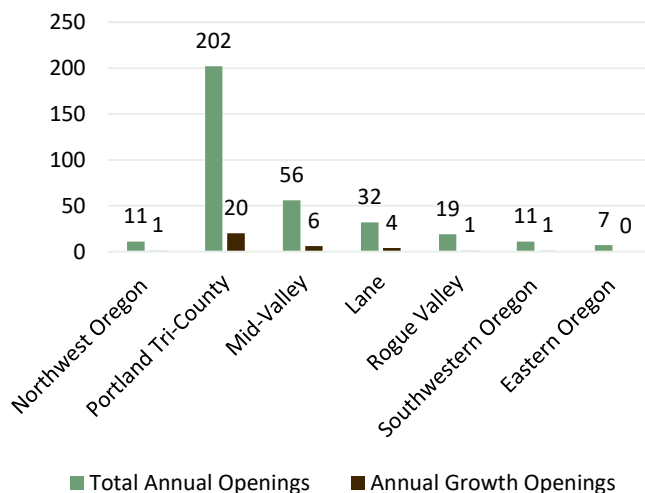
**Total Number Employed
(2023)**
3,103

**Projected Job Openings
Per Year (2023-2033)**
368

Industries of Employment (2023)



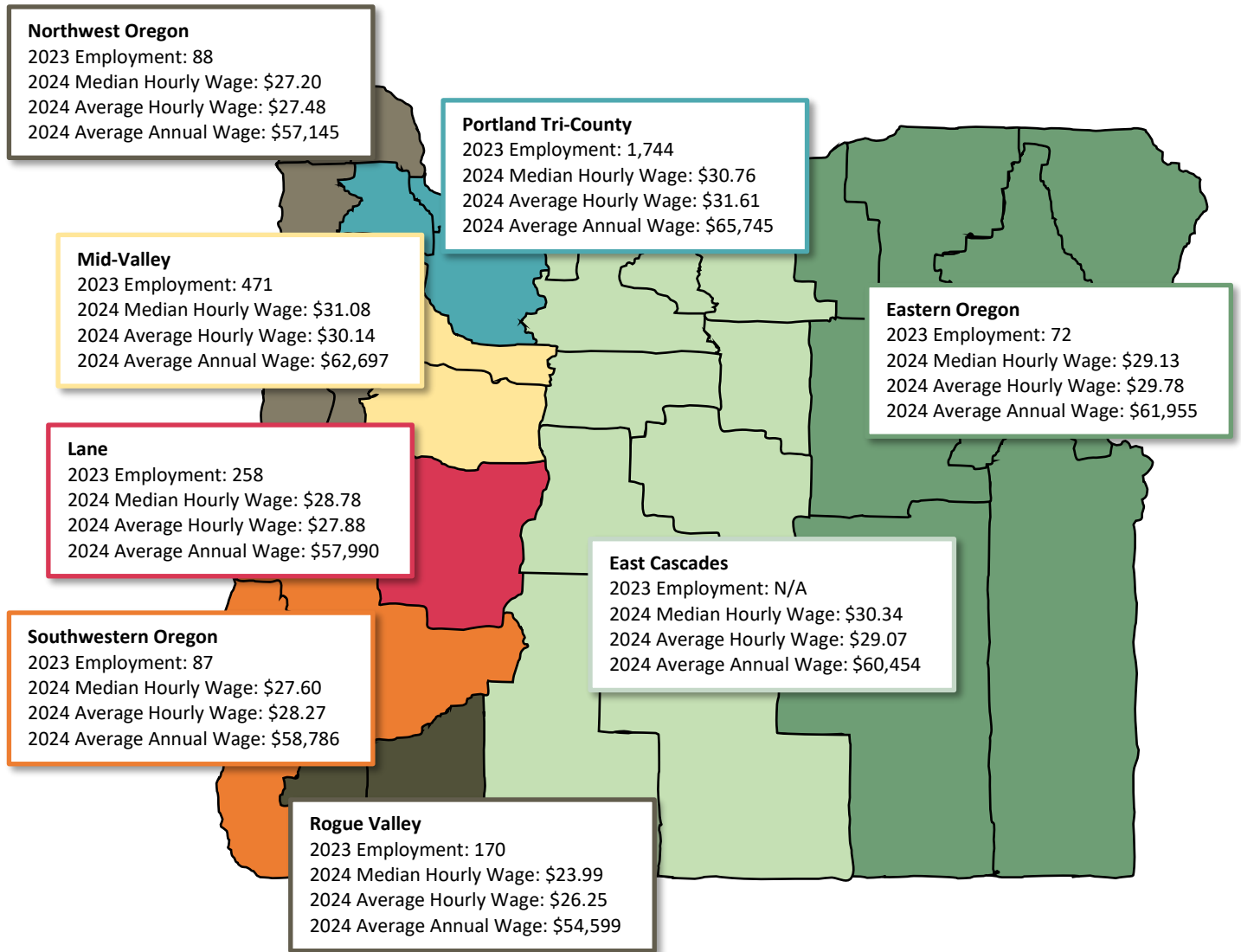
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Mechanical Engineers

(17-2141)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of equipment such as centralized heat, gas, water, and steam systems.”

Education and Credentials

Typical entry-level: Bachelor’s degree. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Master’s degree.

Licenses and Certifications:

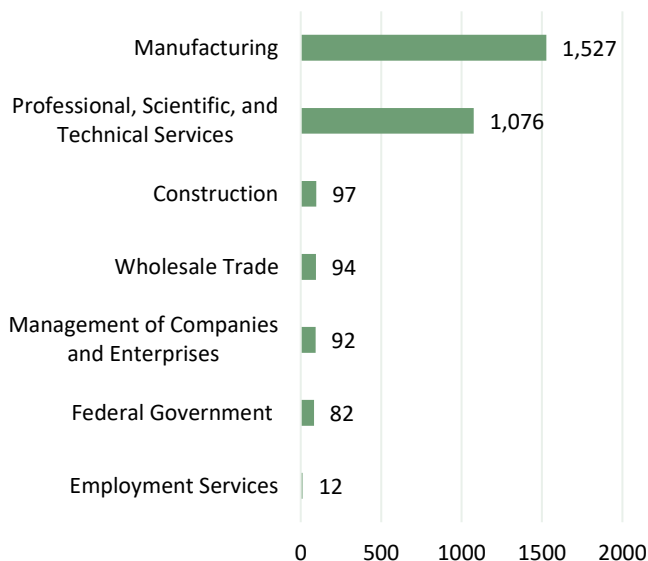
[Engineer, Licensed Professional](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$37.32 - \$43.42

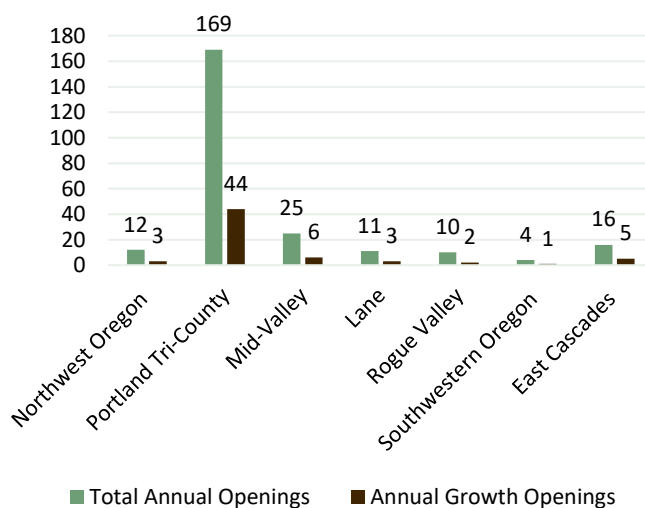
**Total Number Employed
(2023)**
3,190

**Projected Job Openings
Per Year (2023-2033)**
254

Industries of Employment (2023)



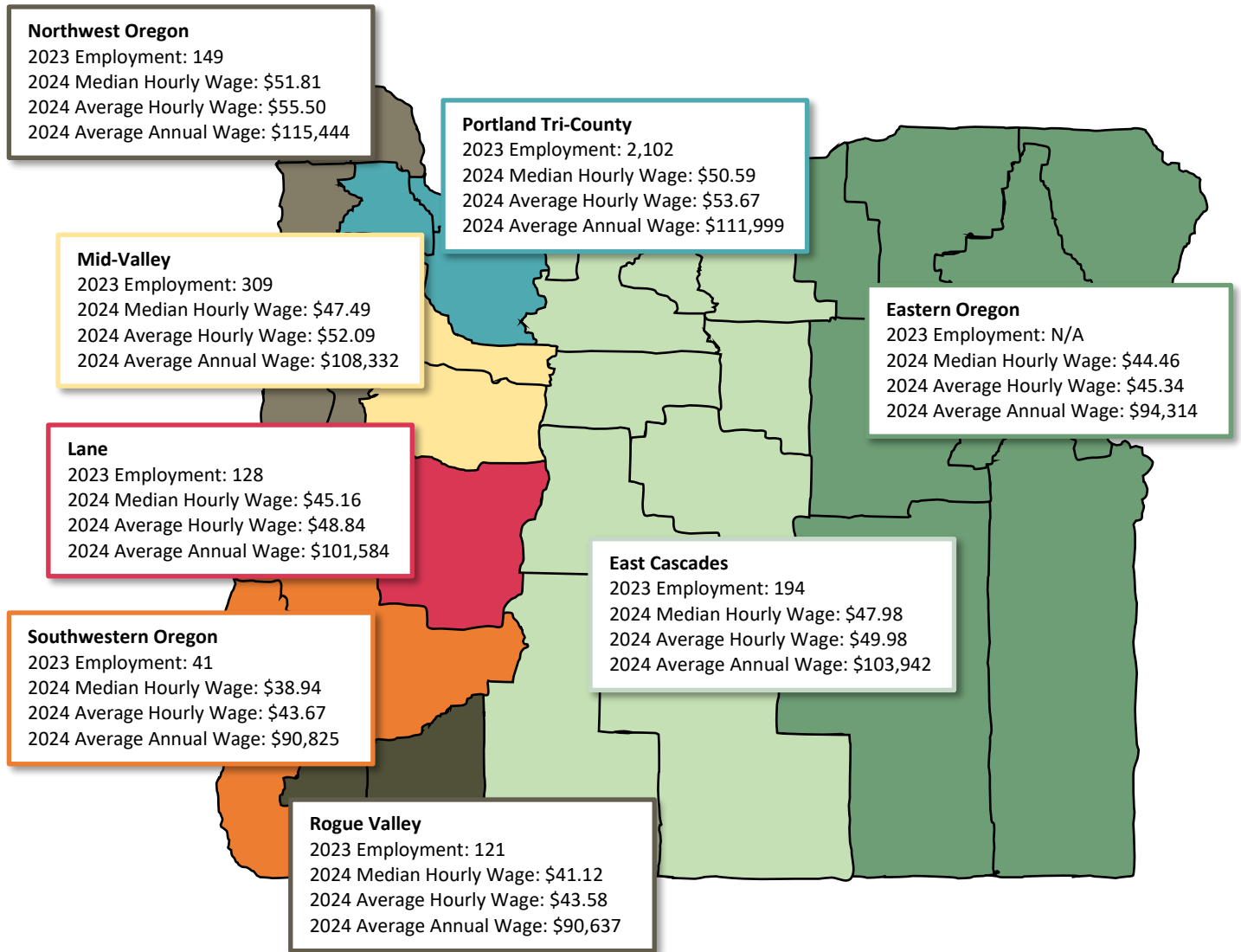
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ⁴³ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Mobile Heavy Equipment Mechanics, Except Engines (49-3042)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and mining. Excludes Bus and Truck Mechanics and Diesel Engine Specialists (49-3031) and Rail Car Repairers (49-3043).”

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree).

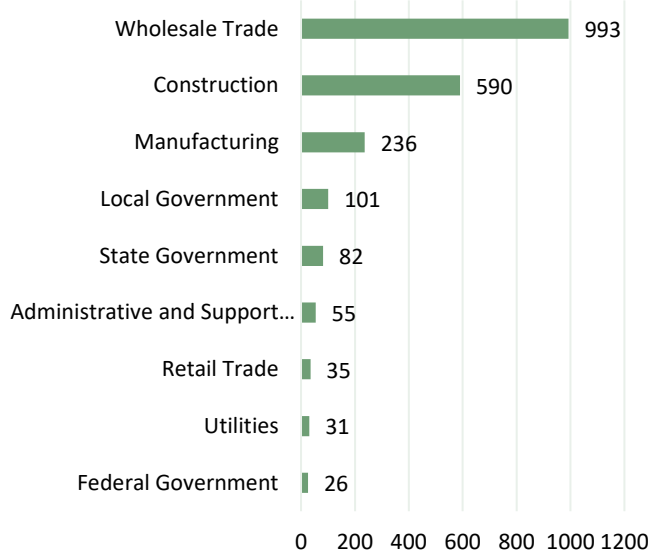
Licenses and Certifications: No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$25.42 - \$30.19

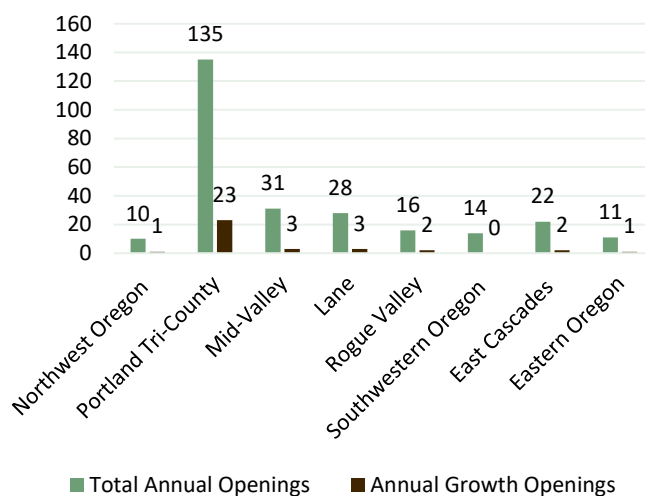
**Total Number Employed
(2023)**
2,698

**Projected Job Openings
Per Year (2023-2033)**
267

Industries of Employment (2023)



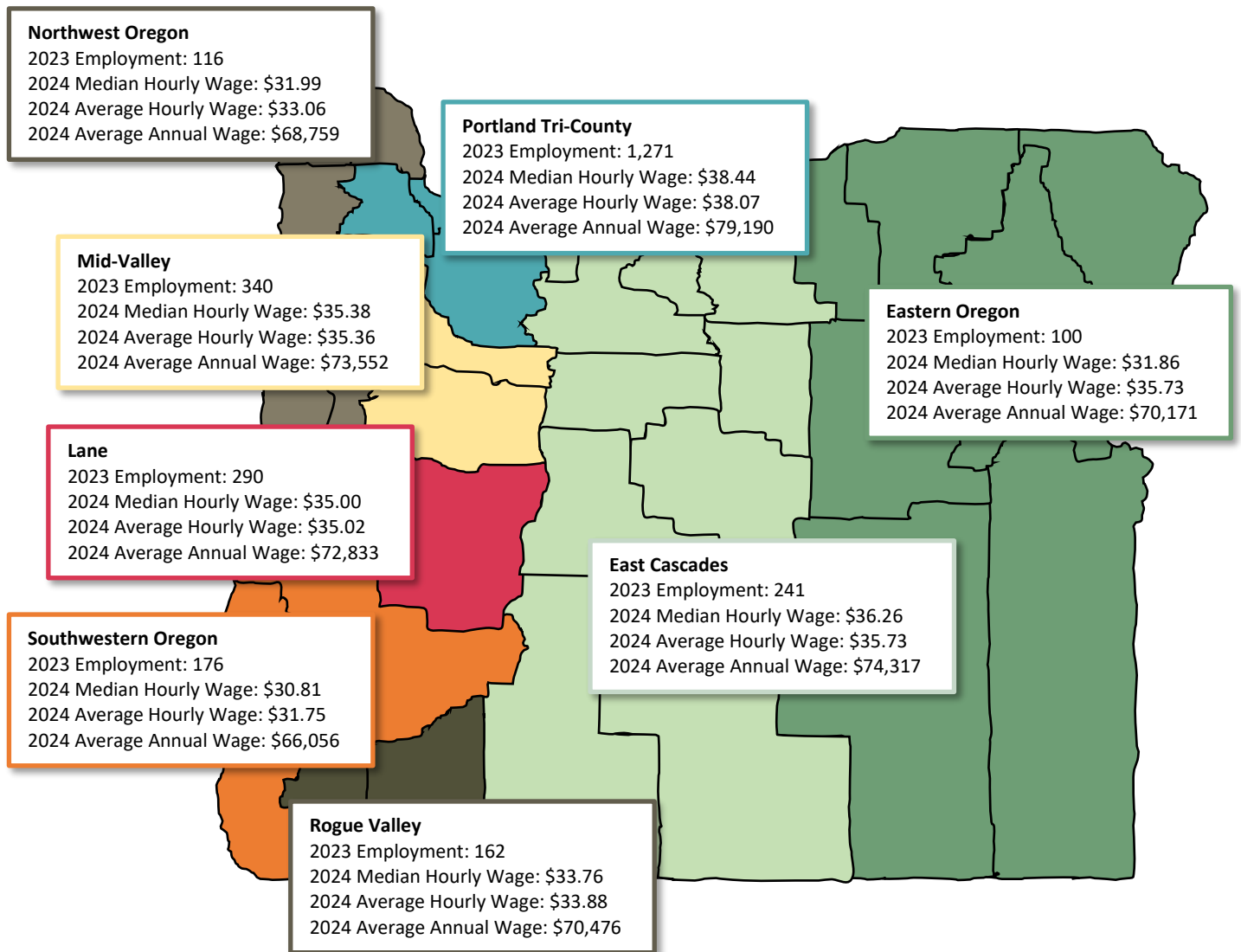
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile Plumbers, Pipefitters, and Steamfitters (47-2152)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems. Includes sprinkler fitters.”

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree) and/or certified apprenticeship.

Licenses and Certifications:

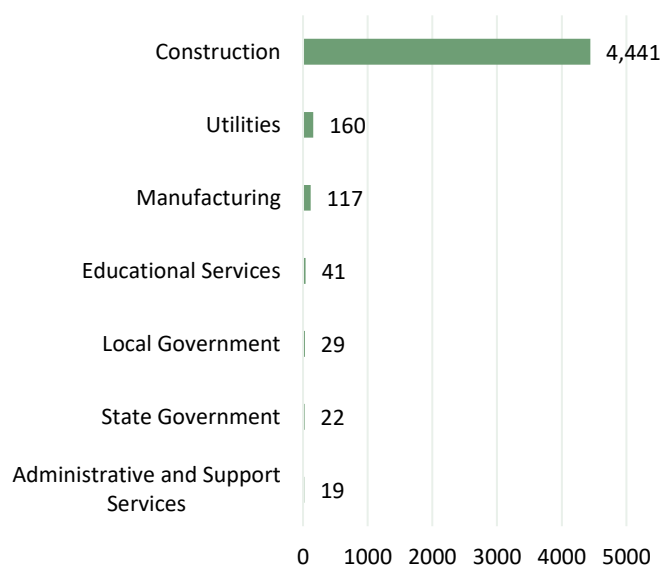
[Visit Qualityinfo.org](#) to view all credentials, licenses, or certifications for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$26.69 - \$31.94

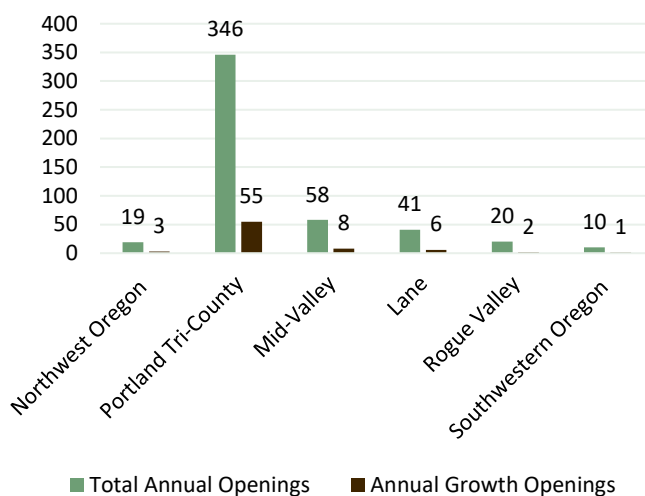
**Total Number Employed
(2023)**
5,185

**Projected Job Openings
Per Year (2023-2033)**
543

Industries of Employment (2023)



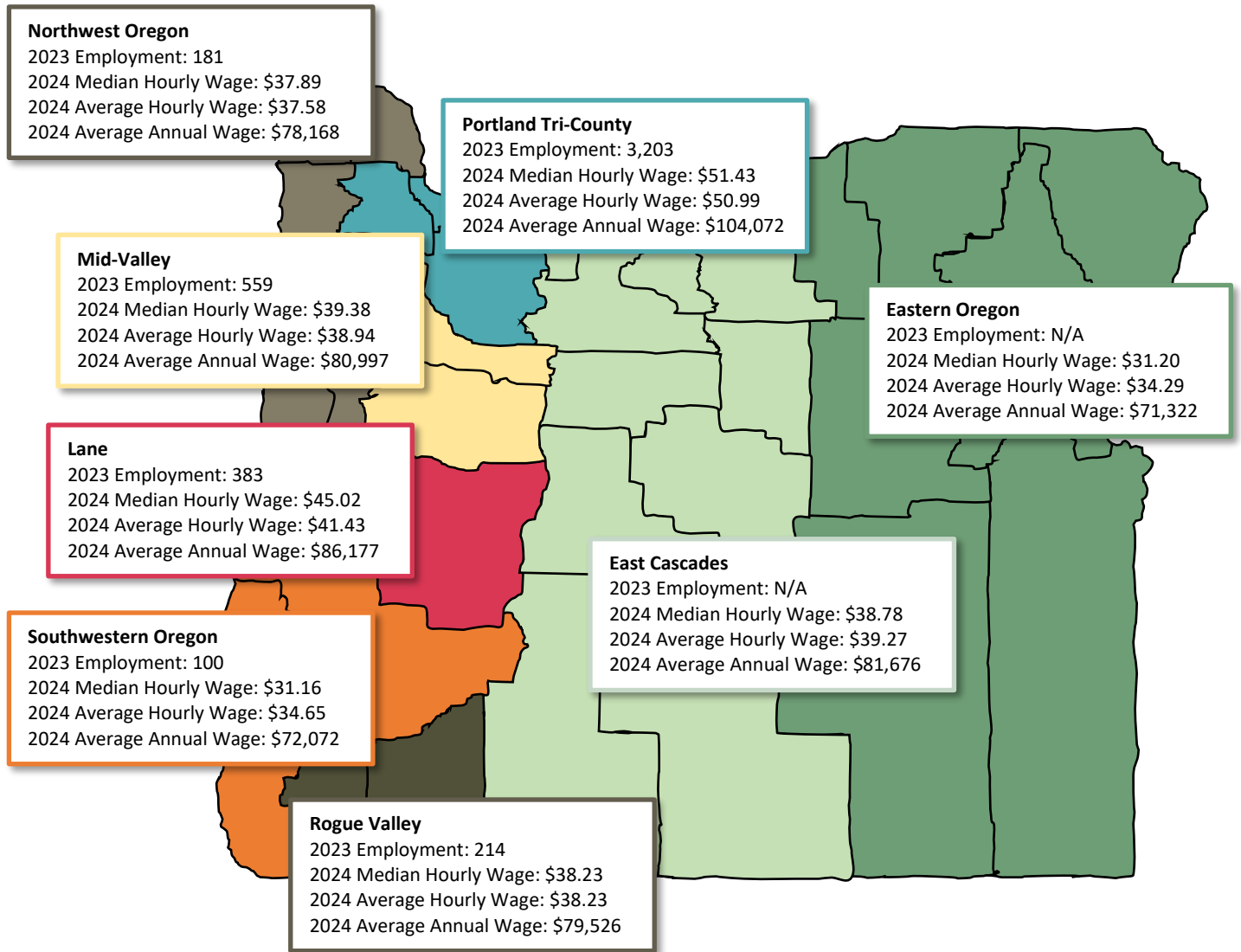
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ⁴⁷ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile Recreational Vehicle Service Technicians (49-3092)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Diagnose, inspect, adjust, repair, or overhaul recreational vehicles including travel trailers. May specialize in maintaining gas, electrical, hydraulic, plumbing, or chassis/towing systems as well as repairing generators, appliances, and interior components. Includes workers who perform customized van conversions.”

Education and Credentials

Typical entry-level: Postsecondary training (non-degree). (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Associate’s degree.

Licenses and Certifications:

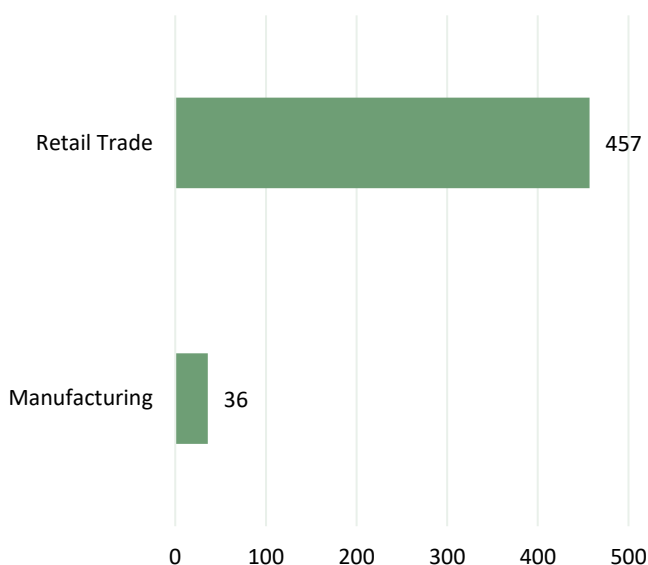
No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$19.45 - \$23.26

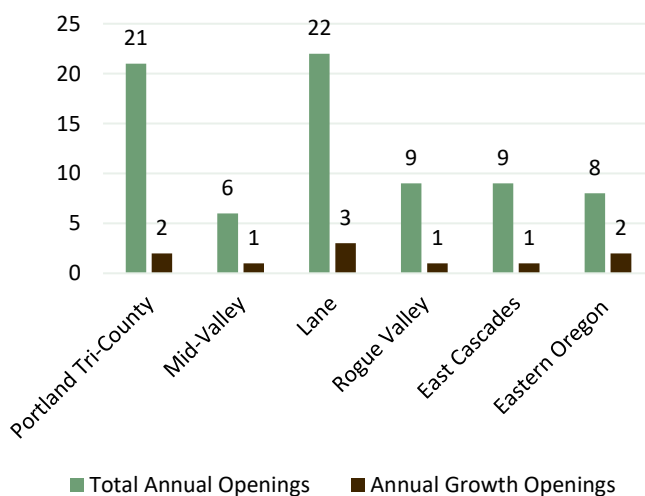
**Total Number Employed
(2023)**
531

**Projected Job Openings
Per Year (2023-2033)**
82

Industries of Employment (2023)



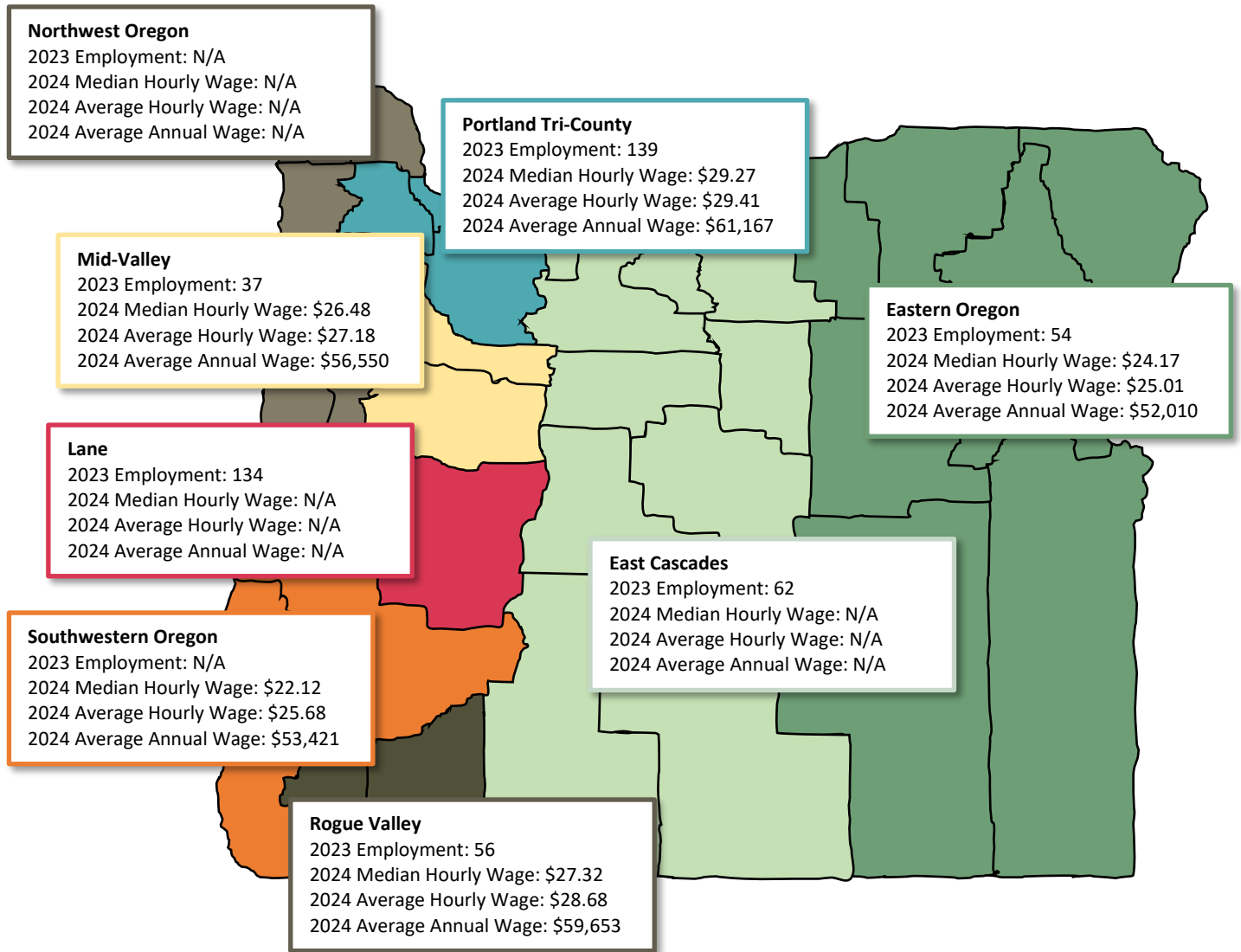
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Semiconductor Processing Technicians (51-9141)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Perform any or all of the following functions in the manufacture of electronic semiconductors: load semiconductor material into furnace; saw formed ingots into segments; load individual segment into crystal growing chamber and monitor controls; locate crystal axis in ingot using x-ray equipment and saw ingots into wafers; and clean, polish, and load wafers into series of special purpose furnaces, chemical baths, and equipment used to form circuitry and change conductive properties.”

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Associate’s degree.

Licenses and Certifications:

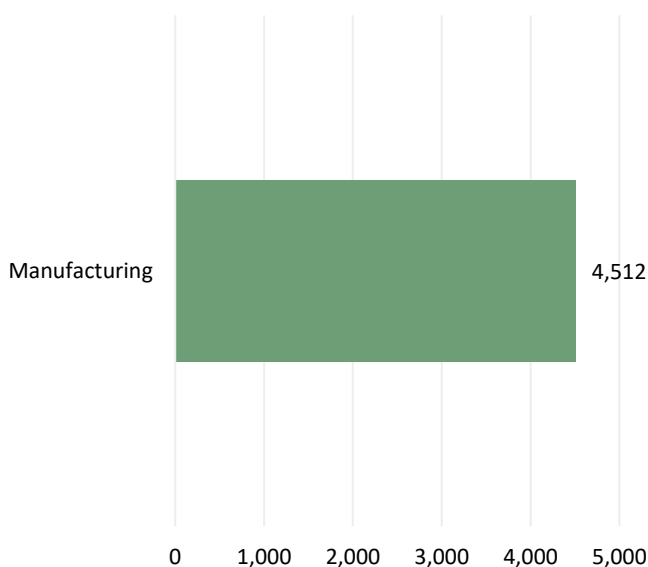
No statewide license is required for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$23.29 - \$29.29

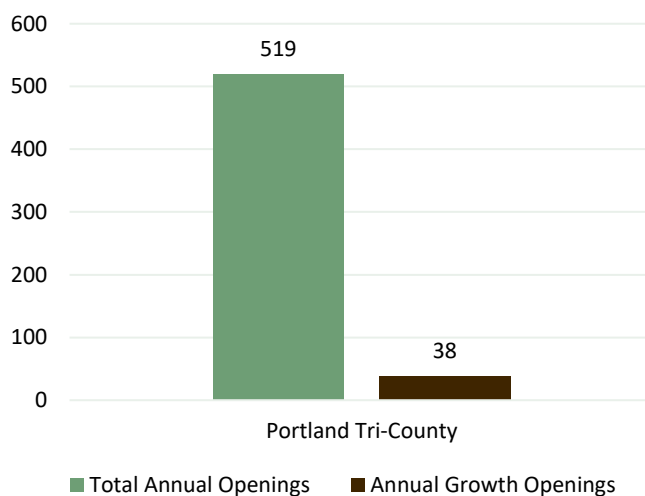
**Total Number Employed
(2023)**
4,708

**Projected Job Openings
Per Year (2023-2033)**
571

Industries of Employment (2023)



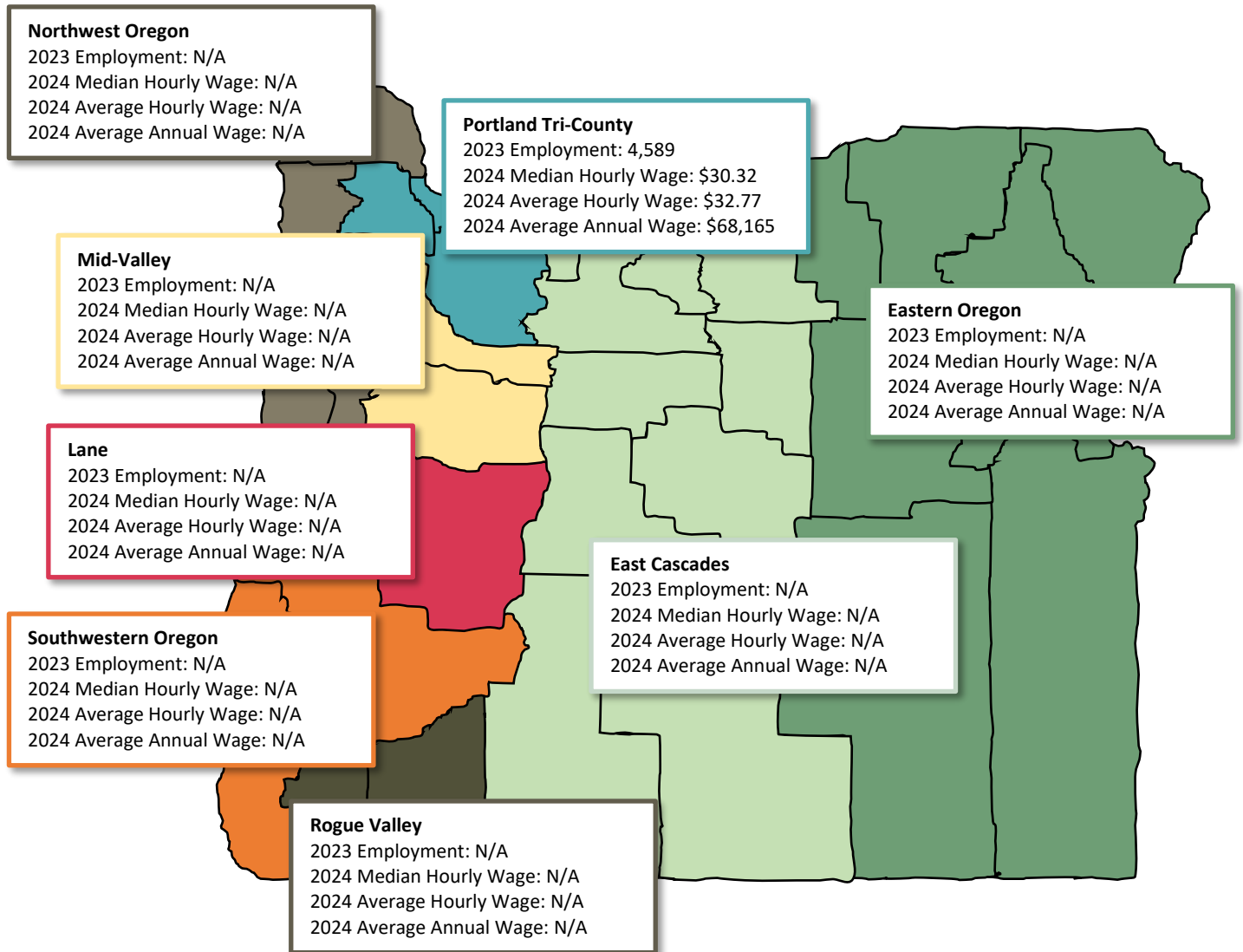
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹. Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

². Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ⁵¹ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile Sheet Metal Workers

(47-2211)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Fabricate, assemble, install, and repair sheet metal products and equipment, such as ducts, control boxes, drainpipes, and furnace casings. Work may involve any of the following: setting up and operating fabricating machines to cut, bend, and straighten sheet metal; shaping metal over anvils, blocks, or forms using hammer; operating soldering and welding equipment to join sheet metal parts; or inspecting, assembling, and smoothing seams and joints of burred surfaces. Includes sheet metal duct installers who install prefabricated sheet metal ducts used for heating, air conditioning, or other purposes.”

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree) and/or certified apprenticeship.

Licenses and Certifications:

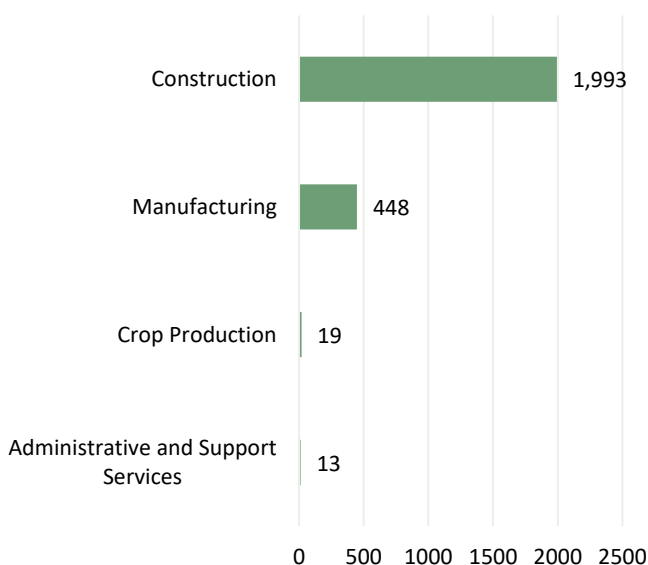
[Apprentice, Registered \(Construction Trades\)](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$22.75 - \$25.29

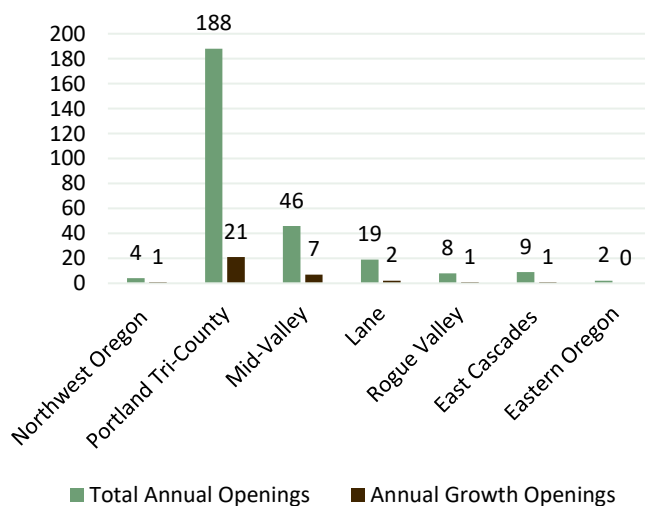
**Total Number Employed
(2023)**
2,592

**Projected Job Openings
Per Year (2023-2033)**
276

Industries of Employment (2023)



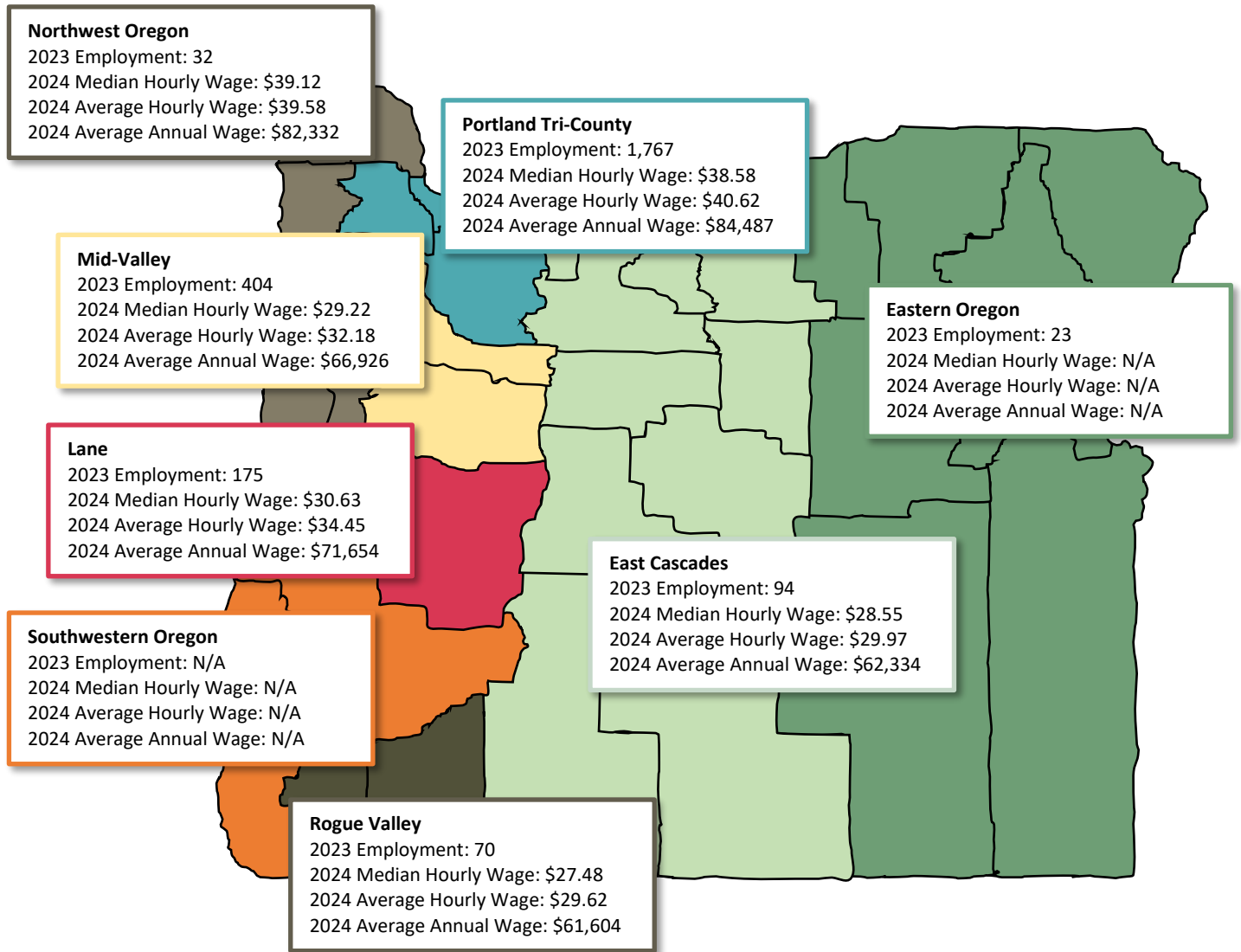
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ⁵³ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Structural Metal Fabricators and Fitters (51-2041)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Fabricate, position, align, and fit parts of structural metal products. Shipfitters are included in Layout Workers, Metal and Plastic (51-4192).”

Illustrative examples: Mill Beam Fitter, Protector Plate Attacher

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree).

Licenses and Certifications:

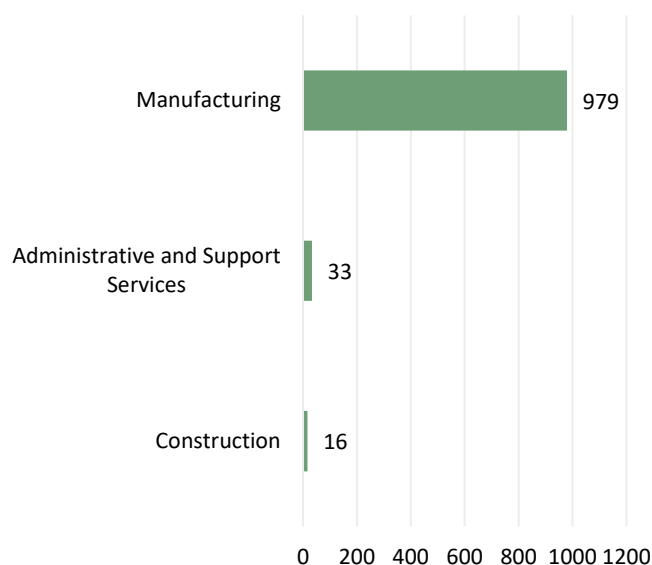
No statewide license is required for this occupation

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$21.54 - \$24.15

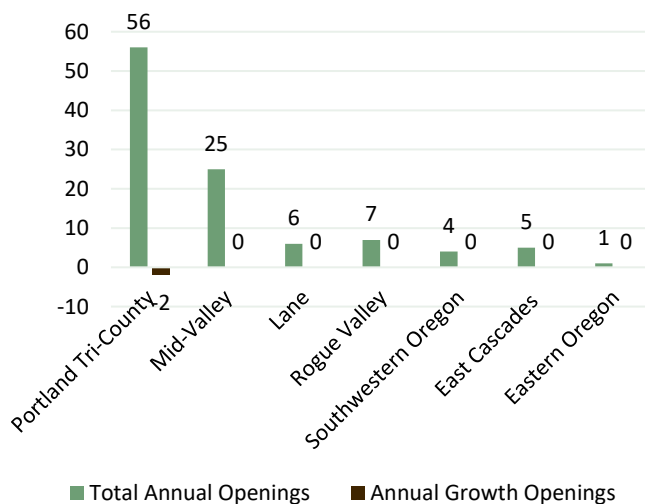
**Total Number Employed
(2023)**
1,076

**Projected Job Openings
Per Year (2023-2033)**
106

Industries of Employment (2023)



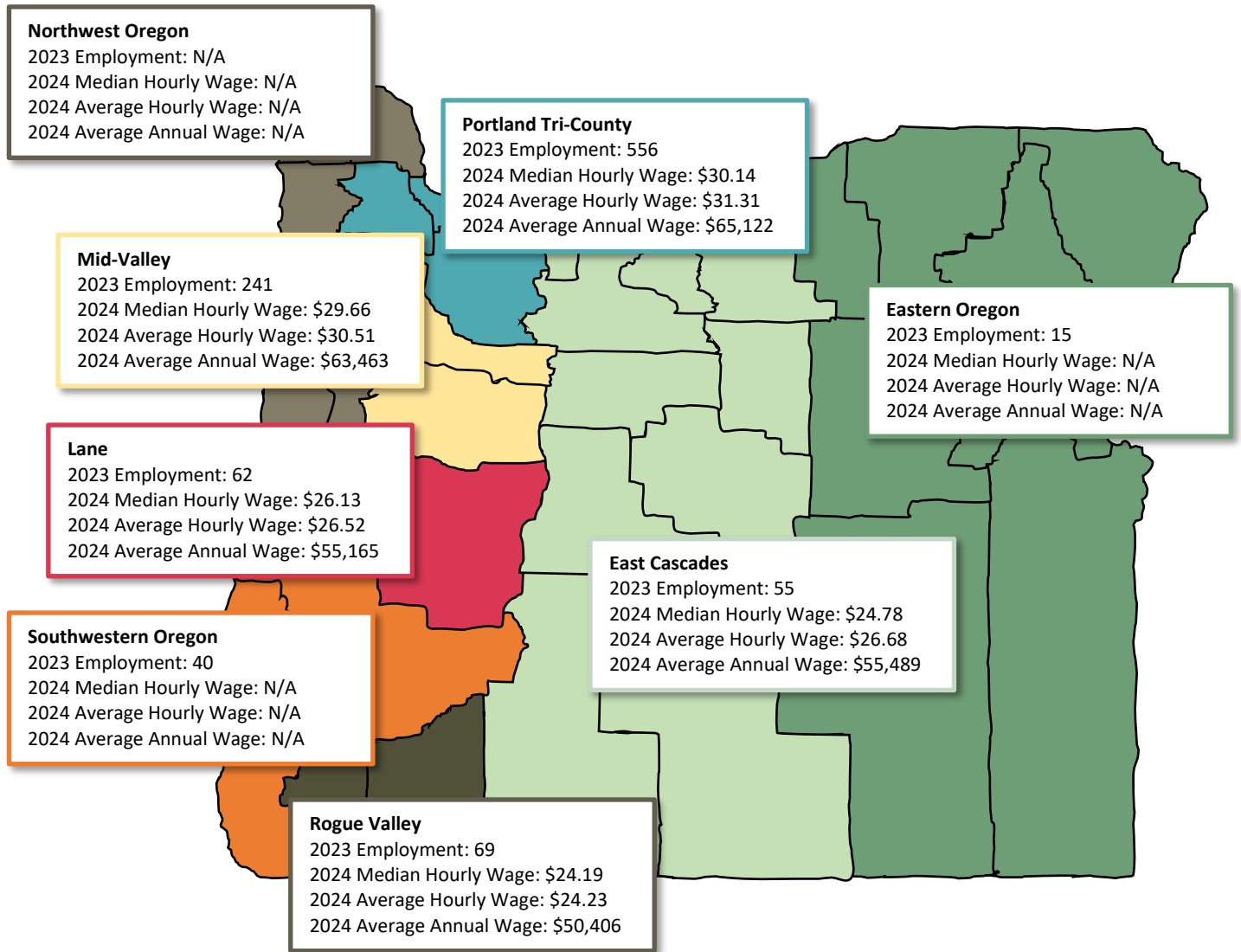
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹. Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

². Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ⁵⁵ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile Tile and Stone Setters

(47-2044)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Apply hard tile, stone, and comparable materials to walls, floors, ceilings, countertops, and roof decks.”

Illustrative examples: Ceramic Tile Installer, Hard Tile Setter, Marble Ceiling Installer, Parquet Floor Layer.

Education and Credentials

Typical entry-level: Less than high school. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: High school diploma or equivalent and/or certified apprenticeship

Licenses and Certifications:

No statewide license is required for this occupation

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$18.43 - \$21.15

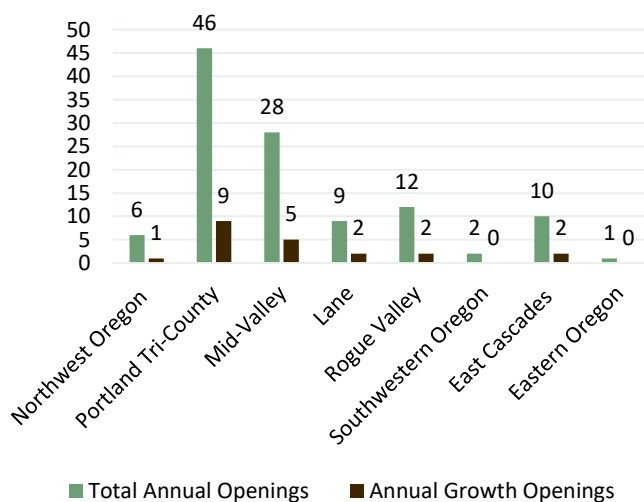
**Total Number Employed
(2023)**
1,251

**Projected Job Openings
Per Year (2023-2033)**
117

Industries of Employment (2023)



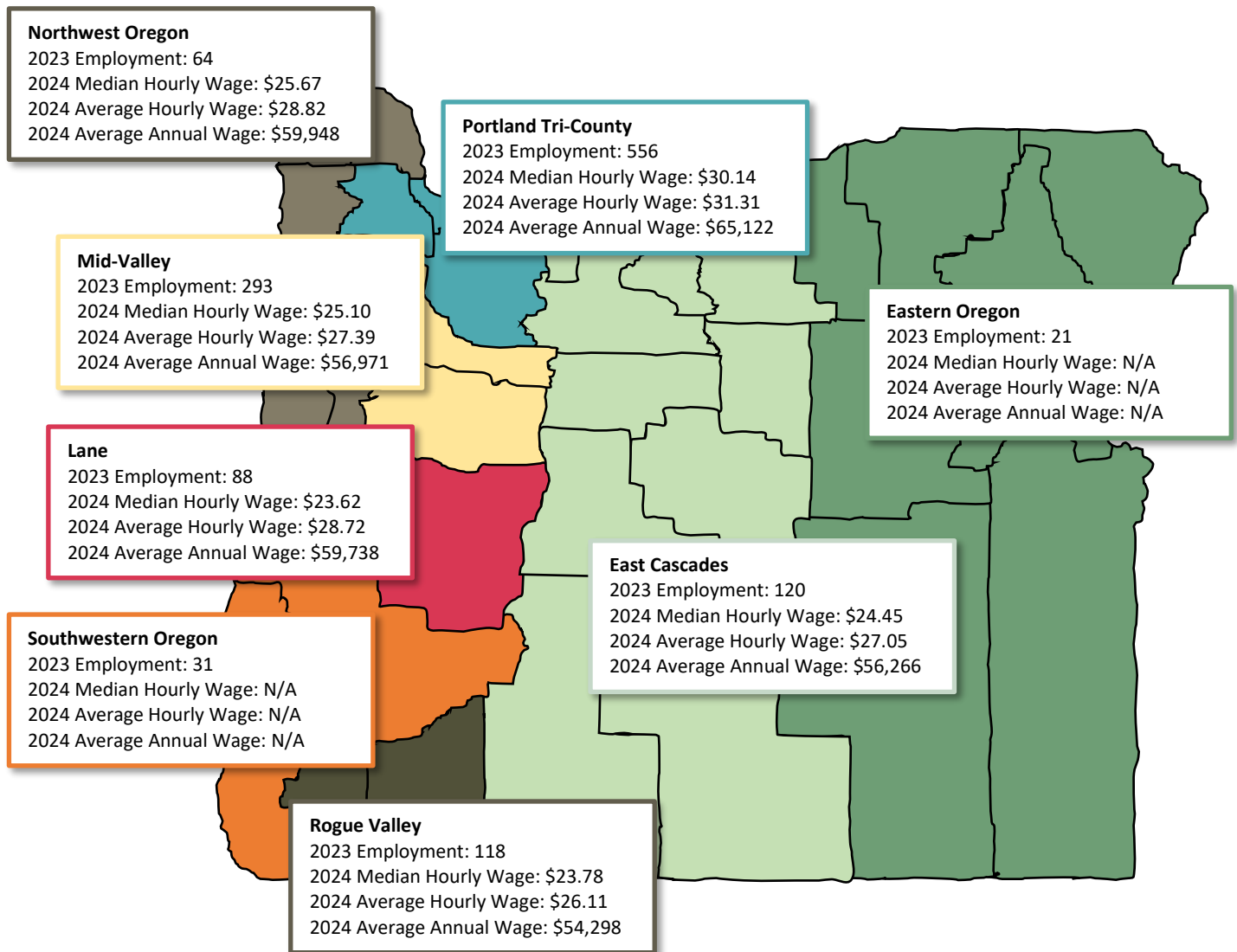
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ⁵⁷ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Operate or control an entire process or system of machines, often through the use of control boards, to transfer or treat water or wastewater.”

Illustrative examples: Liquid Waste Treatment Plant Operator, Sewage Plant Operator

Education and Credentials

Typical entry-level: Postsecondary training (non-degree). (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree).

Licenses and Certifications:

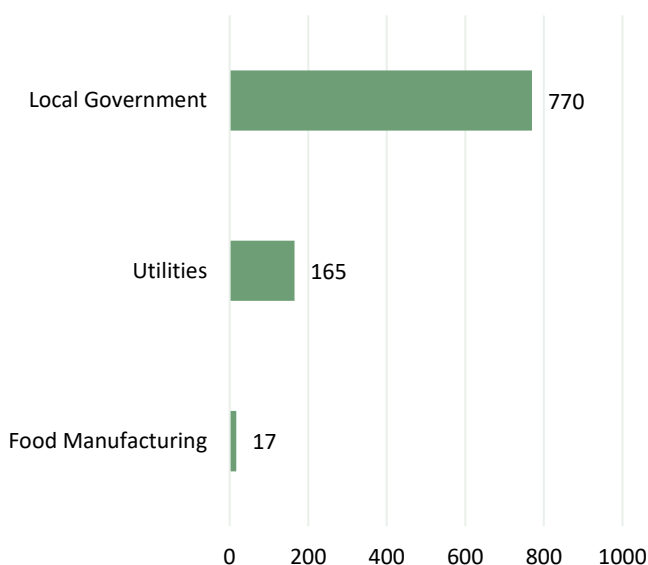
[Visit Qualityinfo.org](#) to view all credentials, licenses, or certifications for this occupation.

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$21.54 - \$24.15

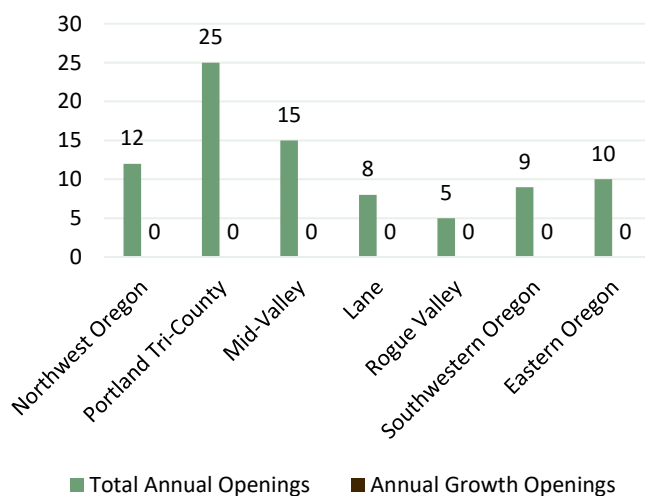
**Total Number Employed
(2023)**
1,026

**Projected Job Openings
Per Year (2023-2033)**
95

Industries of Employment (2023)



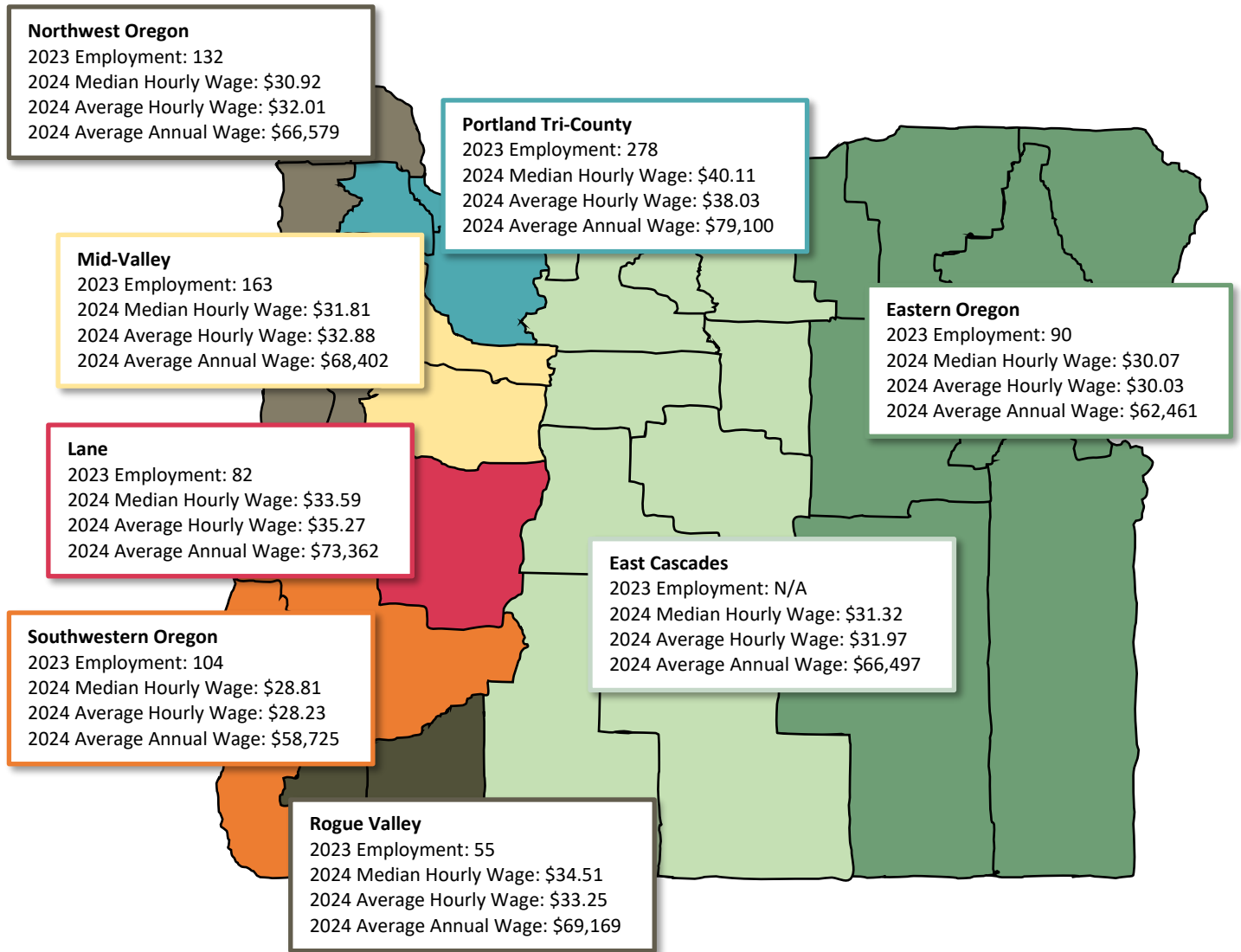
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹. Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

². Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are ⁵⁹ the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



Manufacturing Sector Occupation Profile

Welders, Cutters, Solderers, and Brazers (51-4121)

August 20, 2025

The following information has been compiled by the Higher Education Coordinating Commission using [Oregon Employment Department \(OED\) data](#).

Occupation Description

“Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.”

Illustrative examples: Arc Welder, Cutting Torch Operator, Pipe Welder, Silver Solderer

Education and Credentials

Typical entry-level: High school diploma or equivalent. (Note: Typical entry-level education does not represent minimum education requirements.)

Competitive: Postsecondary training (non-degree) and/or certified apprenticeship.

Licenses and Certifications:

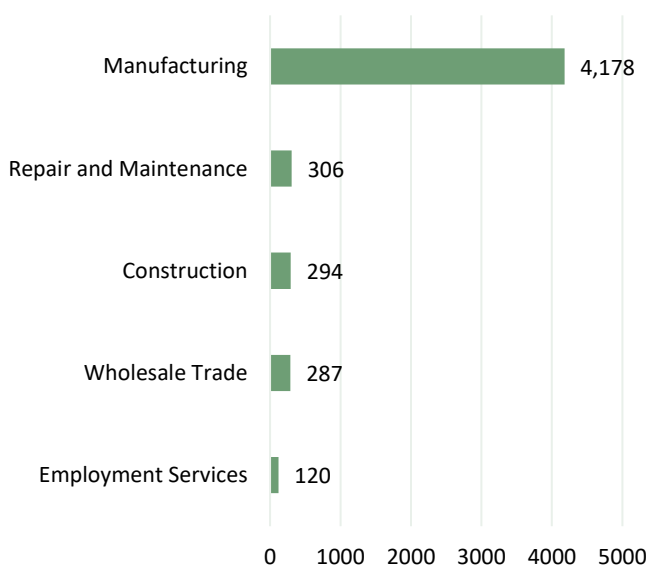
[Apprentice, Registered \(Industrial Trades\)](#)

**Estimated Entry-Level
Hourly Wage Range (2024)¹**
\$22.48 - \$24.38

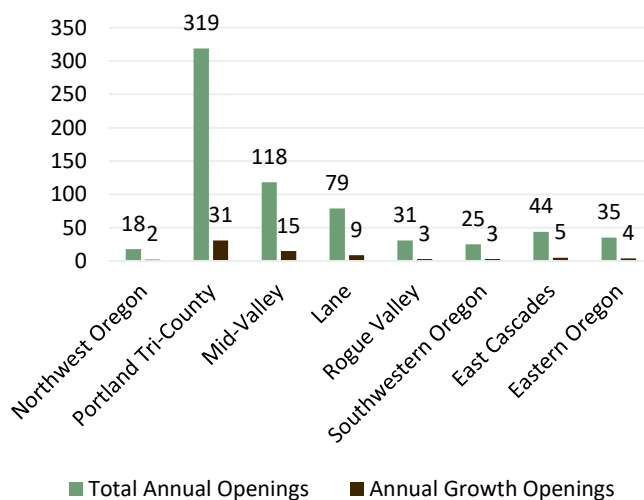
**Total Number Employed
(2023)**
5,784

**Projected Job Openings
Per Year (2023-2033)**
669

Industries of Employment (2023)



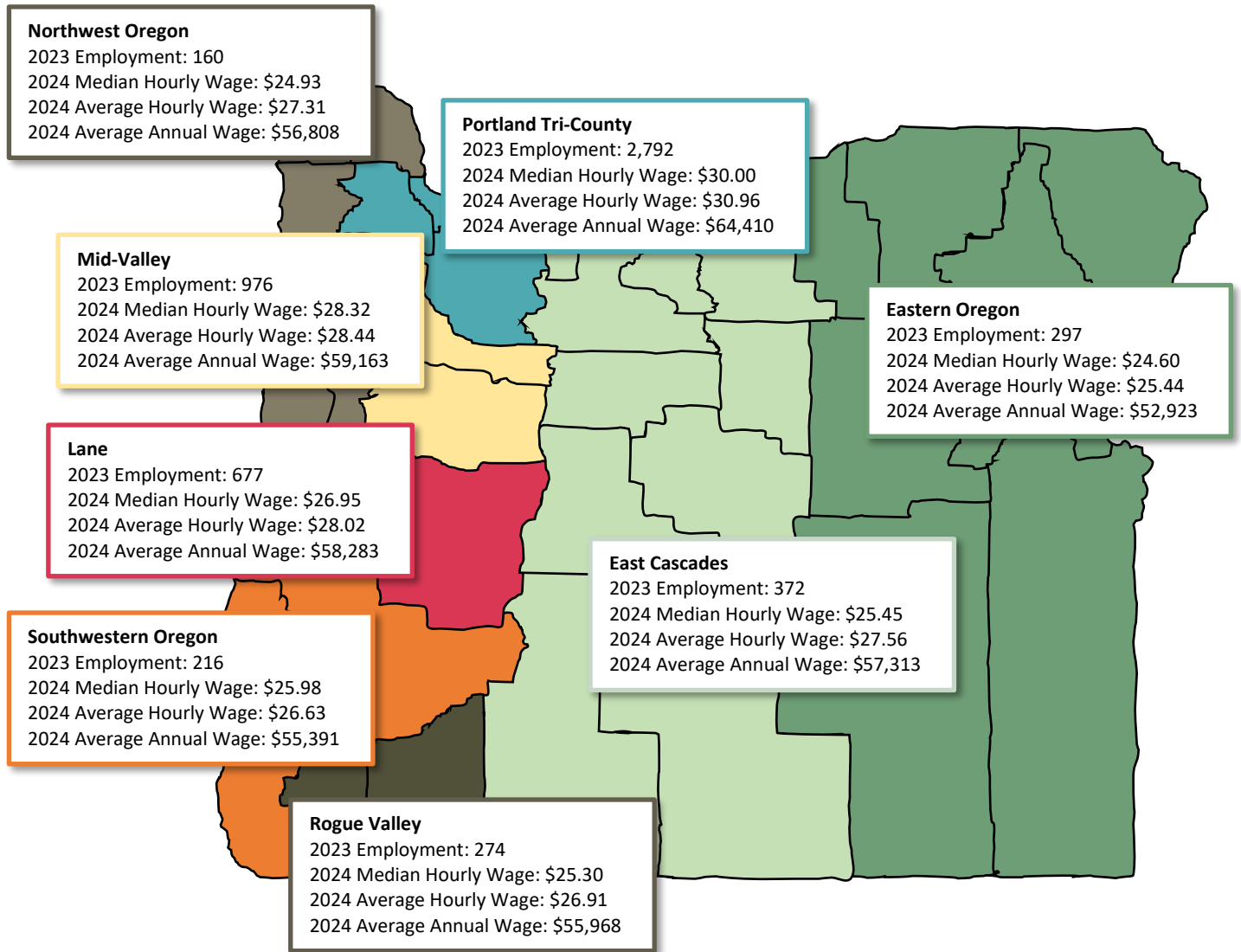
Projected Employment Change (2023-2033) by Local Workforce Development Board Region²



¹ Wage ranges are estimated for this occupation. Wages are considered entry-level if they fall between the 10th and 25th percentile.

² Growth openings are defined by OED as openings due to employment growth within an occupation. Total job openings are the sum of change openings and replacement openings.

Occupation Wage and Employment Information for Oregon's Workforce Development Regions



References

House Bill 3306. 82nd Leg., 1st Sess. (OR 2023). [ORS 660.410](#)

Kohlleppel, Jeff. Oregon Employment Department (2024). Oregon Wage Information Methodology and Limitations.

<https://qualityinfo.org/documents/20117/102300/Oregon%20Wage%20Information%20Methodology%20and%20Limitations/1af1812a-2855-7a6e-2bfb-c81201b19454?version=2.0>

Office of Management and Budget, *North American Industry Classification System Manual*. (2022)

https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf

Office of Management and Budget. *Standard Occupational Classification User Guide*. U.S. Bureau of Labor and Statistics (2018). https://www.bls.gov/soc/2018/soc_2018_user_guide.pdf

Oregon Employment Department (2023). Oregon High-Wage, High-Demand, High-Skill Occupations, 2023-2033. <https://www.qualityinfo.org/documents/20126/110691/Oregon+High-Wage%2C+High-Demand%2C+High-Skill+Occupations+2022-2032/772d7ff6-9b25-8d44-5f40-80c5c497963f?version=1.11>

Oregon Employment Department. Data sources and limitations for occupational projections. qualityinfo.org/-/occupational-projections

Oregon Employment Department. Data sources and limitations for occupational wages. qualityinfo.org/-/occupational-projections

Oregon Employment Department. Occupation Profile: Aircraft Mechanics and Service Technicians (493011) https://qualityinfo.org/oprof?occProfSearchTerm=Aircraft%20Mechanics%20and%20Service%20Technicians&occProfSearchResults=493011&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Architectural and Civil Drafters (173011) https://qualityinfo.org/oprof?occProfSearchTerm=Architectural%20and%20Civil%20Drafters&occProfSearchResults=173011&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Bus and Truck Mechanics and Diesel Engine Specialists (493031) https://qualityinfo.org/oprof?occProfSearchTerm=Bus%20and%20Truck%20Mechanics%20and%20Diesel%20Engine%20Specialists&occProfSearchResults=493031&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Carpenters (472031)

https://qualityinfo.org/oprof?occProfSearchTerm=Carpenters&occProfSearchResults=472031&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=0000100000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Chemical Equipment Operators and Tenders (519011)

https://qualityinfo.org/oprof?occProfSearchTerm=Chemical%20Equipment%20Operators%20and%20Tenders&occProfSearchResults=519011&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Computer Numerically Controlled Tool Programmers (519162)

https://qualityinfo.org/oprof?occProfSearchTerm=Computer%20Numerically%20Controlled%20Tool%20Programmers&occProfSearchResults=519162&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Drafters, All Other (173019)

https://qualityinfo.org/oprof?occProfSearchTerm=Drafters,%20All%20Other&occProfSearchResults=173019&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000100000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Electrical and Electronic Engineering Technologists and Technicians (173023)

https://qualityinfo.org/oprof?occProfSearchTerm=Electrical%20and%20Electronic%20Engineering%20Technologists%20and%20Technicians&occProfSearchResults=173023&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000100000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Electrical Engineers (172071)

https://qualityinfo.org/oprof?occProfSearchTerm=Electrical%20Engineers&occProfSearchResults=172071&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000100000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Electricians (472111)

https://qualityinfo.org/oprof?occProfSearchTerm=Electricians&occProfSearchResults=472111&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=0000100000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Engineering Technologists and Technicians, Except Drafters, All Other (173029)

https://qualityinfo.org/oprof?occProfSearchTerm=Engineering%20Technologists%20and%20Technicians,%20Except%20Drafters,%20All%20Other&occProfSearchResults=173029&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000100000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Engineers, All Other (172199)

https://qualityinfo.org/oprof?occProfSearchTerm=Engineers,%20All%20Other&occProfSearchResults=172199&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: First-Line Supervisors of Mechanics, Installers, and Repairers (491011)

https://qualityinfo.org/oprof?occProfSearchTerm=FirstLine%20Supervisors%20of%20Mechanics,%20Installers,%20and%20Repairers&occProfSearchResults=491011&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. First-Line Supervisors of Production and Operating Workers (511011)

https://qualityinfo.org/oprof?occProfSearchTerm=FirstLine%20Supervisors%20of%20Production%20and%20Operating%20Workers&occProfSearchResults=511011&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic (514033)

https://qualityinfo.org/oprof?occProfSearchTerm=Grinding,%20Lapping,%20Polishing,%20and%20Buffing%20Machine%20Tool%20Setters,%20Operators,%20and%20Tenders,%20Metal%20and%20Plastic&occProfSearchResults=514033&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Heating, Air Conditioning, and Refrigeration Mechanics and Installers (499021)

https://qualityinfo.org/oprof?occProfSearchTerm=Heating,%20Air%20Conditioning,%20and%20Refrigeration%20Mechanics%20and%20Installers&occProfSearchResults=499021&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Heavy and Tractor-Trailer Truck Drivers (533032)

https://qualityinfo.org/oprof?occProfSearchTerm=Heavy%20and%20TractorTrailer%20Truck%20Drivers&occProfSearchResults=533032&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Industrial Engineers (172112)

https://qualityinfo.org/oprof?occProfSearchTerm=Industrial%20Engineers&occProfSearchResults=172112&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000100000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Industrial Engineering Technologists and Technicians (173026)

https://qualityinfo.org/oprof?occProfSearchTerm=Industrial%20Engineering%20Technologists%20and%20Technicians&occProfSearchResults=173026&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Industrial Machinery Mechanics (499041)

https://qualityinfo.org/oprof?occProfSearchTerm=Industrial%20Machinery%20Mechanics&occProfSearchResults=499041&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Logging Equipment Operators (454022)

https://qualityinfo.org/oprof?occProfSearchTerm=Logging%20Equipment%20Operators&occProfSearchResults=454022&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Machinists (514041)

https://qualityinfo.org/oprof?occProfSearchTerm=Machinists&occProfSearchResults=514041&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Mechanical Engineers (172141)

https://qualityinfo.org/oprof?occProfSearchTerm=Mechanical%20Engineers&occProfSearchResults=172141&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000100000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Mobile Heavy Equipment Mechanics, Except Engines (493042)

https://qualityinfo.org/oprof?occProfSearchTerm=Mobile%20Heavy%20Equipment%20Mechanics,%20Except%20Engines&occProfSearchResults=493042&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Recreational Vehicle Service Technicians (493092)

https://qualityinfo.org/oprof?occProfSearchTerm=Recreational%20Vehicle%20Service%20Technicians&occProfSearchResults=493092&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Semiconductor Processing Technicians (519141)

https://qualityinfo.org/oprof?occProfSearchTerm=Semiconductor%20Processing%20Technicians&occProfSearchResults=519141&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Sheet Metal Workers (472211)

https://qualityinfo.org/oprof?occProfSearchTerm=Sheet%20Metal%20Workers&occProfSearchResults=472211&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Structural Metal Fabricators and Fitters (512041)

https://qualityinfo.org/oprof?occProfSearchTerm=Structural%20Metal%20Fabricators%20and%20Fitters&occProfSearchResults=512041&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Tile and Stone Setters (472044)

https://qualityinfo.org/oprof?occProfSearchTerm=Tile%20and%20Stone%20Setters&occProfSearchResults=472044&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Water and Wastewater Treatment Plant and System Operators (518031)

https://qualityinfo.org/oprof?occProfSearchTerm=Water%20and%20Wastewater%20Treatment%20Plant%20and%20System%20Operators&occProfSearchResults=518031&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Oregon Employment Department. Occupation Profile: Welders, Cutters, Solderers, and Brazers (514121)

https://qualityinfo.org/oprof?occProfSearchTerm=Welders,%20Cutters,%20Solderers,%20and%20Brazers&occProfSearchResults=514121&occProfAreas=4101000000&occprof_RptType=0&occProfName=none&occProfJSID=0&expandedState=00001000000000&oedPageNumber=1&hwolPageNumber=1

Payton, Jason. Oregon Employment Department. 2024 Oregon Wage Information.

https://qualityinfo.org/-/2024-oregon-wage-information?p_l_back_url=%2Fsearch%3Fq%3DEntry-level%2Bwage&p_l_back_url_title=Search

Appendix I: Oregon Wage Information Methodology and Limitations

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Oregon Wage Information 2024 represents the most comprehensive collection of occupational wage data available. It offers a broad spectrum of wage rates from many sectors of Oregon's economy and is designed to help job seekers, employers, career planners, and others who need Oregon wage rates for specific occupations.

Occupations in the Oregon Wage Information files are categorized using Standard Occupational Classification (SOC) codes. This federal classification system includes 867 separate occupations and is designed and reviewed by a national committee of experts from industry, government, and academia. Since the national wage survey uses the SOC, we are limited to that structure when publishing wage data.

Methodology

Wage data presented in this publication are collected through the Occupational Employment and Wage Survey (OEWS), a semiannual survey that measures occupational employment and wage rates for payroll workers. In Oregon, the survey samples more than 6,000 establishments each year, taking three years to fully collect the sample of more than 18,000 establishments. Each year, one-third of the establishments are surveyed, with all industries covered each year of the three-year cycle. The OEWS survey is sent to Oregon employers. The Bureau of Labor Statistics requires at least a 75 percent response rate.

Data in *Oregon Wage Information 2024* are based on the 2020, 2021, 2022 and 2023 surveys and are adjusted to 2024 using the Employment Cost Index. More than 95 percent of all Oregonians working for wages or salary in the private and public sectors work in occupations represented in the estimates.

The OEWS survey defines employment as workers covered by unemployment insurance. This may exclude the self-employed, owners or partners of unincorporated firms, unpaid family workers, and some commission-based sales agents. Wages paid to these excluded groups are not reflected in this publication.

Wages for the OEWS survey are straight-time gross pay excluding premium pay and nonwage fringe benefits. Some inclusions are the base pay rate, tips, commissions, and certain types of production bonuses. Some exclusions are overtime pay, housing allowances, and nonproduction bonuses. For Oregon, the OEWS survey collects wages based on hourly rates or annual rates. If they report an annual rate, they provide a wage rate equivalent to full-time whether or not their employees work full-time. The OEWS survey may also collect wage data in 12 intervals. Employers report the number of employees in each wage interval by occupation.

The Oregon Employment Department has provided several extensions to the official OEWS data series (which have been developed in cooperation with the Bureau of Labor Statistics). These additional products have not been validated by BLS and are not, therefore, official BLS data series. The Oregon Employment Department feels, however, that these data provide additional information that is useful to The Oregon Employment Department's data users.

The Oregon Employment Department has updated wage data to a post-survey reference period. The data contained in this report have not been validated by BLS and are not, therefore, official BLS data series (See technical note included in this publication).

For more information on the OEWS technical notes, please see www.bls.gov/oes/current/oes_tec.htm.

Limitations

This publication is only one of several sources of wage information. OED suggests readers consult other wage resources when researching wage information. Other sources may include public and private wage surveys.

This publication focuses on occupational wage rates. These rates can vary greatly among industries, by firm size within an industry, and regions within the state. Though various percentiles and the means and medians are listed, these wages do not necessarily reflect specific experience or educational levels.

Data in this publication represent wages as of the first quarter of 2024. When determining wage rates for individual occupations, it is wise to assess current labor market conditions, including labor shortages that would affect wage levels.

An N/A listed for employment or wage information on any workforce region indicates that there is insufficient data for the Employment Department to produce an estimate. Either data for that region and/or occupation has been intentionally suppressed due to confidentiality requirements, or the error range for an estimate is too large to meet data quality standards. This does not necessarily indicate that there is no employment or wages for that particular occupation and/or region.

Other Wage Data Tools

OED recommends the following tools to adjust wages for inflation and for variations in cost of living by city.

Perhaps the best-known inflation index is the Consumer Price Index (CPI). The CPI is a measure of prices paid by urban consumers for a fixed market basket of consumer goods and services. The index allows a calculation of the average change over time in consumer prices. The website for the CPI is www.bls.gov/cpi.

The best measure of change in national wage levels over time is the Employment Cost Index (ECI). This series is updated quarterly and shows benefit and payroll changes. The website for the ECI is www.bls.gov/ncs/ect/.

Users of wage data sometimes need a cost-of-living differential for workers in various locations. The American Chamber of Commerce Researchers Association (ACCRA) Cost of Living Index (COLI) is the most widely available indicator of variations by city in the cost of living. This is not a public data source and membership or purchase is required. The ACCRA COLI is released quarterly for some 300 urban areas in North America. It provides indexes on housing, utilities, groceries, transportation, health care, and miscellaneous goods and services. This information is available through some chambers of commerce, or by visiting the ACCRA COLI website at www.coli.org.

EDUCATION



INDUSTRY

Industry and Education Changing the Workforce and Collaborating through Employability Skills

A recent article from *The New York Times*, reprinted from *Fox Business News*, pointed out that employers are placing a premium on “soft” or “employability” skills when hiring new employees. For years, business and industry has understood the need for these transferable skills in employees. Education is following suit with the passage of Oregon Senate Bill 3 in 2023 that requires high school graduates to have at least a half credit in Higher Education and Career Path Skills.

Oregon Employability Skills (OES) bridges the gap between industry demands and educational curriculum. Originating from a collaboration between educators, administrators, and industry partners in 2018, OES offers a comprehensive framework for teaching soft skills. Adapted from the 21st Century New World of Work Foundation, the curriculum provides adaptable training from 5th grade up through adult learners, and can be used for filling skills gaps in ten areas:

Adaptability	Empathy
Analysis Solution Mindset	Entrepreneurial Mindset
Communication	Resilience
Collaboration	Self-awareness
Digital Literacy	Social Diversity Awareness

Oregon Employability Skills is being used by public and private educational institutions, community-based organizations, Worksource training programs, apprenticeship programs, and small and large businesses across the state. The curriculum is free, open-source, highly adaptable, and easily integrated into any training or professional development program. The content helps a learner to recognize skills they already have, develop skills that need to be expanded, and articulate to a potential employer how those skills are exhibited. In addition to nearly 100 education partners, over 50 small and large companies have supported the curriculum by providing specialized videos, activities, and expertise – businesses from corner to corner of the state. The Oregon Workforce Talent and Development Board and Oregon Department of Education are major proponents of OES, providing funding and guidance to the initiative, which will not only expose learners to relevant skills such as digital communication, but also interpersonal skills such as resiliency and teamwork.

For more information, visit our website at OregonEmployabilitySkills.org



Oregon Employability Skills | Skill Traits

Adaptability

- ☐ Sees when things change and recognizes that change can be an opportunity.
- ☐ Open to new experiences, including work environments, roles, and tasks.
- ☐ Acknowledges the viewpoints of others and accepts suggestions to get the job done.
- ☐ Handles average amounts of stress, positively uses feedback, and learns from things that go wrong.

Analysis/Solution Mindset/Problem Solving

- ☐ Considers different points of view; tries to understand why information is presented the way it is.
- ☐ Sees problems and needs in society, the community, or the workplace. Looks at the bigger picture when finding a way to solve a problem.
- ☐ Sees themes or patterns in data and connects information from different subject areas. Uses critical thinking skills.
- ☐ Considers different ways of solving problems; tests ideas to find the one that works best.

Collaboration/Team Player

- ☐ Understands that collaborating with a diverse team, in person or remotely, benefits everyone.
- ☐ Can identify the process of completing a shared goal by identifying resources, timelines, objectives, and team members' skills to meet the shared goal successfully.
- ☐ Can demonstrate a leadership mindset by sharing responsibilities with team members, offering help when needed, and involving team input to generate new ideas.
- ☐ Finds positive ways to deal with conflict on the team; sees setbacks as a way to learn.

Communication

- ☐ Speaks in a way that is appropriate for the workplace and that others will understand, and writes with correct grammar and rules.
- ☐ Chooses words with care, uses nonverbal methods to clarify meaning, and uses common social rules for interacting with others. Knows how to communicate across roles.
- ☐ Knows when and how to communicate with email, the internet, digital communication and social media, and other computer applications.
- ☐ Is an active listener - listens with empathy, paraphrases for understanding, and asks questions for clarification before actively communicating to avoid misunderstanding.

Digital Literacy

- ☐ Knows how to operate a computer, tablet, or smartphone and use programs like word processing, messaging, and browser windows.
- ☐ Knows how to properly and legally share documents, pictures, and programs; understands what, how, and when to use sensitive, confidential, or private information.
- ☐ Uses online tools to find information, answer questions, solve a problem, and consider whether a source is accurate.
- ☐ Knows what technology tools help people work together in person and online.



Oregon Employability Skills | Skill Traits

Empathy

- ☐ Knows empathy and sympathy are different and understands when to respond with empathy or sympathy
- ☐ Connects with others by being an active listener; asks questions to help understand what others are feeling.
- ☐ Builds trusting, valued relationships with people from diverse backgrounds and cultures.
- ☐ Makes decisions incorporating and considering others' needs and points of view; asks for feedback.

Entrepreneurial Mindset/Go-Getter

- ☐ Learns new things, builds skills, and seeks more job responsibilities.
- ☐ Connects different types of information to create new ideas and ways of completing tasks.
- ☐ Is willing to take risks and learn from mistakes to make improvements.
- ☐ Thinks like an entrepreneur, even when working for others, and understands social entrepreneurship can benefit others and self.

Resilience

- ☐ Sets priorities and goals. Sees possible outcomes to actions and creates backup plans.
- ☐ Bounces back when things go wrong by figuring out what happened and how to learn from it.
- ☐ Takes feedback, deals directly with conflict positively, and can listen to others and speak up for themselves.
- ☐ Knows that personal growth and skill development is an essential part of life.

Self-Awareness

- ☐ Is realistic about personal strengths, skills, and areas of needed growth.
- ☐ Looks for jobs that are a good match for personal strengths and skills.
- ☐ Acknowledges personal responsibility in actions and words; seeks to control emotions and behavior even under stress; tries to do the right thing.
- ☐ Exhibits work-appropriate behavior, including showing up on time, and applies guidelines or rules of the work setting to stay safe.

Social Diversity Awareness

- ☐ Recognizes and values internal diversity, appreciating unique qualities and contributions regardless of origin, appearance, or beliefs.
- ☐ Shares unique backgrounds, experiences, and cultural knowledge, understanding how they shape external diversity.
- ☐ Understands how differences in roles, experiences, company size, mission, and values contribute to workplace diversity.
- ☐ Advocates for diversity by asking thoughtful questions and promoting respectful, inclusive behaviors to model diversity.

Appendix III: Oregon Manufacturing Sector Wage Information - High-Skill Occupations* Statewide, 2024

Occupation Code	Occupation Title	Employment (May 2023)	Employment Relative Standard Error**	Wage Percentiles					Average Hourly Wage	Average Annual Wage	Average Relative Standard Error**
				10th	25th	50th (Median)	75th	90th			
00-0000	Total all occupations	192,190	1%	\$17.96	\$21.15	\$26.71	\$40.03	\$66.33	\$35.12	\$73,039	0%
11-0000	Management Occupations	14,640	2%	\$34.00	\$46.53	\$64.04	\$87.56	\$112.71	\$70.76	\$147,190	0%
11-1011	Chief Executives	70	13%	\$84.56	Over \$115	Over \$115	Over \$115	Over \$115	\$170.81	\$355,284	5%
11-1021	General and Operations Managers	4,190	2%	\$24.49	\$34.86	\$51.02	\$83.29	\$116.85	\$64.84	\$134,862	1%
11-2011	Advertising and Promotions Managers	10	26%	\$40.63	\$41.35	\$48.68	Over \$115	Over \$115	\$76.31	\$158,738	13%
11-2021	Marketing Managers	690	5%	\$39.30	\$50.65	\$67.93	\$87.61	\$111.64	\$74.52	\$155,009	1%
11-2022	Sales Managers	930	4%	\$38.09	\$49.35	\$62.40	\$81.12	\$110.11	\$69.12	\$143,769	1%
11-2032	Public Relations Managers	50	15%	\$45.31	\$53.40	\$78.70	\$93.62	\$101.44	\$74.94	\$155,882	4%
11-3012	Administrative Services Managers	200	8%	\$34.66	\$43.37	\$51.12	\$63.34	\$87.15	\$56.17	\$116,840	2%
11-3013	Facilities Managers	270	7%	\$38.89	\$47.42	\$62.32	\$71.61	\$79.73	\$60.33	\$125,487	2%
11-3021	Computer and Information Systems Managers	970	7%	\$59.20	\$77.93	\$87.83	\$114.38	Over \$115	\$95.62	\$198,879	1%
11-3031	Financial Managers	650	5%	\$49.65	\$61.54	\$74.76	\$90.74	\$113.35	\$81.23	\$168,958	2%
11-3051	Industrial Production Managers	2,410	3%	\$34.21	\$42.06	\$52.64	\$66.59	\$83.41	\$57.77	\$120,158	1%
11-3061	Purchasing Managers	420	6%	\$37.78	\$48.42	\$59.65	\$77.92	\$88.94	\$62.48	\$129,960	2%
11-3071	Transportation, Storage, and Distribution Managers	250	7%	\$38.47	\$42.77	\$49.90	\$65.61	\$84.82	\$56.98	\$118,518	2%
11-3121	Human Resources Managers	350	7%	\$44.08	\$55.65	\$67.16	\$87.76	\$102.97	\$72.17	\$150,125	2%
11-3131	Training and Development Managers	40	19%	\$42.35	\$51.93	\$67.00	\$86.65	\$104.16	\$69.56	\$144,687	6%
11-9021	Construction Managers	30	21%	\$40.18	\$42.23	\$84.41	\$100.99	\$112.31	\$75.08	\$156,176	7%
11-9041	Architectural and Engineering Managers	2,330	5%	\$53.98	\$68.16	\$87.34	\$90.11	\$112.71	\$85.36	\$177,536	1%
11-9051	Food Service Managers	20	20%	\$22.45	\$23.55	\$35.22	\$44.89	\$47.30	\$40.15	\$83,528	10%
11-9111	Medical and Health Services Managers	10	28%	\$34.72	\$84.36	\$99.58	\$102.82	\$102.82	\$87.28	\$181,546	9%
11-9121	Natural Sciences Managers	60	15%	\$53.01	\$60.15	\$72.99	\$92.95	\$109.57	\$78.13	\$162,530	3%
11-9199	Managers, All Other	670	6%	\$34.61	\$47.78	\$59.60	\$79.51	\$97.01	\$64.22	\$133,587	2%
13-0000	Business and Financial Operations Occupations	8,780	2%	\$24.69	\$30.48	\$38.65	\$52.34	\$67.83	\$43.32	\$90,098	0%
13-1020	Buyers and Purchasing Agents	1,550	4%	\$24.21	\$28.80	\$34.03	\$41.35	\$53.17	\$37.04	\$77,038	1%
13-1041	Compliance Officers	160	9%	\$26.67	\$30.06	\$34.57	\$45.56	\$63.44	\$40.77	\$84,788	3%
13-1051	Cost Estimators	420	6%	\$21.86	\$27.47	\$32.97	\$39.49	\$47.38	\$35.48	\$73,798	1%
13-1071	Human Resources Specialists	830	4%	\$24.87	\$29.97	\$36.83	\$46.18	\$56.29	\$39.32	\$81,803	1%
13-1081	Logisticians	690	6%	\$23.47	\$31.59	\$38.80	\$45.46	\$55.72	\$40.14	\$83,494	2%
13-1082	Project Management Specialists	1,450	5%	\$30.45	\$38.82	\$53.75	\$67.83	\$87.74	\$56.57	\$117,671	1%
13-1111	Management Analysts	240	10%	\$33.60	\$38.01	\$49.24	\$63.68	\$80.97	\$53.14	\$110,544	3%
13-1121	Meeting, Convention, and Event Planners	90	11%	\$16.39	\$17.39	\$26.72	\$30.09	\$36.77	\$26.20	\$54,499	4%
13-1141	Compensation, Benefits, and Job Analysis Specialists	40	20%	\$31.56	\$37.91	\$44.81	\$51.46	\$65.64	\$45.87	\$95,397	4%
13-1151	Training and Development Specialists	270	8%	\$22.82	\$25.70	\$28.91	\$37.48	\$48.92	\$32.60	\$67,821	2%
13-1161	Market Research Analysts and Marketing Specialists	740	5%	\$22.59	\$27.67	\$36.64	\$51.05	\$82.18	\$44.00	\$91,536	2%
13-1199	Business Operations Specialists, All Other	670	5%	\$22.37	\$25.45	\$33.43	\$41.32	\$59.90	\$36.98	\$76,914	2%
13-2011	Accountants and Auditors	1,110	3%	\$27.99	\$33.09	\$40.21	\$49.78	\$62.92	\$42.93	\$89,282	1%
13-2041	Credit Analysts	20	26%	\$24.60	\$30.00	\$30.80	\$33.10	\$41.66	\$32.17	\$66,921	5%
13-2051	Financial and Investment Analysts	430	11%	\$37.61	\$42.90	\$52.34	\$68.08	\$88.17	\$55.04	\$114,484	2%
15-0000	Computer and Mathematical Occupations	6,880	4%	\$37.70	\$51.96	\$69.57	\$87.52	\$91.28	\$68.29	\$142,049	1%
15-1211	Computer Systems Analysts	300	13%	\$45.18	\$53.78	\$71.21	\$91.21	\$91.21	\$73.63	\$153,157	3%
15-1231	Computer Network Support Specialists	60	17%	\$24.87	\$25.00	\$28.53	\$36.03	\$36.06	\$30.57	\$63,576	3%
15-1232	Computer User Support Specialists	370	7%	\$23.69	\$26.98	\$31.99	\$38.17	\$43.63	\$33.16	\$68,982	1%
15-1241	Computer Network Architects	60	15%	\$48.93	\$55.93	\$68.17	\$82.99	\$98.26	\$71.20	\$148,099	3%
15-1242	Database Administrators	20	22%	\$25.92	\$32.36	\$49.60	\$63.92	\$69.42	\$48.92	\$101,770	8%
15-1243	Database Architects	30	28%	\$52.44	\$52.44	\$69.95	\$81.33	\$87.52	\$70.47	\$146,580	5%

Oregon Manufacturing Wage Information - High-Skill Occupations*
Statewide, 2024

Occupation Code	Occupation Title	Employment (May 2023)	Employment Relative Standard Error**	Wage Percentiles					Average Hourly Wage	Average Annual Wage	Average Relative Standard Error**
				10th	25th	50th (Median)	75th	90th			
15-1244	Network and Computer Systems Administrators	370	7%	\$32.58	\$40.26	\$52.20	\$69.95	\$79.24	\$54.71	\$113,803	2%
15-1252	Software Developers	3,190	5%	\$47.05	\$54.54	\$70.52	\$85.55	\$92.23	\$71.48	\$148,676	1%
15-1253	Software Quality Assurance Analysts and Testers	180	13%	\$40.28	\$51.27	\$61.39	\$70.02	\$79.75	\$60.71	\$126,273	2%
15-1254	Web Developers	40	15%	\$32.19	\$35.71	\$41.85	\$49.79	\$61.84	\$44.48	\$92,537	4%
15-1299	Computer Occupations, All Other	180	11%	\$37.34	\$47.98	\$63.77	\$87.59	\$98.98	\$67.60	\$140,607	3%
15-2031	Operations Research Analysts	110	25%	(3)	(3)	(3)	(3)	(3)	(3)	(3)	4%
17-0000	Architecture and Engineering Occupations	21,200	3%	\$30.96	\$39.94	\$52.63	\$67.16	\$87.65	\$56.77	\$118,097	1%
17-1011	Architects, Except Landscape and Naval	20	24%	\$32.19	\$42.32	\$44.80	\$48.22	\$48.22	\$45.22	\$94,040	7%
17-2011	Aerospace Engineers	150	15%	\$36.21	\$36.87	\$44.49	\$56.84	\$63.06	\$47.79	\$99,406	3%
17-2041	Chemical Engineers	50	18%	\$38.63	\$40.14	\$44.73	\$54.45	\$68.16	\$49.55	\$103,075	3%
17-2051	Civil Engineers	20	30%	\$32.77	\$34.00	\$48.32	\$50.25	\$80.82	\$48.25	\$100,361	8%
17-2071	Electrical Engineers	400	8%	\$41.40	\$45.33	\$52.34	\$67.62	\$81.51	\$58.34	\$121,347	1%
17-2072	Electronics Engineers, Except Computer	370	8%	\$39.93	\$45.32	\$52.47	\$67.48	\$75.11	\$56.44	\$117,404	1%
17-2081	Environmental Engineers	80	17%	\$38.50	\$43.43	\$53.02	\$65.88	\$69.14	\$55.26	\$114,942	3%
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	70	15%	\$36.68	\$48.47	\$57.48	\$68.34	\$83.46	\$60.18	\$125,175	3%
17-2112	Industrial Engineers	3,140	5%	\$37.05	\$41.42	\$51.21	\$63.84	\$69.04	\$52.67	\$109,566	1%
17-2121	Marine Engineers and Naval Architects	20	31%	\$38.57	\$40.09	\$43.17	\$50.30	\$63.90	\$46.96	\$97,678	4%
17-2131	Materials Engineers	290	16%	\$41.92	\$51.82	\$66.27	\$69.84	\$89.35	\$62.31	\$129,603	3%
17-2141	Mechanical Engineers	1,540	5%	\$37.14	\$41.37	\$49.75	\$62.82	\$68.89	\$52.89	\$110,014	1%
17-2199	Engineers, All Other	660	7%	\$33.83	\$41.93	\$53.55	\$69.00	\$88.54	\$58.50	\$121,664	2%
17-3011	Architectural and Civil Drafters	110	13%	\$20.39	\$25.15	\$29.59	\$32.62	\$38.97	\$30.07	\$62,541	2%
17-3012	Electrical and Electronics Drafters	50	18%	\$19.26	\$23.98	\$32.25	\$38.63	\$44.40	\$32.05	\$66,673	4%
17-3013	Mechanical Drafters	210	9%	\$23.18	\$26.49	\$30.43	\$39.96	\$43.17	\$32.72	\$68,047	2%
17-3019	Drafters, All Other	330	7%	\$20.06	\$23.03	\$25.92	\$31.70	\$38.05	\$27.72	\$57,654	1%
17-3021	Aerospace Engineering and Operations Technologists and Technicians	70	15%	\$24.12	\$25.04	\$26.74	\$29.19	\$41.03	\$29.26	\$60,849	2%
17-3023	Electrical and Electronic Engineering Technologists and Technicians	1,620	8%	\$25.69	\$31.63	\$38.99	\$41.08	\$50.73	\$38.10	\$79,235	1%
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	130	17%	\$21.43	\$22.48	\$23.55	\$30.44	\$34.67	\$27.02	\$56,202	3%
17-3025	Environmental Engineering Technologists and Technicians	20	33%	\$23.28	\$31.40	\$31.43	\$34.91	\$35.96	\$31.47	\$65,460	4%
17-3026	Industrial Engineering Technologists and Technicians	2,330	8%	\$24.67	\$26.17	\$31.99	\$33.42	\$40.61	\$32.52	\$67,646	1%
17-3027	Mechanical Engineering Technologists and Technicians	220	10%	\$25.13	\$29.71	\$32.96	\$37.98	\$40.69	\$34.30	\$71,335	1%
17-3028	Calibration Technologists and Technicians	30	28%	\$26.42	\$26.42	\$31.72	\$35.19	\$40.70	\$32.05	\$66,653	5%
17-3029	Engineering Technologists and Technicians, Except Drafters, All Other	330	11%	\$22.78	\$23.77	\$30.72	\$36.85	\$42.43	\$31.07	\$64,629	2%
19-0000	Life, Physical, and Social Science Occupations	1,800	4%	\$21.02	\$24.38	\$31.57	\$39.38	\$51.80	\$34.65	\$72,070	1%
19-1012	Food Scientists and Technologists	250	8%	\$29.30	\$32.46	\$37.80	\$46.66	\$59.56	\$40.48	\$84,189	1%
19-1021	Biochemists and Biophysicists	20	26%	\$49.53	\$51.83	\$60.60	\$60.60	\$60.61	\$56.39	\$117,296	3%
19-1032	Foresters	30	22%	\$30.99	\$38.32	\$46.28	\$51.30	\$63.78	\$54.62	\$94,890	3%
19-1042	Medical Scientists, Except Epidemiologists	20	26%	\$43.47	\$58.33	\$63.39	\$83.16	\$87.72	\$67.86	\$141,139	4%
19-1099	Life Scientists, All Other	30	23%	\$50.84	\$52.33	\$63.31	\$79.70	Over \$115	\$73.86	\$153,611	7%
19-2031	Chemists	150	11%	\$31.61	\$36.85	\$40.80	\$51.22	\$64.54	\$45.14	\$93,889	2%
19-2032	Materials Scientists	70	18%	\$37.21	\$38.66	\$39.41	\$47.46	\$58.84	\$49.77	\$103,510	7%
19-2041	Environmental Scientists and Specialists, Including Health	20	23%	\$25.77	\$29.43	\$31.59	\$44.21	\$58.41	\$37.23	\$77,449	6%
19-2099	Physical Scientists, All Other	10	39%	\$40.22	\$45.94	\$48.23	\$48.23	\$48.23	\$46.71	\$97,157	5%
19-4013	Food Science Technicians	550	7%	\$17.98	\$20.34	\$23.13	\$26.03	\$31.01	\$23.57	\$49,026	1%
19-4031	Chemical Technicians	140	12%	\$22.91	\$24.68	\$29.04	\$32.00	\$36.90	\$29.25	\$60,824	2%
19-4099	Life, Physical, and Social Science Technicians, All Other	130	23%	\$25.47	\$28.49	\$34.05	\$34.34	\$34.80	\$32.00	\$66,558	2%

Oregon Manufacturing Wage Information - High-Skill Occupations*
Statewide, 2024

Occupation Code	Occupation Title	Employment (May 2023)	Employment Relative Standard Error**	Wage Percentiles					Average Hourly Wage	Average Annual Wage	Average Relative Standard Error**
				10th	25th	50th (Median)	75th	90th			
19-5011	Occupational Health and Safety Specialists	340	6%	\$23.28	\$26.96	\$34.66	\$40.97	\$49.47	\$35.17	\$73,161	1%
19-5012	Occupational Health and Safety Technicians	30	20%	\$21.94	\$23.71	\$28.56	\$31.68	\$33.97	\$27.83	\$57,873	3%
23-0000	Legal Occupations	150	14%	\$50.59	\$89.00	Over \$115	Over \$115	Over \$115	\$120.43	\$250,495	4%
23-1011	Lawyers	140	14%	\$65.76	\$100.04	Over \$115	Over \$115	Over \$115	\$125.57	\$261,185	4%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	1,350	3%	\$18.75	\$22.12	\$28.71	\$37.76	\$49.72	\$31.68	\$65,885	1%
27-1011	Art Directors	20	21%	\$46.23	\$50.64	\$54.54	\$63.73	\$66.35	\$59.57	\$123,892	5%
27-1014	Special Effects Artists and Animators	20	29%	\$33.36	\$38.00	\$41.60	\$41.60	\$41.60	\$40.35	\$83,943	3%
27-1021	Commercial and Industrial Designers	80	17%	\$27.63	\$35.20	\$50.05	\$60.05	\$79.83	\$50.42	\$104,864	5%
27-1022	Fashion Designers	20	21%	\$19.81	\$22.38	\$23.19	\$30.26	\$42.90	\$28.61	\$59,497	7%
27-1024	Graphic Designers	660	5%	\$18.44	\$22.05	\$27.04	\$31.04	\$39.44	\$28.29	\$58,836	1%
27-1026	Merchandise Displayers and Window Trimmers	40	21%	\$17.88	\$18.27	\$18.50	\$24.21	\$28.18	\$21.97	\$45,701	5%
27-1029	Designers, All Other	140	9%	\$18.74	\$20.60	\$22.15	\$30.38	\$35.96	\$25.63	\$53,310	2%
27-3031	Public Relations Specialists	140	9%	\$18.15	\$21.19	\$28.25	\$36.90	\$46.51	\$30.49	\$63,430	3%
27-3041	Editors	20	20%	\$16.80	\$17.52	\$17.52	\$39.37	\$62.05	\$29.59	\$61,544	12%
27-3042	Technical Writers	150	10%	\$28.18	\$31.78	\$44.05	\$48.42	\$52.92	\$40.72	\$84,713	2%
27-3043	Writers and Authors	20	22%	\$20.43	\$22.42	\$28.02	\$33.08	\$44.38	\$30.51	\$63,466	7%
29-0000	Healthcare Practitioners and Technical Occupations	50	16%	\$28.15	\$33.51	\$44.68	\$47.04	\$70.15	\$44.24	\$92,017	3%
29-2091	Orthotists and Prosthetists	40	19%	\$32.84	\$33.51	\$46.08	\$48.58	\$70.26	\$46.98	\$97,723	3%
35-0000	Food Preparation and Serving Related Occupations	2,370	4%	\$14.40	\$15.14	\$16.63	\$18.65	\$23.23	\$18.09	\$37,625	1%
35-1011	Chefs and Head Cooks	70	14%	\$23.11	\$24.99	\$30.78	\$34.02	\$55.17	\$32.88	\$68,403	4%
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	120	11%	\$15.18	\$18.22	\$21.22	\$26.08	\$33.13	\$22.86	\$47,548	2%
37-0000	Building and Grounds Cleaning and Maintenance Occupations	650	5%	\$16.10	\$17.86	\$19.33	\$21.79	\$24.06	\$20.31	\$42,241	1%
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	30	21%	\$21.46	\$23.18	\$26.15	\$28.90	\$37.95	\$27.01	\$56,164	4%
41-0000	Sales and Related Occupations	6,230	2%	\$16.90	\$18.54	\$27.47	\$43.42	\$65.25	\$34.86	\$72,517	1%
41-1011	First-Line Supervisors of Retail Sales Workers	100	11%	\$18.46	\$19.25	\$23.72	\$24.81	\$41.28	\$25.58	\$53,197	3%
41-1012	First-Line Supervisors of Non-Retail Sales Workers	210	8%	\$23.77	\$31.74	\$39.10	\$47.79	\$53.14	\$39.70	\$82,581	2%
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	280	8%	\$30.32	\$32.91	\$48.93	\$68.77	\$78.08	\$52.69	\$109,588	2%
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,950	2%	\$20.11	\$24.80	\$32.31	\$46.38	\$63.45	\$37.89	\$78,809	1%
41-9031	Sales Engineers	430	11%	\$38.62	\$51.32	\$73.26	\$92.48	\$116.37	\$74.72	\$155,422	3%
43-0000	Office and Administrative Support Occupations	13,610	2%	\$17.98	\$20.65	\$23.99	\$29.21	\$35.51	\$25.67	\$53,381	0%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	760	4%	\$24.56	\$29.67	\$33.88	\$39.32	\$47.01	\$35.13	\$73,050	1%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,940	3%	\$17.97	\$21.98	\$25.29	\$29.93	\$35.83	\$26.48	\$55,082	1%
43-3061	Procurement Clerks	100	11%	\$17.56	\$21.09	\$24.31	\$27.87	\$32.55	\$24.86	\$51,708	2%
43-5061	Production, Planning, and Expediting Clerks	1,240	5%	\$20.13	\$23.79	\$28.87	\$35.39	\$40.86	\$29.80	\$61,990	1%
43-6011	Executive Secretaries and Executive Administrative Assistants	250	9%	\$24.91	\$30.42	\$41.22	\$42.36	\$46.82	\$37.43	\$77,855	2%
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,000	4%	\$17.95	\$20.67	\$24.53	\$31.93	\$38.15	\$26.18	\$54,452	1%
47-0000	Construction and Extraction Occupations	2,500	4%	\$18.82	\$22.40	\$29.54	\$39.71	\$45.33	\$31.20	\$64,910	1%
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	170	10%	\$27.52	\$31.77	\$41.16	\$47.19	\$57.81	\$41.33	\$85,960	2%
47-2031	Carpenters	550	6%	\$18.89	\$22.15	\$24.95	\$30.02	\$39.38	\$27.40	\$56,984	1%
47-2111	Electricians	750	7%	\$29.43	\$32.21	\$39.71	\$44.59	\$48.66	\$39.13	\$81,395	1%
47-2152	Plumbers, Pipefitters, and Steamfitters	120	17%	\$18.31	\$24.81	\$34.72	\$37.78	\$42.91	\$32.87	\$68,379	4%
47-2211	Sheet Metal Workers	460	8%	\$16.73	\$19.19	\$23.29	\$28.68	\$40.37	\$25.41	\$52,872	2%
49-0000	Installation, Maintenance, and Repair Occupations	8,310	2%	\$22.81	\$26.97	\$32.52	\$39.11	\$44.47	\$33.51	\$69,703	0%

Oregon Manufacturing Wage Information - High-Skill Occupations*
Statewide, 2024

Occupation Code	Occupation Title	Employment (May 2023)	Employment Relative Standard Error**	Wage Percentiles					Average Hourly Wage	Average Annual Wage	Average Relative Standard Error**
				10th	25th	50th (Median)	75th	90th			
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	770	5%	\$31.20	\$37.75	\$42.02	\$50.26	\$59.32	\$44.13	\$91,792	1%
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	270	10%	\$32.06	\$38.28	\$42.02	\$43.13	\$46.64	\$40.19	\$83,611	1%
49-2097	Audiovisual Equipment Installers and Repairers	50	24%	\$24.78	\$26.55	\$29.08	\$30.21	\$46.63	\$31.51	\$65,550	7%
49-3011	Aircraft Mechanics and Service Technicians	40	19%	\$23.77	\$24.96	\$28.77	\$29.81	\$54.19	\$30.97	\$64,424	4%
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	100	12%	\$23.94	\$26.26	\$29.80	\$36.09	\$40.87	\$31.83	\$66,220	3%
49-3041	Farm Equipment Mechanics and Service Technicians	30	19%	\$18.76	\$20.44	\$28.58	\$31.85	\$38.98	\$27.98	\$58,199	3%
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	240	10%	\$22.79	\$29.88	\$31.80	\$35.44	\$39.61	\$32.20	\$66,973	2%
49-3092	Recreational Vehicle Service Technicians	40	35%	\$15.26	\$18.63	\$18.63	\$23.64	\$38.69	\$22.64	\$47,099	8%
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	130	13%	\$21.50	\$23.29	\$33.31	\$36.54	\$42.47	\$31.99	\$66,534	3%
49-9041	Industrial Machinery Mechanics	4,310	3%	\$24.30	\$29.15	\$33.35	\$39.09	\$42.74	\$33.92	\$70,550	0%
49-9044	Millwrights	50	20%	\$25.53	\$27.13	\$32.52	\$34.02	\$36.62	\$31.65	\$65,833	2%
49-9069	Precision Instrument and Equipment Repairers, All Other	50	20%	\$25.04	\$27.51	\$32.76	\$34.88	\$40.02	\$32.24	\$67,049	3%
51-0000	Production Occupations	85,430	1%	\$17.62	\$19.53	\$23.50	\$29.12	\$34.81	\$25.08	\$52,167	0%
51-1011	First-Line Supervisors of Production and Operating Workers	6,950	2%	\$23.28	\$27.20	\$32.48	\$40.24	\$47.86	\$34.58	\$71,922	0%
51-3021	Butchers and Meat Cutters	170	16%	\$16.62	\$17.60	\$19.13	\$21.83	\$22.62	\$19.67	\$40,895	1%
51-4041	Machinists	2,680	4%	\$21.21	\$24.26	\$29.90	\$32.63	\$37.56	\$29.38	\$61,102	1%
51-4111	Tool and Die Makers	240	12%	\$29.13	\$32.76	\$38.76	\$40.50	\$47.39	\$37.97	\$78,969	2%
51-8031	Water and Wastewater Treatment Plant and System Operators	50	18%	\$19.57	\$23.31	\$30.29	\$31.94	\$33.97	\$28.74	\$59,770	4%
51-9141	Semiconductor Processing Technicians	4,600	14%	\$21.20	\$23.80	\$29.46	\$33.69	\$41.46	\$29.96	\$62,319	2%
51-9161	Computer Numerically Controlled Tool Operators	2,730	4%	\$19.46	\$22.19	\$24.39	\$30.65	\$35.02	\$26.37	\$54,846	1%
51-9162	Computer Numerically Controlled Tool Programmers	480	6%	\$23.58	\$29.34	\$36.14	\$42.07	\$52.51	\$36.87	\$76,678	1%
53-0000	Transportation and Material Moving Occupations	16,200	2%	\$16.98	\$19.11	\$22.62	\$25.53	\$30.06	\$23.15	\$48,166	0%
53-1047	First-Line Supervisors of Transportation and Material-Moving Workers, Except Aircraft Cargo Handling Supervisors	770	5%	\$22.43	\$24.76	\$30.75	\$38.24	\$44.29	\$32.49	\$67,561	1%
53-2012	Commercial Pilots	20	27%	(3)	(3)	(3)	(3)	(3)	(3)	\$136,794	5%
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,480	4%	\$21.22	\$23.87	\$28.57	\$30.60	\$34.49	\$28.02	\$58,272	1%

Source: Oregon Employment Department, Oregon Wage Information 2024; Oregon Employment Department, Oregon High-Skill Occupations, 2023-2033

NAICS Selection: Employment and wage estimates are based on employers found in the broad sector of manufacturing.

(3) Indicates the estimate is suppressed due to confidentiality or the reliability of the estimate.

(4) Indicates an average hourly wage is not estimated due the occupation not typically working 2,080 hours per year.

*An occupation is considered high-skill if either:

(a) it has a typical educational level needed for entry of postsecondary training (non-degree) or higher;

(b) it has a "typical on-the-job training" level of apprenticeship;

(c) it typically needs related work experience or long-term on-the-job-training for entry, and postsecondary training (non-degree) or above as competitive.

**The relative standard error is a measure of the reliability of a survey statistic. The smaller the relative standard error, the more precise the estimate.

Prepared by: Jason Payton, April 2025