Oregon’s Current Workforce Gaps and Future Workforce Needs

WIOA Statewide Conference
April 10, 2019
Our Vision:
An Oregon where meaningful work enables the state’s diverse people and businesses to realize their full potential, creating prosperity in every community.
Employment in Oregon: What’s Going On?
Unemployment Near Record Lows
Oregon's Unemployment Rate is Close to the U.S. (Bars Represent NBER Recessions)

11.9% in November and December 1982
11.9% in May 2009
4.4% in Feb. 2019
3.8% in Feb. 2019

Source: Oregon Employment Department and National Bureau of Economic Research
One out of five unemployed have been looking for work at least six months.

18,000 Long-Term Unemployed Oregonians
(19% of the Unemployed)

Source: Oregon Employment Department, Local Area Unemployment Statistics
Many counties are near their record low unemployment rates.

Seasonally adjusted unemployment rate was lowest in Benton County (3.4%) and highest in Grant County (8.7%).

Seven of Oregon’s 36 counties have rates at or below the statewide level of 4.4%.

Only three counties have rates at or below the national level of 3.8%.
Many counties are near their record low unemployment rates.

Unemployment Rates in Oregon Counties
Current Rate and Max for 2007-2009 Recession, Seasonally Adjusted

Recession Max
Current
Lowest since 1990
Job Growth Over the Past Year
Oregon's Year-Over-Year Job Growth/Decline seasonally adjusted
Oregon had the 16th Fastest Job Growth of the States
Rank of 12-Month Job Growth, January 2018 to January 2019

- Total nonfarm: 16th
- Total private: 20th
- Mining, logging, and construction: 29th
- Manufacturing: 8th
- Trade, transportation, and utilities: 23rd
- Financial activities: 25th
- Professional and business services: 32th
- Private education and health services: 25th
- Leisure and hospitality: 34th
- Other services: 38th
- Government: 3rd

Oregon's Rank Among the 50 States

Source: Oregon Employment Department and U.S. Bureau of Labor Statistics
East Cascades and Rogue Valley are seeing the fastest job growth.

12-Month Job Growth Rates by Local Workforce Area
February 2018 to February 2019, Seasonally Adjusted
Manufacturing added more jobs than any other sector over the past year.

### Oregon Job Growth and Average Pay by Industry

**February 2018 - February 2019 Job Growth, 2017 Average Pay**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td></td>
<td>$68,157</td>
</tr>
<tr>
<td>Health care and social assistance*</td>
<td></td>
<td>$52,694</td>
</tr>
<tr>
<td>State and local government*</td>
<td></td>
<td>$52,429</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td>$57,998</td>
</tr>
<tr>
<td>Leisure and hospitality</td>
<td></td>
<td>$51,151</td>
</tr>
<tr>
<td>Transportation, warehousing, and utilities</td>
<td></td>
<td>$67,895</td>
</tr>
<tr>
<td>Professional and business services</td>
<td></td>
<td>$67,634</td>
</tr>
<tr>
<td>Financial activities</td>
<td></td>
<td>$70,299</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td></td>
<td>$37,176</td>
</tr>
<tr>
<td>Private educational services</td>
<td></td>
<td>$50,716</td>
</tr>
<tr>
<td>Mining and logging</td>
<td></td>
<td>$74,982</td>
</tr>
<tr>
<td>Federal government</td>
<td></td>
<td>$30,504</td>
</tr>
<tr>
<td>Retail trade</td>
<td></td>
<td>$32,004</td>
</tr>
<tr>
<td>Other services</td>
<td></td>
<td>$80,174</td>
</tr>
<tr>
<td>Information</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Adjusted for home care worker reclassification

Source: Oregon Employment Department
Eighty-seven percent of the jobs added in Oregon last year were in industries with average wages higher than the statewide average of $51,132 per year.

Oregon Job Growth and Average Pay by Industry
February 2018 - February 2019 Job Growth, 2017 Average Pay

*Adjusted for home care worker reclassification
Source: Oregon Employment Department

Support Business · Promote Employment
Oregon’s manufacturing sector added 6,200 jobs over the past year.

Seasonally Adjusted Employment in Oregon
Manufacturing: 1990 - 2019

Job Vacancies!

Support Business ∙ Promote Employment
Metals, machinery, and computer and electronic products are areas of manufacturing seeing a lot of job growth.
Construction continues to be a fast growing sector in Oregon.

Seasonally Adjusted Employment in Oregon
Construction: 1990 - 2019

4,100
Job Vacancies!
Some retailers are cutting jobs, but other areas are expanding, such as miscellaneous store retailers, food stores, and nonstore retailers.

Seasonally Adjusted Employment in Oregon
Retail Trade: 1997 - 2019

6,400
Job Vacancies!
Job losses in transportation, warehousing, and utilities in February.

Seasonally Adjusted Employment in Oregon
Transportation, Warehousing, Utilities: 1997 - 2019

Employment

1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019

50,000
55,000
60,000
65,000
70,000

Job Vacancies!

1,900
Private health care and social assistance added 5,000 jobs over the past year.

**Job gains over the year:**
- Ambulatory: +4,300
- Hospitals: +800
- Nursing and residential: -500
- Social assistance: +1,500

**10,300 Job Vacancies!**

Reclassification of home care workers.
Wage Gains Stalled in 2018
The real average wage of private nonfarm jobs is starting to rise again.

Average Hourly Wages on the Rise
Oregon, 12-Month Moving Average, Adjusted for Inflation

Source: Oregon Employment Department and Bureau of Labor Statistics
Population and Labor Force Trends
Net migration into Oregon is a source of labor force supply. It also grows the economy by increasing the demand for products and services.

Components of Oregon's Annual Population Change

Source: Portland State University, Population Research Center
The labor force participation has been relatively flat in recent months.
Oregon’s Current Workforce Gaps
Oregon had roughly 58,000 job vacancies at any given time in 2018.

We surveyed 13,800 private employers with two or more employees. If they were hiring, employers gave details about each vacancy, including:

- Job title
- Full- or part-time status
- Permanent or temporary status
- Starting wage or salary
- Educational and experience requirements

Businesses also identified if their vacancies were difficult to fill, and if so, they wrote in the primary reason they faced hiring challenges.
## Key Findings

**Snapshot of Oregon's Job Vacancies in 2018**

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Difficult to Fill</th>
<th>Not Difficult to Fill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacancies</td>
<td>57,960</td>
<td>33,023</td>
<td>24,937</td>
</tr>
<tr>
<td>Average Wage</td>
<td>$17.63</td>
<td>$18.76</td>
<td>$15.48</td>
</tr>
<tr>
<td>Full time</td>
<td>79%</td>
<td>80%</td>
<td>78%</td>
</tr>
<tr>
<td>Permanent</td>
<td>89%</td>
<td>91%</td>
<td>88%</td>
</tr>
<tr>
<td>Require education beyond high school</td>
<td>32%</td>
<td>34%</td>
<td>27%</td>
</tr>
<tr>
<td>Require previous experience</td>
<td>54%</td>
<td>67%</td>
<td>38%</td>
</tr>
<tr>
<td>Difficult to fill</td>
<td>57%</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Some occupational vacancies are more difficult to fill than others.

Top Occupations in Oregon
With the Highest Number of Vacancies Reported as Difficult to Fill, 2018

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Vacancies</th>
<th>Difficult to Fill</th>
<th>Share of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Occupations</td>
<td>57,960</td>
<td>33,023</td>
<td>57%</td>
</tr>
<tr>
<td>Personal Care Aides</td>
<td>3,043</td>
<td>2,038</td>
<td>67%</td>
</tr>
<tr>
<td>Heavy and Tractor-Trailer Truck Drivers</td>
<td>1,936</td>
<td>1,664</td>
<td>86%</td>
</tr>
<tr>
<td>Food Preparation Workers</td>
<td>889</td>
<td>806</td>
<td>91%</td>
</tr>
<tr>
<td>Cooks, Restaurant</td>
<td>1,074</td>
<td>724</td>
<td>67%</td>
</tr>
<tr>
<td>Roofers</td>
<td>725</td>
<td>716</td>
<td>99%</td>
</tr>
<tr>
<td>Landscaping and Groundskeeping Workers</td>
<td>756</td>
<td>619</td>
<td>82%</td>
</tr>
<tr>
<td>Retail Salespersons</td>
<td>1,902</td>
<td>610</td>
<td>32%</td>
</tr>
<tr>
<td>Nursing Assistants</td>
<td>1,001</td>
<td>598</td>
<td>60%</td>
</tr>
<tr>
<td>Maids and Housekeeping Cleaners</td>
<td>788</td>
<td>592</td>
<td>75%</td>
</tr>
<tr>
<td>Construction Laborers</td>
<td>807</td>
<td>592</td>
<td>73%</td>
</tr>
<tr>
<td>Farmworkers and Laborers, Crop, Nursery, and Greenhouse</td>
<td>798</td>
<td>591</td>
<td>74%</td>
</tr>
<tr>
<td>Automotive Service Technicians and Mechanics</td>
<td>769</td>
<td>576</td>
<td>75%</td>
</tr>
<tr>
<td>Combined Food Preparation and Serving Workers, Including Fast Food</td>
<td>852</td>
<td>562</td>
<td>66%</td>
</tr>
<tr>
<td>Janitors and Cleaners, Except Maids and Housekeeping Cleaners</td>
<td>1,275</td>
<td>552</td>
<td>43%</td>
</tr>
<tr>
<td>Electricians</td>
<td>563</td>
<td>540</td>
<td>96%</td>
</tr>
</tbody>
</table>
Employer-Provided Reasons for Difficulty Filling Vacancies in Oregon, 2018

- Lack of applicants: 29%
- Unfavorable working conditions: 23%
- Lack of qualified candidates: 16%
- Lack of soft skills: 8%
- Lack of work experience: 7%
- Low wages: 7%
- All other reasons: 10%

Employer-Provided Reasons for Difficulty Filling Vacancies in Oregon, 2018
Why are job vacancies difficult to fill in Oregon?

Some responses illustrate serious workforce issues.

• “No affordable housing in our county.”
• “Finding qualified individuals to work with young children can often be hard to find in a rural area.”
• “Availability of people to do farm work.”
• “Must pass background check and drug screen. Good driving records only.”
Why are job vacancies difficult to fill in Oregon?

Employers can address some issues.

- “Right fit.”
- “Workers leave job for more money.”
- “Can’t find anyone with experience.”
- “Full time work, no one wants 40 hours.”
Why are job vacancies difficult to fill in Oregon?

I love some of these comments.

• “Few applicants that can skate.”
• “Onion fumes.”
• “Hard to find researchers with mouse handling experience.”
• “Difficult and dirty job. Employees don’t last long.”
  – for explosives workers, ordnance handling experts, and blasters.
Education Pays
## Education Pays

<table>
<thead>
<tr>
<th>Percent Unemployed</th>
<th>Education Level</th>
<th>Average Hourly Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3%</td>
<td>Four-Year or Higher Degree</td>
<td>$31.99</td>
</tr>
<tr>
<td>3.4%</td>
<td>Two-Year College Degree</td>
<td>$20.90</td>
</tr>
<tr>
<td>4.0%</td>
<td>Some College, No Degree</td>
<td>$19.35</td>
</tr>
<tr>
<td>4.6%</td>
<td>High School Diploma</td>
<td>$17.80</td>
</tr>
<tr>
<td>6.5%</td>
<td>No High School Diploma</td>
<td>$13.00</td>
</tr>
</tbody>
</table>

# Apprenticeship Pays

<table>
<thead>
<tr>
<th>Cost of Education</th>
<th>Education</th>
<th>Average Hourly Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000 +/-</td>
<td>IBEW Journey Level Electrician</td>
<td>$42.60*</td>
</tr>
<tr>
<td>$12,000 +/-</td>
<td>4-Year or higher degree</td>
<td>$30.75</td>
</tr>
<tr>
<td>$100,000 - $4,000 +/-</td>
<td>2-Year degree</td>
<td>$19.95</td>
</tr>
<tr>
<td>$0</td>
<td>Some college, no degree</td>
<td>$18.45</td>
</tr>
<tr>
<td>$0</td>
<td>High School Diploma</td>
<td>$16.95</td>
</tr>
</tbody>
</table>

*Minimum hourly wage - guaranteed by union contract

Industry-funded scholarship for tuition, books, and hand tools
Credit through Mount Hood Community College toward an AA
Employer paid benefits of $23.25 per hour on top of wages

www.nietc.org

IBEW 48
NECA
# Apprenticeship Pays

<table>
<thead>
<tr>
<th>Cost of Education</th>
<th>Education</th>
<th>Average Hourly Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000 +/-</td>
<td>Admission</td>
<td>$42.60*</td>
</tr>
<tr>
<td>$12,000 +/-</td>
<td>4-Year or higher degree</td>
<td>$30.75</td>
</tr>
<tr>
<td>$100,000 - $4,000 +/-</td>
<td>2-Year degree</td>
<td>$19.95</td>
</tr>
<tr>
<td>$0</td>
<td>Some college, no degree</td>
<td>$18.45</td>
</tr>
<tr>
<td></td>
<td>High School Diploma</td>
<td>$16.95</td>
</tr>
</tbody>
</table>

*Minimum hourly wage - guaranteed by union contract

- Industry-funded scholarship for tuition, books, and hand tools
- Credit through Mount Hood Community College toward an AA
- Employer paid benefits of $23.25 per hour on top of wages

Source: www.nietc.org
Higher paying difficult-to-fill job vacancies require candidates with education and experience.

### Characteristics of Difficult-to-Fill Vacancies by Education Level Requirement, 2018

<table>
<thead>
<tr>
<th>Education Level Requirement</th>
<th>Vacancies</th>
<th>Average wage</th>
<th>Full time</th>
<th>Permanent</th>
<th>Require previous experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Education Levels</td>
<td>33,023</td>
<td>$18.76</td>
<td>80%</td>
<td>91%</td>
<td>67%</td>
</tr>
<tr>
<td>No requirement</td>
<td>9,926</td>
<td>$14.25</td>
<td>77%</td>
<td>80%</td>
<td>43%</td>
</tr>
<tr>
<td>High school or equivalent</td>
<td>11,676</td>
<td>$15.82</td>
<td>78%</td>
<td>97%</td>
<td>67%</td>
</tr>
<tr>
<td>Postsecondary or other certification</td>
<td>8,359</td>
<td>$24.53</td>
<td>80%</td>
<td>94%</td>
<td>86%</td>
</tr>
<tr>
<td>Bachelor’s or advanced degree</td>
<td>2,770</td>
<td>$33.14</td>
<td>92%</td>
<td>96%</td>
<td>99%</td>
</tr>
<tr>
<td>Unknown</td>
<td>292</td>
<td>$19.03</td>
<td>79%</td>
<td>86%</td>
<td>52%</td>
</tr>
</tbody>
</table>
Is A Recession Coming?
Planning for the Next Downturn

Q: Is a recession coming?
Me: Yes.

Q: When?
Me: I don’t know. But I am paying attention. Let’s look at some data.
Future Workforce Needs (through the year 2027)
Projecting Oregon’s Future Workforce Needs

• Oregon to add 246,000 new jobs by 2027.
  – 12% job growth rate over 10 years.

• For every one new job added, Oregon employers will have another nine job openings requiring newly trained workers.
  – Replacing those who leave the labor force or change occupations.

• Projections take into account expected workforce changes due to automation, due to new and emerging occupations.
Health care leads future job growth in Oregon.

Private health care and social assistance accounts for one-fifth of all new jobs by 2027.

Construction will be the second-fastest growing sector (17%).

Federal government is the only broad sector expected to decline.
Widespread job opportunities are expected across Oregon’s economy.

2017-2027 Average Annual Openings by Industry in Oregon

- Health Care and Social Assistance
- Retail Trade
- Manufacturing
- Accommodation and Food Services
- Educational Services
- Construction
- Professional, Scientific, and Technical Services
- Administrative Support and Waste Management
- Local Government, Excluding Education and Hospitals
- Other Services
- Wholesale Trade
- Transportation, Warehousing, and Utilities
- Natural Resources and Mining
- Finance and Insurance
- State Government, Excluding Education and Hospitals
- Management of Companies and Enterprises
- Real Estate and Rental and Leasing
- Information
- Arts, Entertainment, and Recreation
- Federal Government
## Fastest-Growing Occupations in Oregon, 2017-2027

(Minimum of 1,000 jobs in 2017)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2017 Employment</th>
<th>Percent Change</th>
<th>Annual Openings</th>
<th>Typical Entry-Level Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician Assistants</td>
<td>1,299</td>
<td>39.1%</td>
<td>133</td>
<td>Master's degree</td>
</tr>
<tr>
<td>Home Health Aides</td>
<td>6,316</td>
<td>35.2%</td>
<td>1,048</td>
<td>Less than high school</td>
</tr>
<tr>
<td>Nurse Practitioners</td>
<td>1,762</td>
<td>34.9%</td>
<td>160</td>
<td>Master's degree</td>
</tr>
<tr>
<td>Operations Research Analysts</td>
<td>1,127</td>
<td>34.2%</td>
<td>115</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Software Developers, Applications</td>
<td>13,253</td>
<td>32.6%</td>
<td>1,400</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Health Specialties Teachers, Postsecondary</td>
<td>3,812</td>
<td>30.5%</td>
<td>445</td>
<td>Master's degree</td>
</tr>
<tr>
<td>Veterinary Assistants and Laboratory Animal Caretakers</td>
<td>1,572</td>
<td>29.4%</td>
<td>319</td>
<td>High school diploma or equivalent</td>
</tr>
<tr>
<td>Market Research Analysts and Marketing Specialists</td>
<td>5,914</td>
<td>29.2%</td>
<td>817</td>
<td>Bachelor's degree</td>
</tr>
<tr>
<td>Health Diagnosing and Treating Practitioners, All Other</td>
<td>1,406</td>
<td>29.0%</td>
<td>121</td>
<td>Doctoral or professional degree</td>
</tr>
<tr>
<td>Veterinary Technologists and Technicians</td>
<td>1,834</td>
<td>29.0%</td>
<td>214</td>
<td>Associate's degree</td>
</tr>
</tbody>
</table>
New and Emerging Occupations

Fast growing smaller occupations (fewer than 1,000 jobs in 2017):

- **Wind Turbine Service Technicians**: 74 percent growth; 11 annual openings
- **Cartographers and Photogrammetrists**: 39 percent growth; 63 annual openings
- **Statisticians**: 38 percent growth; 73 annual openings
- **Information Security Analysts**: 32 percent growth; 73 annual openings
At the typical entry-level education, almost one-third of projected openings require education beyond high school.

Total Projected Openings by Typical Entry-Level Education, 2017-2027

- Less than high school: 36%
- High school diploma or equivalent: 35%
- Postsecondary training (non-degree): 8%
- Associate's degree: 2%
- Bachelor's degree: 16%
- Master's degree: 2%
- Doctoral or professional degree: 1%

Support Business ∙ Promote Employment
At the competitive level, nearly half of projected job openings require education beyond high school.

Total Projected Openings by Competitive Education, 2017-2027

- High school diploma or equivalent: 51%
- Postsecondary training (non-degree): 19%
- Associate's degree: 7%
- Bachelor's degree: 15%
- Master's degree: 6%
- Doctoral or professional degree: 2%
- Total: 100%
And over 90 percent of job openings that typically pay high wages require some type of education past high school to be competitive.

Total Projected Openings for High-Wage Occupations by Competitive Education level, 2017-2027

- High school diploma or equivalent: 7%
- Postsecondary or Associate's degree: 38%
- Bachelor's degree or Higher: 55%
- Total Projected Openings for High-Wage Occupations: 100%
Regional Employment Projections, 2017–2027

Oregon = 12%

This map doesn’t include the expected job opportunities through replacement openings.

Rural areas will have more jobs opportunities than this map suggests due to expected replacement openings.
Automation

Technology will destroy some jobs and create new ones.

Source: The Funny Times
Automation

• Occupational projections already account for technological impacts on jobs:
  o Manufacturing – automation and efficiency gains
  o Retail Trade – online shopping and self-checkout
  o Information – less print and more web publishing
  o Leisure and hospitality – ordering food, booking hotels online
Automation

• Change also depends on social acceptance and policy.
Thanks For Your Time!
Nick Beleiciks, State Employment Economist
Nick.J.Beleiciks@Oregon.gov
503-947-1267

Get the latest workforce and economic research delivered to your inbox!
Sign up at https://www.qualityinfo.org/p-sofrm/

Join the conversation:
OregonEmployment.Blogspot.com
Twitter @OED_Research