



For Release: Tuesday, May 23, 2017

17-681-SAN

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## Occupational Employment and Wages in Portland-Vancouver-Hillsboro — May 2016

Workers in the Portland-Vancouver-Hillsboro Metropolitan Statistical Area had an average (mean) hourly wage of \$25.94 in May 2016, about 9 percent above the nationwide average of \$23.86, according to the U.S. Bureau of Labor Statistics. Assistant Commissioner for Regional Operations Richard Holden noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 13 of the 22 major occupational groups, including healthcare practitioners and technical; healthcare support; and construction and extraction. Five groups had significantly lower wages than their respective national averages, including legal; management; and life, physical, and social science.

When compared to the nationwide distribution, local employment was more highly concentrated in 8 of the 22 occupational groups, including management; architecture and engineering; and computer and mathematical. Conversely, 10 groups had employment shares significantly below their national representation, including office and administrative support; transportation and material moving; and installation, maintenance, and repair. (See [table A](#) and [box note](#) at end of release.)

**Table A. Occupational employment and wages by major occupational group, United States and the Portland-Vancouver-Hillsboro Metropolitan Statistical Area, and measures of statistical significance, May 2016**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Portland	United States	Portland	Percent difference <sup>(1)</sup>
Total, all occupations .....	100.0	100.0	\$23.86	\$25.94*	9
Management .....	5.1	6.8*	56.74	53.83*	-5
Business and financial operations .....	5.2	5.6*	36.09	34.63*	-4
Computer and mathematical .....	3.0	3.8*	42.25	41.26	-2
Architecture and engineering .....	1.8	3.2*	40.53	43.06	6
Life, physical, and social science .....	0.8	1.0*	35.06	32.51*	-7
Community and social service .....	1.4	1.8*	22.69	23.01	1
Legal .....	0.8	0.7*	50.95	45.63*	-10
Education, training, and library .....	6.2	5.7*	26.21	28.93	10
Arts, design, entertainment, sports, and media .....	1.4	1.8*	28.07	26.29*	-6
Healthcare practitioners and technical .....	5.9	5.5*	38.06	43.07*	13
Healthcare support .....	2.9	2.5*	14.65	17.42*	19
Protective service .....	2.4	1.7*	22.03	24.24*	10
Food preparation and serving related .....	9.2	9.1	11.47	12.43*	8
Building and grounds cleaning and maintenance .....	3.2	2.7*	13.47	14.81*	10
Personal care and service .....	3.2	3.3	12.74	13.81*	8
Sales and related .....	10.4	10.0*	19.50	20.03*	3
Office and administrative support .....	15.7	14.6*	17.91	18.93*	6
Farming, fishing, and forestry .....	0.3	0.3	13.37	15.81*	18

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and the Portland-Vancouver-Hillsboro Metropolitan Statistical Area, and measures of statistical significance, May 2016 - Continued**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Portland	United States	Portland	Percent difference <sup>(1)</sup>
Construction and extraction.....	4.0	4.2*	23.51	26.16*	11
Installation, maintenance, and repair .....	3.9	3.2*	22.45	23.69*	6
Production .....	6.5	6.3	17.88	18.69*	5
Transportation and material moving .....	6.9	6.1*	17.34	18.55*	7

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Portland-Vancouver-Hillsboro Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.

\* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—architecture and engineering—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Portland-Vancouver-Hillsboro had 35,940 jobs in architecture and engineering, accounting for 3.2 percent of local area employment, significantly higher than the 1.8-percent share nationally. The average hourly wage for this occupational group locally was \$43.06, compared to the national wage of \$40.53.

Some of the larger detailed occupations within the architecture and engineering group included mechanical engineers (3,650), industrial engineers (3,530), and civil engineers (3,210). Among the higher paying jobs were industrial engineers, and marine engineers and naval architects, with mean hourly wages of \$49.59 and \$46.35, respectively. At the lower end of the wage scale were architectural and civil drafters (\$25.33) and surveying and mapping technicians (\$25.90). (Detailed occupational data for architecture and engineering are presented in [table 1](#); for a complete listing of detailed occupations available go to [www.bls.gov/oes/2016/may/oes\\_38900.htm](http://www.bls.gov/oes/2016/may/oes_38900.htm) .)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Portland-Vancouver-Hillsboro Metropolitan Statistical Area, above-average concentrations of employment were found in many of the occupations within the architecture and engineering group. For instance, electro-mechanical technicians were employed at 5.4 times the national rate in Portland, and industrial engineers, at 1.7 times the U.S. average. On the other hand, architectural and civil drafters had a location quotient of 1.0 in Portland, indicating that this particular occupation’s local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Oregon Employment Department.

## Notes on Occupational Employment Statistics Data

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

### Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES data available from BLS include cross-industry occupational employment and wage estimates for the nation; over 650 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), metropolitan divisions, nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-, 4-, and selected 5- and 6-digit industry levels, and national estimates by ownership across all industries and for schools and hospitals. OES data are available at [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.htm).

OES estimates are constructed from a sample of about 1.2 million establishments. Each year, two semiannual panels of approximately 200,000 sampled establishments are contacted, one panel in May and the other in November. Responses are obtained by mail, Internet or other electronic means, email, telephone, or personal visit. The May 2016 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2016, November 2015, May 2015, November 2014, May 2014, and November 2013. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 73 percent based on establishments and 69 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Portland-Vancouver-Hillsboro Metropolitan Statistical Area included 7,346 establishments with a response rate of 74 percent. For more information about OES concepts and methodology, go to [www.bls.gov/news.release/ocwage.tn.htm](http://www.bls.gov/news.release/ocwage.tn.htm).

The May 2016 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at [www.bls.gov/soc](http://www.bls.gov/soc) and information about the 2012 NAICS is available at [www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm).

### Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Portland-Vancouver-Hillsboro, Ore. Metropolitan Statistical Area** includes Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties of Oregon and Clark and Skamania Counties of Washington.

### Additional information

OES data are available on our regional web page at [www.bls.gov/regions/west](http://www.bls.gov/regions/west). Answers to frequently asked questions about the OES data are available at [www.bls.gov/oes/oes\\_ques.htm](http://www.bls.gov/oes/oes_ques.htm). Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at [www.bls.gov/oes/current/methods\\_statement.pdf](http://www.bls.gov/oes/current/methods_statement.pdf).

Information in this release will be made available to sensory impaired individuals upon request . Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Portland-Vancouver-Hillsboro Metropolitan Statistical Area, May 2016**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Architecture and engineering occupations .....	35,940	1.8	\$43.06	\$89,570
Architects, except landscape and naval .....	1,360	1.7	36.35	75,610
Landscape architects .....	410	2.6	27.91	58,060
Cartographers and photogrammetrists.....	330	3.4	29.86	62,100
Surveyors .....	380	1.1	34.27	71,290
Aerospace engineers .....	40	0.1	46.08	95,850
Biomedical engineers .....	300	1.8	43.80	91,100
Chemical engineers.....	120	0.5	45.70	95,060
Civil engineers.....	3,210	1.4	40.57	84,400
Electrical engineers .....	2,390	1.6	44.74	93,070
Electronics engineers, except computer .....	1,610	1.5	46.27	96,240
Environmental engineers.....	550	1.3	42.86	89,160
Health and safety engineers, except mining safety engineers and inspectors .....	110	0.6	42.74	88,890
Industrial engineers .....	3,530	1.7	49.59	103,140
Marine engineers and naval architects.....	30	0.5	46.35	96,420
Mechanical engineers .....	3,650	1.6	41.72	86,770
Engineers, all other .....	2,110	2.1	48.33	100,540
Architectural and civil drafters .....	800	1.0	25.33	52,680
Electrical and electronics drafters .....	390	1.8	27.18	56,540
Mechanical drafters .....	660	1.3	31.32	65,150
Drafters, all other.....	680	5.4	25.72	53,510
Civil engineering technicians.....	480	0.8	29.70	61,770
Electro-mechanical technicians.....	600	5.4	31.02	64,520
Environmental engineering technicians.....	170	1.2	29.33	61,000
Industrial engineering technicians .....	580	1.1	29.01	60,330
Mechanical engineering technicians .....	420	1.2	26.18	54,460
Engineering technicians, except drafters, all other .....	840	1.4	26.89	55,930
Surveying and mapping technicians.....	480	1.1	25.90	53,870

Footnotes:

(1) For a complete listing of all detailed occupations in the Portland-Vancouver-Hillsboro Metropolitan Statistical Area, see [www.bls.gov/oes/current/oes\\_38900.htm](http://www.bls.gov/oes/current/oes_38900.htm)

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.