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Occupational Employment and Wages in Philadelphia-Camden-Wilmington – May 2018

Workers in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area had an average (mean) hourly wage of \$27.01 in May 2018, 8 percent above the nationwide average of \$24.98, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that after testing for statistical significance, wages in the local area were higher from their respective national averages in 13 of the 22 major occupational groups, including construction and extraction; management; and life, physical, and social science.

When compared to the nationwide distribution, local employment shares were significantly higher in 11 of the 22 occupational groups, including office and administrative support, healthcare practitioners and technical, and business and financial operations. Conversely, 11 groups had employment shares significantly below their national representation; these groups included production, construction and extraction, and food preparation and serving related. (See [table A](#) and box note at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Philadelphia-Camden-Wilmington Metropolitan Statistical Area, and measures of statistical significance, May 2018

Major occupational group	Percent of total employment			Mean hourly wage			Percent difference ⁽¹⁾
	United States	Philadelphia		United States	Philadelphia		
Total, all occupations	100	100		\$24.98	\$27.01	*	8
Management	5.3	4.9	*	58.44	67.88	*	16
Business and financial operations	5.3	6.1	*	36.98	39.08	*	6
Computer and mathematical	3.0	3.5	*	44.01	44.14		0
Architecture and engineering	1.8	1.7	*	42.01	43.37	*	3
Life, physical, and social science	0.8	1.1	*	36.62	41.37	*	13
Community and social service	1.5	2.0	*	23.69	23.09	*	-3
Legal	0.8	1.1	*	52.25	54.52		4
Education, training, and library	6.1	6.4	*	27.22	30.26	*	11
Arts, design, entertainment, sports, and media	1.3	1.1	*	28.74	27.45	*	-4
Healthcare practitioners and technical	6.0	6.9	*	39.42	41.03	*	4
Healthcare support	2.8	3.6	*	15.57	15.41		-1
Protective service	2.4	2.5	*	23.36	22.77		-3
Food preparation and serving related	9.2	8.3	*	12.30	12.53	*	2
Building and grounds cleaning and maintenance	3.1	2.8	*	14.43	15.32	*	6
Personal care and service	3.8	4.5	*	13.51	13.50		0
Sales and related	10.0	9.7	*	20.09	22.26	*	11
Office and administrative support	15.1	16.3	*	18.75	19.80	*	6

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and the Philadelphia-Camden-Wilmington Metropolitan Statistical Area, and measures of statistical significance, May 2018 - Continued

Major occupational group	Percent of total employment			Mean hourly wage			Percent difference ⁽¹⁾
	United States	Philadelphia		United States	Philadelphia		
Farming, fishing, and forestry.....	0.3	0.1	*	14.49	15.41		6
Construction and extraction.....	4.1	3.1	*	24.62	29.36	*	19
Installation, maintenance, and repair	3.9	3.4	*	23.54	25.23	*	7
Production	6.3	4.2	*	18.84	20.44	*	8
Transportation and material moving.....	7.1	6.8	*	18.41	18.02		-2

Footnotes:

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

* The mean hourly wage or percent share of employment 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. Philadelphia had 47,480 jobs in the architecture and engineering occupations, accounting for 1.7 percent of local area employment, significantly lower than the 1.8-percent share nationally. The average hourly wage for this occupational group locally was \$43.37, 3 percent above the national average of \$42.01.

With employment of 6,350, mechanical engineers was the largest detailed occupation within architecture and engineering, followed by civil engineers (4,940). Among the higher-paying jobs in this group were chemical engineers with a mean hourly wage of \$57.77 and aerospace engineers with a wage of \$55.59. At the lower end of the wage scale were environmental engineering technicians (\$22.44) and surveying and mapping technicians (\$23.71). (Detailed occupational data for life, physical, and social science are presented in [table 1](#); for a complete listing of detailed occupations available go to https://www.bls.gov/oes/current/oes_37980.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 as it does nationally. In the Philadelphia area, above-average concentrations of employment were found in several of the occupations within the architecture and engineering group. For instance, chemical engineers were employed at 2.3 times the national rate in Philadelphia, and aerospace engineers at 2.5 times the U.S. average. On the other hand, electrical and electronics drafters had a location quotient of 1.0 in Philadelphia, 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 Pennsylvania Department of Labor and Industry; the New Jersey Department of Labor and Workforce Development; the Delaware Department of Labor; and the Maryland Department of Labor, Licensing, and Regulation.

Area Changes to the May 2018 Occupational Employment Statistics (OES)

OES continues to publish data for metropolitan and nonmetropolitan areas that cover the full geography of the United States. However, the level of detail available has decreased.

OES no longer publishes data for metropolitan divisions. Data for the 11 large metropolitan areas that contain divisions are now available at the Metropolitan Statistical Area (MSA) or New England City and Town Area (NECTA) level only.

In addition, some smaller nonmetropolitan areas have been combined to form larger nonmetropolitan areas. The May 2018 OES estimates contain data for 134 nonmetropolitan areas, compared with 167 nonmetropolitan areas in the May 2017 estimates.

More information on these changes is available at www.bls.gov/oes/areas_2018.htm.

Implementing the 2018 Standard Occupational Classification (SOC) System

The OES program plans to begin implementing the 2018 Standard Occupational Classification (SOC) system with the May 2019 estimates, to be released by early April of 2020. Because each set of OES estimates is produced by combining three years of survey data, estimates for May 2019 and May 2020 will be based on a combination of survey data collected under the 2010 SOC and data collected under the 2018 SOC, and will use a hybrid of the two classification systems. The May 2021 OES estimates, to be released by early April of 2022, will be the first set of estimates based fully on the 2018 SOC. For more information, please see www.bls.gov/oes/soc_2018.htm.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual 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 580 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-digit, most 4-digit, 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.

The OES survey is a cooperative effort between BLS and State Workforce Agencies (SWAs). BLS funds the survey and provides the procedures and technical support, while the State Workforce Agencies collect most of the data. OES estimates are constructed from a sample of about 1.2 million establishments. Each year, two semiannual panels of approximately 180,000 to 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 2018 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2018, November 2017, May 2017, November 2016, May 2016, and November 2015. The unweighted sample employment of 83 million across all six semiannual panels represents approximately 58 percent of total national employment. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 71 percent based on establishments and 68

percent based on weighted sampled employment. The sample in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area included 16,296 establishments with a response rate of 69 percent. For more information about OES concepts and methodology, go to www.bls.gov/oes/current/oes_tec.htm.

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 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.

The May 2018 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2017 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at www.bls.gov/soc and information about the 2017 NAICS is available at 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 **Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metropolitan Statistical Area** includes Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in Pennsylvania; Burlington, Camden, Gloucester, and Salem Counties in New Jersey; New Castle County in Delaware; and Cecil County in Maryland.

Additional information

OES data are available on our regional web page at www.bls.gov/regions/mid-atlantic. Answers to frequently asked questions about the OES data are available at 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.

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, Philadelphia-Camden-Wilmington Metropolitan Statistical Area, May 2018

Occupation ⁽¹⁾	Employment ⁽²⁾		Mean wage	
	Level	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Architecture and engineering occupations	47,480	0.9	\$43.37	\$90,220
Architects, except landscape and naval	2,780	1.4	39.48	82,110
Landscape architects	490	1.3	32.72	68,050
Cartographers and photogrammetrists.....	40	0.2	34.94	72,680
Surveyors	560	0.6	32.10	66,780
Aerospace engineers	3,200	2.5	55.59	115,630
Biomedical engineers	(5)	(5)	37.16	77,290
Chemical engineers.....	1,460	2.3	57.77	120,150
Civil engineers.....	4,940	0.8	45.33	94,280
Computer hardware engineers.....	480	0.4	52.25	108,680
Electrical engineers.....	4,250	1.2	50.59	105,220
Electronics engineers, except computer	2,010	0.8	49.41	102,770
Environmental engineers.....	1,190	1.1	44.69	92,950
Health and safety engineers, except mining safety engineers and inspectors	840	1.6	55.56	115,560
Industrial engineers.....	4,220	0.8	46.29	96,290
Marine engineers and naval architects.....	80	0.4	43.04	89,530
Materials engineers.....	450	0.8	47.69	99,200
Mechanical engineers	6,350	1.1	43.83	91,170
Nuclear engineers	(5)	(5)	55.22	114,860
Petroleum engineers	220	0.3	69.47	144,500
Engineers, all other	2,860	1.0	50.20	104,410
Architectural and civil drafters	1,700	0.9	26.54	55,200
Electrical and electronics drafters	470	1.0	33.19	69,030
Mechanical drafters.....	990	0.9	30.10	62,600
Drafters, all other.....	120	0.4	26.45	55,010
Aerospace engineering and operations technicians	50	0.3	41.63	86,590
Civil engineering technicians.....	920	0.7	26.91	55,970
Electrical and electronics engineering technicians.....	1,780	0.7	28.88	60,080
Electro-mechanical technicians.....	120	0.5	27.55	57,300
Environmental engineering technicians.....	450	1.3	22.44	46,670
Industrial engineering technicians	800	0.6	29.70	61,770
Mechanical engineering technicians	880	1.1	24.42	50,800
Engineering technicians, except drafters, all other	1,150	0.7	32.92	68,470
Surveying and mapping technicians.....	280	0.3	23.71	49,310

Footnotes:

(1) For a complete listing of all detailed occupations in the Philadelphia-Camden-Wilmington Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_37980.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.

(5) Estimates not available.