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Occupational Employment and Wages in Virginia Beach-Norfolk-Newport News – May 2016

Workers in the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area had an average (mean) hourly wage of \$22.34 in May 2016, 6 percent below the nationwide average of \$23.86, 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 significantly lower than their respective national averages in 14 of the 22 major occupational groups, including legal; sales and related; and arts, design, entertainment, sports, and media. The transportation and material moving occupational group had an average hourly wage that was significantly higher than the national average.

When compared to the nationwide distribution, local employment shares were significantly higher in 8 of the 22 occupational groups including architecture and engineering; sales and related; and construction and extraction. Conversely, seven groups had employment shares significantly below their national representation; these groups included production; management; and office and administrative support. (See [table A](#) and box note at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area, and measures of statistical significance, May 2016

Major occupational group	Percent of total employment			Mean hourly wage			Percent difference (1)
	United States	Virginia Beach		United States	Virginia Beach		
Total, all occupations	100.0	100.0		\$23.86	\$22.34	*	-6
Management	5.1	3.6	*	56.74	55.18	*	-3
Business and financial operations	5.2	5.4	*	36.09	35.12	*	-3
Computer and mathematical	3.0	3.0		42.25	39.73	*	-6
Architecture and engineering	1.8	2.9	*	40.53	38.82	*	-4
Life, physical, and social science	0.8	0.8		35.06	33.05	*	-6
Community and social service	1.4	1.6	*	22.69	22.14		-2
Legal	0.8	0.6	*	50.95	37.19	*	-27
Education, training, and library	6.2	6.2		26.21	25.43		-3
Arts, design, entertainment, sports, and media	1.4	1.1	*	28.07	23.17	*	-17
Healthcare practitioners and technical	5.9	5.8		38.06	36.62		-4
Healthcare support	2.9	2.8		14.65	13.98	*	-5
Protective service	2.4	2.6	*	22.03	20.62	*	-6
Food preparation and serving related	9.2	9.9	*	11.47	11.44		0
Building and grounds cleaning and maintenance	3.2	3.2		13.47	12.29	*	-9
Personal care and service	3.2	3.4		12.74	11.62	*	-9
Sales and related	10.4	11.5	*	19.50	15.92	*	-18
Office and administrative support	15.7	14.9	*	17.91	17.27	*	-4

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area, and measures of statistical significance, May 2016 - Continued

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Virginia Beach		United States	Virginia Beach		Percent difference (1)
Farming, fishing, and forestry	0.3	0.1	*	13.37	13.40		0
Construction and extraction	4.0	4.9	*	23.51	20.63	*	-12
Installation, maintenance, and repair	3.9	4.5	*	22.45	22.28		-1
Production	6.5	4.8	*	17.88	19.28		8
Transportation and material moving	6.9	6.5	*	17.34	17.86	*	3

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Virginia Beach-Norfolk-Newport News 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. Virginia Beach had 21,580 jobs in architecture and engineering, accounting for 2.9 percent of local area employment, significantly larger than the 1.8-percent share nationally. The average hourly wage for this occupational group locally was \$38.82, significantly less than the national wage of \$40.53.

Some of the larger detailed occupations within the architecture and engineering group included electrical and electronics engineering technicians (2,040) and civil engineers (1,950). Among the higher-paying jobs were aerospace engineers and computer hardware engineers, with mean hourly wages of \$55.13 and \$53.09, respectively. At the lower end of the wage scale were surveying and mapping technicians (\$20.54) and architectural and civil drafters (\$23.85). (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/current/oes_47260.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 Virginia Beach area, above-average concentrations of employment were found in several of the occupations within the architecture and engineering group. For instance, nuclear engineers were employed at 16.8 times the national rate in Virginia Beach, and marine engineers and naval architects at 21.3 times the U.S. average. On the other hand, architects, except landscape and naval, had a location quotient of 1.0 in Virginia Beach, 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 Virginia Employment Commission and the North Carolina Department of Commerce.

Note 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 program produces employment and wage estimates for over 800 occupations for all industries combined in the nation; the 50 states and the District of Columbia; 432 metropolitan areas and divisions; 167 nonmetropolitan areas; and Guam, Puerto Rico, and the U.S. Virgin Islands. National estimates are also available by industry for NAICS sectors, 3-, 4-, and selected 5- and 6-digit industries, and by ownership across all industries and for schools and hospitals. OES data are available at www.bls.gov/oes/tables.htm.

OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. 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 Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area included 4,443 establishments with a response rate of 69 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The May 2015 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 and information about the 2012 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 **Virginia Beach-Norfolk-Newport News, Va.-N.C. Metropolitan Statistical Area** includes Gloucester, Isle of Wight, James City, Mathews, Surry, and York Counties and Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg cities in Virginia and Currituck County in North Carolina.

Additional information

OES data are available on our regional web page at <https://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, Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area, May 2016

Occupation ⁽¹⁾	Employment ⁽²⁾		Mean wage	
	Level	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Architecture and engineering occupations	21,580	1.6	\$38.82	\$80,730
Architects, except landscape and naval	520	1.0	37.79	78,600
Landscape architects	40	0.4	31.54	65,590
Cartographers and photogrammetrists	70	1.1	30.76	63,990
Surveyors	230	1.0	36.11	75,100
Aerospace engineers	810	2.2	55.13	114,670
Biomedical engineers	(5)	(5)	37.61	78,220
Chemical engineers	120	0.7	51.87	107,890
Civil engineers	1,950	1.3	41.97	87,300
Computer hardware engineers	220	0.6	53.09	110,430
Electrical engineers	1,420	1.5	42.89	89,200
Electronics engineers, except computer	1,230	1.8	43.55	90,580
Environmental engineers	290	1.1	42.82	89,060
Health and safety engineers, except mining safety engineers and inspectors	130	0.9	38.30	79,660
Industrial engineers	740	0.6	41.35	86,000
Marine engineers and naval architects	910	21.3	45.12	93,840
Materials engineers	130	0.9	51.01	106,100
Mechanical engineers	1,880	1.3	42.47	88,340
Nuclear engineers	1,560	16.8	39.00	81,120
Engineers, all other	1,360	2.1	46.97	97,700
Architectural and civil drafters	310	0.6	23.85	49,610
Electrical and electronics drafters	130	0.9	30.01	62,430
Drafters, all other	(5)	(5)	30.25	62,920
Aerospace engineering and operations technicians	(5)	(5)	33.25	69,160
Civil engineering technicians	370	1.0	25.02	52,030
Electrical and electronics engineering technicians	2,040	2.9	32.58	67,760
Electro-mechanical technicians	330	4.6	25.71	53,480
Environmental engineering technicians	80	1.0	21.20	44,100
Industrial engineering technicians	310	0.9	28.06	58,370
Mechanical engineering technicians	410	1.7	26.72	55,580
Engineering technicians, except drafters, all other	2,140	5.5	35.74	74,340
Surveying and mapping technicians	300	1.1	20.54	42,720

Footnotes:

- (1) For a complete listing of all detailed occupations in the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_47260.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 released.