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Occupational Employment and Wages in Virginia Beach-Norfolk-Newport News – May 2017

Workers in the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area had an average (mean) hourly wage of $22.79 in May 2017, 6 percent below the nationwide average of $24.34, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that, after testing for statistical significance, 15 of the 22 major occupational groups in the local area had average wages that were significantly lower than their respective national averages, including legal; arts, design, entertainment, sports, and media; and sales and related. The production occupational group had an average hourly wage that was measurably higher than the national average.

When compared to the nationwide distribution, local employment shares were significantly higher in 7 of the 22 occupational groups including architecture and engineering, sales and related, and construction and extraction. Conversely, six 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 2017

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Virginia Beach		United States	Virginia Beach		Percent difference [1]
Total, all occupations	100	100		$24.34	$22.79	*	-6
Management	5.1	3.5	*	57.65	56.07	*	-3
Business and financial operations	5.2	5.6	*	36.70	35.80	*	-2
Computer and mathematical	3.0	2.9		43.18	40.20	*	-7
Architecture and engineering	1.8	2.9	*	41.44	39.18	*	-5
Life, physical, and social science	0.8	0.8		35.76	33.73	*	-6
Community and social service	1.5	1.5		23.10	23.34		1
Legal	0.8	0.6	*	51.62	37.49	*	-27
Education, training, and library	6.1	6.0		26.67	27.75		4
Arts, design, entertainment, sports, and media	1.4	1.1	*	28.34	23.42	*	-17
Healthcare practitioners and technical	6.0	5.9		38.83	37.15	*	-4
Healthcare support	2.9	2.8		15.05	15.26		1
Protective service	2.4	2.8	*	22.69	20.47	*	-10
Food preparation and serving related	9.3	9.6	*	11.88	11.17	*	-6
Building and grounds cleaning and maintenance	3.1	3.2		13.91	12.16	*	-13
Personal care and service	3.6	3.7		13.11	12.05	*	-8
Sales and related	10.2	11.3	*	19.56	16.27	*	-17
Office and administrative support	15.4	14.7	*	18.24	17.40	*	-5

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 2017 - 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	*	13.87	14.61		5
Construction and extraction	4.0	5.0	*	24.01	21.18	*	-12
Installation, maintenance, and repair	3.9	4.6	*	23.02	23.06		0
Production	6.3	4.6	*	18.30	19.85	*	8
Transportation and material moving	7.0	6.8		17.82	17.80		0
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.							

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.

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 21,800 jobs in architecture and engineering, accounting for 2.9 percent of local area employment, significantly higher than the 1.8-percent share nationally. The average hourly wage for this occupational group locally was $39.18, significantly less than the national wage of $41.44.

Some of the larger detailed occupations within the architecture and engineering group included electrical and electronics engineering technicians (2,250) and civil engineers (2,120). Among the higher-paying jobs in this group were aerospace engineers and computer hardware engineers, with mean hourly wages of $56.54 and $51.16, respectively. At the lower end of the wage scale were surveying and mapping technicians ($19.93) and architectural and civil drafters ($25.34). (Detailed data for architecture and engineering occupations 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, electro-mechanical technicians were employed at 4.1 times the national rate in Virginia Beach, and marine engineers and naval architects at 16.9 times the U.S. average. On the other hand, architects, except landscape and naval, had a location quotient of 1.1 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

With the release of the May 2017 estimates, the OES program has replaced 21 detailed occupations found in the 2010 Standard Occupational Classification (SOC) with 10 new aggregations of those occupations. In addition, selected 4- and 5-digit North American Industry Classification System (NAICS) industries previously published by OES will no longer be published separately. Some of the 4-digit NAICS industries that are no longer being published separately will instead be published as OES-specific industry aggregations. More information about the new occupational and industry aggregations is available at www.bls.gov/oes/changes_2017.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 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 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.

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 2017 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2017, November 2016, May 2016, November 2015, May 2015, and November 2014. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 72 percent based on establishments and 68 percent based on weighted sampled employment. The unweighted sample employment of 82 million across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Virginia Beach Metropolitan Statistical Area included 4,375 establishments with a response rate of 68 percent. For more information about OES concepts and methodology, go to www.bls.gov/oes/current/oes_tec.htm.

The May 2017 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 **Virginia Beach-Norfolk-Newport News, VA-NC Metropolitan Statistical Area** includes Gates, Gloucester, Isle of Wight, James City, Mathews, 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 2017

Occupation [1]	Employment [2]		Mean wage	
	Level	Location quotient [3]	Hourly	Annual [4]
Architecture and engineering occupations	21,800	1.7	$39.18	$81,490
Architects, except landscape and naval	600	1.1	38.33	79,740
Landscape architects	70	0.7	34.20	71,140
Cartographers and photogrammetrists	80	1.3	32.00	66,570
Surveyors	200	0.9	33.53	69,740
Aerospace engineers	780	2.3	56.54	117,600
Biomedical engineers	[5]	[5]	38.86	80,820
Chemical engineers	120	0.7	51.26	106,620
Civil engineers	2,120	1.4	42.77	88,960
Computer hardware engineers	200	0.6	51.16	106,410
Electrical engineers	1,260	1.3	45.26	94,140
Electronics engineers, except computer	1,280	1.8	43.61	90,700
Environmental engineers	330	1.2	41.39	86,090
Health and safety engineers, except mining safety engineers and inspectors	120	0.9	38.15	79,340
Industrial engineers	910	0.7	41.28	85,860
Marine engineers and naval architects	970	16.9	41.10	85,480
Materials engineers	130	0.9	50.33	104,690
Mechanical engineers	1,820	1.2	42.45	88,300
Engineers, all other	1,390	2.0	47.22	98,210
Architectural and civil drafters	440	0.9	25.34	52,710
Electrical and electronics drafters	140	1.0	29.16	60,650
Drafters, all other	[5]	[5]	24.08	50,090
Aerospace engineering and operations technicians	[5]	[5]	27.88	58,000
Civil engineering technicians	500	1.3	28.71	59,720
Electrical and electronics engineering technicians	2,250	3.4	33.19	69,030
Electro-mechanical technicians	280	4.1	27.07	56,300
Environmental engineering technicians	90	0.9	21.00	43,680
Industrial engineering technicians	290	0.9	27.43	57,050
Mechanical engineering technicians	350	1.5	26.32	54,750
Engineering technicians, except drafters, all other	2,090	5.2	37.15	77,270
Surveying and mapping technicians	300	1.1	19.93	41,460

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.