

MID-ATLANTIC INFORMATION OFFICE
Philadelphia, Pa.

For release: Tuesday, July 31, 2012

12-1538-PHI

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**OCCUPATIONAL EMPLOYMENT AND WAGES IN
VIRGINIA BEACH-NORFOLK-NEWPORT NEWS – MAY 2011**

Workers in the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area had an average (mean) hourly wage of \$20.32 in May 2011, about 7 percent below the nationwide average of \$21.74, 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 12 of the 22 major occupational groups, including legal, sales and related, and construction and extraction. (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 2011

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Virginia Beach-Norfolk-Newport News	United States	Virginia Beach-Norfolk-Newport News	Percent difference ¹
Total, all occupations	100.0	100.0	\$21.74	\$20.32 *	-7
Management	4.8	3.6 *	51.64	49.22 *	-5
Business and financial operations	4.8	5.5 *	33.05	31.71 *	-4
Computer and mathematical	2.7	2.8	37.85	35.99 *	-5
Architecture and engineering	1.8	3.0 *	37.08	34.96 *	-6
Life, physical, and social science	0.8	0.6 *	32.44	30.92	-5
Community and social service	1.5	1.5	21.07	20.76	-1
Legal	0.8	0.7	47.30	35.51 *	-25
Education, training, and library	6.6	6.4	24.46	23.20	-5
Arts, design, entertainment, sports, and media	1.3	1.3	25.89	24.14	-7
Healthcare practitioners and technical	5.9	5.3 *	34.97	33.46	-4
Healthcare support	3.1	2.7 *	13.16	12.28 *	-7
Protective service	2.5	2.6	20.54	18.57 *	-10
Food preparation and serving related	8.7	9.9 *	10.30	10.34	0
Building and grounds cleaning and maintenance	3.3	3.5	12.29	10.99 *	-11
Personal care and service	2.8	3.0	11.84	10.63 *	-10
Sales and related	10.6	10.7	18.04	15.21 *	-16
Office and administrative support	16.7	15.8 *	16.40	15.54 *	-5
Farming, fishing, and forestry	0.3	0.1 *	11.68	11.78	1
Construction and extraction	3.9	5.0 *	21.46	18.88 *	-12
Installation, maintenance, and repair	3.9	4.5 *	20.86	20.68	-1
Production	6.5	4.8 *	16.45	17.26	5
Transportation and material moving	6.7	6.6	15.96	15.75	-1

* 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.

¹ A positive percent difference measures how much the mean wage in Virginia Beach-Norfolk-Newport News is above the national mean wage, while a negative difference reflects a lower wage.

When compared to the nationwide distribution, Virginia Beach employment was more highly concentrated in 5 of the 22 occupational groups, which included architecture and engineering, construction and extraction, and business and financial operations. Conversely, seven groups had employment shares significantly below their national representation; these groups included production, management, and office and administrative support.

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 21,370 jobs in architecture and engineering, accounting for 3.0 percent of local area employment, significantly above the 1.8-percent share nationally. The average hourly wage for this occupational group locally was \$34.96, measurably below the national wage of \$37.08.

With employment of 1,960, electrical and electronics engineering technicians was the largest occupation within the architecture and engineering group, closely followed by mechanical engineers with 1,920 jobs. Among the higher-paying jobs were aerospace engineers and computer hardware engineers with mean hourly wages of \$52.45 and \$47.95, respectively. At the lower end of the wage scale were surveying and mapping technicians (\$17.54) and civil engineering technicians (\$24.20). (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 many of the occupations within the architecture and engineering group. For instance, marine engineers and naval architects were employed at almost 16 times the national rate in Virginia Beach, and electrical and electronics engineering technicians, at over twice the U.S. rate. On the other hand, industrial engineers 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. The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and about 800 detailed occupations for the nation, states, metropolitan statistical areas, metropolitan divisions, and nonmetropolitan areas.

OES wage and employment data for the 22 major occupational groups in the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area were compared to their respective national averages based on statistical significance testing. Only those occupations with wages or employment shares above or below the national wage or share after testing for significance at the 90-percent confidence level meet the criteria.

NOTE: 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. Guam, Puerto Rico, and the Virgin Islands are also surveyed, but their data are not included in the national estimates. OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 establishments in May and November of each year for a 3-year period. The nationwide response rate for the May 2011 survey was 77.3 percent based on establishments and 73.3 percent based on employment. May 2011 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2011, November 2010, May 2010, November 2009, May 2009, and November 2008. The sample in the Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area included 4,489 establishments with a response rate of 78 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The May 2011 OES estimates are based in part on data collected using the 2010 Standard Occupational Classification (SOC) system. Nearly all the occupations in this release are 2010 SOC occupations; however, some are not. The May 2012 OES data will reflect the full set of detailed occupations in the 2010 SOC. For a list of all occupations, including 2010 SOC occupations, and how data collected on two structures were combined, see the OES Frequently Asked Questions online at www.bls.gov/oes/oes_ques.htm#Ques41.

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 (MSA)** 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

Information in this release will be made available to sensory impaired individuals upon request. Voice phone: 202-691-5200; TDD message referral phone number: 1-800-877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area, May 2011

Occupation ¹	Employment ²		Mean wage	
	Level	Location quotient ³	Hourly	Annual ⁴
Architecture and Engineering Occupations	21,370	1.7	\$34.96	\$72,710
Architects, except landscape and naval	430	0.9	39.43	82,020
Landscape architects	100	1.2	27.05	56,270
Cartographers and photogrammetrists	100	1.6	27.50	57,190
Surveyors	210	0.9	31.74	66,020
Aerospace engineers	820	1.8	52.45	109,100
Biomedical engineers	30	0.3	41.42	86,150
Chemical engineers	50	0.3	40.57	84,380
Civil engineers	1,890	1.3	36.22	75,330
Computer hardware engineers	260	0.7	47.95	99,730
Electrical engineers	1,230	1.4	38.08	79,200
Electronics engineers, except computer	1,200	1.6	38.09	79,220
Environmental engineers	350	1.3	40.05	83,310
Health and safety engineers, except mining safety engineers and inspectors	110	0.9	33.90	70,520
Industrial engineers	1,240	1.1	38.61	80,310
Marine engineers and naval architects	480	15.8	37.33	77,640
Materials engineers	(5)	(5)	47.67	99,160
Mechanical engineers	1,920	1.4	39.51	82,180
Engineers, all other	1,620	2.3	43.42	90,320
Architectural and civil drafters	310	0.6	22.70	47,210
Electrical and electronics drafters	200	1.3	24.01	49,940
Drafters, all other	(5)	(5)	27.01	56,180
Aerospace engineering and operations technicians	(5)	(5)	27.00	56,170
Civil engineering technicians	350	0.9	24.20	50,340
Electrical and electronics engineering technicians	1,960	2.3	30.99	64,450
Environmental engineering technicians	100	1.0	17.48	36,350
Industrial engineering technicians	240	0.7	24.53	51,030
Mechanical engineering technicians	440	1.8	24.69	51,360
Engineering technicians, except drafters, all other	1,810	5.0	35.11	73,030
Surveying and mapping technicians	310	1.2	17.54	36,480

¹ For a complete listing of all detailed occupations in the Virginia Beach-Norfolk-Newport News MSA, 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 available