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## Occupational Employment and Wages in Washington-Arlington-Alexandria – May 2014

Workers in the Washington-Arlington-Alexandria Metropolitan Statistical Area had an average (mean) hourly wage of \$31.22 in May 2014, 37 percent above the nationwide average of \$22.71, 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 higher than their respective national averages in 21 of the 22 major occupational groups. (See [table A](#) and box note at end of release.)

When compared to the nationwide distribution, Washington employment shares were significantly higher in 9 of the 22 occupational groups including business and financial operations, computer and mathematical, and management. Conversely, 12 groups had employment shares significantly below their national representation; these groups included production, transportation and material moving, and office and administrative support.

**Table A. Occupational employment and wages by major occupational group, United States and the Washington Metropolitan Statistical Area, and measures of statistical significance, May 2014**

Major occupational group	Employment share (percent of total)			Average (mean) hourly wage			
	United States	Washington	Significant difference <sup>(1)</sup>	United States	Washington	Significant difference <sup>(1)</sup>	Percent difference <sup>(2)</sup>
Total, all occupations .....	100.00%	100.00%		\$22.71	\$31.22	Yes	37
Management .....	5.0	7.5	Yes	54.08	64.89	Yes	20
Business and financial operations .....	5.1	10.0	Yes	34.81	43.01	Yes	24
Computer and mathematical .....	2.8	7.4	Yes	40.37	47.97	Yes	19
Architecture and engineering .....	1.8	2.1	Yes	39.19	48.13	Yes	23
Life, physical, and social science .....	0.8	2.0	Yes	33.69	46.48	Yes	38
Community and social service .....	1.4	1.3	Yes	21.79	26.80	Yes	23
Legal .....	0.8	2.3	Yes	48.61	63.88	Yes	31
Education, training, and library .....	6.2	6.3	No	25.10	28.53	Yes	14
Arts, design, entertainment, sports, and media .....	1.3	2.2	Yes	26.82	35.99	Yes	34
Healthcare practitioners and technical .....	5.8	4.7	Yes	36.54	43.51	Yes	19
Healthcare support .....	2.9	1.9	Yes	13.86	15.40	Yes	11
Protective service .....	2.4	3.0	Yes	21.14	25.44	Yes	20
Food preparation and serving related .....	9.1	8.1	Yes	10.57	11.77	Yes	11
Building and grounds cleaning and maintenance .....	3.2	3.5	Yes	12.68	13.40	Yes	6
Personal care and service .....	3.1	2.8	Yes	12.01	13.99	Yes	16
Sales and related .....	10.5	8.7	Yes	18.59	20.29	Yes	9
Office and administrative support .....	16.0	13.7	Yes	17.08	20.33	Yes	19
Farming, fishing, and forestry .....	0.3	0.0	Yes	12.09	16.58	Yes	37
Construction and extraction .....	3.9	3.6	Yes	22.40	22.66	No	1
Installation, maintenance, and repair .....	3.9	3.0	Yes	21.74	24.98	Yes	15
Production .....	6.6	1.7	Yes	17.06	19.09	Yes	12

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and the Washington Metropolitan Statistical Area, and measures of statistical significance, May 2014 - Continued**

Major occupational group	Employment share (percent of total)			Average (mean) hourly wage			
	United States	Washington	Significant difference <sup>(1)</sup>	United States	Washington	Significant difference <sup>(1)</sup>	Percent difference <sup>(2)</sup>
Transportation and material moving .....	6.8	4.1	Yes	16.57	18.08	Yes	9

Footnotes:

(1) Statistical significance testing at the 90-percent confidence level.

(2) A positive percent difference measures how much the mean wage in Washington is above the national mean wage, while a negative difference reflects a lower wage.

One occupational group—computer and mathematical—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Washington had 218,260 jobs in the computer and mathematical group, accounting for 7.4 percent of local area employment, significantly larger than the 2.8-percent share nationally. The average hourly wage for this occupational group locally was \$47.97, significantly higher than the national average of \$40.37.

With employment of 34,700, applications software developers was the largest occupation within the computer and mathematical group in the Washington area, followed by systems software developers (29,240) and computer systems analysts (25,930). Among the higher paying jobs were computer and information research scientists and computer network architects, with mean hourly wages of \$59.55 and \$56.53, respectively. At the lower end of the wage scale were computer user support specialists (\$28.89) and computer network support specialists (\$36.64). (Detailed occupational data for computer and mathematical are presented in [table 1](#); for a complete listing of detailed occupations available go to [https://www.bls.gov/oes/current/oes\\_47900.htm](https://www.bls.gov/oes/current/oes_47900.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 Washington metropolitan area, above-average concentrations of employment were found in nearly all of the detailed occupations within the computer and mathematical group. For instance, information security analysts were employed at over five-and-a-half times the national rate in Washington, and statisticians, at more than seven times the U.S. average. On the other hand, computer programmers had a location quotient of 1.5 in Washington, meaning the local employment share in this particular occupation was closer to the national share.

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 District of Columbia Department of Employment Services, the Virginia Employment Commission, the Maryland Department of Labor, Licensing, and Regulation, and WorkForce West Virginia.

### **Note**

OES wage and employment data for the 22 major occupational groups in the Washington-Arlington-Alexandria 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. Each year, forms are mailed to two semiannual panels of approximately 200,000 sampled establishments, one panel in May and the other in November. May 2014 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2014, November 2013, May 2013, November 2012, May 2012, and November 2011. The overall national response rate for the six panels is 74.3 percent based on establishments and 70.5 percent based on employment. The sample in the Washington-Arlington-Alexandria Metropolitan Statistical Area included 16,935 establishments with a response rate of 67 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 OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and 821 detailed occupations for the nation, states, metropolitan statistical areas, metropolitan divisions, and nonmetropolitan areas. In addition, employment and wage estimates for 94 minor groups and 458 broad occupations are available in the national data. OES data by state and metropolitan/nonmetropolitan area are available from [www.bls.gov/oes/current/oessrcst.htm](http://www.bls.gov/oes/current/oessrcst.htm) and [www.bls.gov/oes/current/oessrcma.htm](http://www.bls.gov/oes/current/oessrcma.htm), respectively.

The May 2014 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).

### **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 **Washington-Arlington-Alexandria, D.C.-Va.-Md.-W.Va. Metropolitan Statistical Area** includes the District of Columbia; Arlington, Clarke, Fairfax, Fauquier, Loudoun, Prince William, Spotsylvania, Stafford, and Warren Counties, and Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park Cities in Virginia; Calvert, Charles, Frederick, Montgomery, and Prince George's Counties in Maryland; and Jefferson County in West Virginia.

### **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](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/2013/may/methods\\_statement.pdf](http://www.bls.gov/oes/2013/may/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: 1-800-877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Washington-Arlington-Alexandria Metropolitan Statistical Area, May 2014**

Occupation <sup>(1)</sup>	Employment <sup>(2)</sup>		Mean wage	
	Level	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Computer and mathematical occupations .....	218,260	2.6	\$47.97	\$99,770
Computer and information research scientists .....	2,630	5.0	59.55	123,860
Computer systems analysts .....	25,930	2.2	48.67	101,240
Information security analysts .....	9,750	5.6	51.71	107,550
Computer programmers .....	9,630	1.5	47.45	98,690
Software developers, applications .....	34,700	2.3	51.72	107,570
Software developers, systems software .....	29,240	3.5	52.68	109,580
Web developers .....	5,800	2.2	40.28	83,780
Database administrators .....	5,450	2.2	45.91	95,490
Network and computer systems administrators .....	20,140	2.5	46.48	96,680
Computer network architects .....	10,180	3.3	56.53	117,580
Computer user support specialists .....	19,500	1.6	28.89	60,090
Computer network support specialists .....	8,520	2.2	36.64	76,210
Computer occupations, all other .....	24,970	5.4	51.69	107,510
Actuaries .....	380	0.8	65.03	135,260
Mathematicians .....	400	5.9	63.85	132,810
Operations research analysts .....	6,460	3.4	50.56	105,160
Statisticians .....	4,170	7.1	48.13	100,110
Mathematical science occupations, all other .....	390	11.1	36.54	76,010

Footnotes:

(1) For a complete listing of all detailed occupations in the Washington-Arlington-Alexandria MSA, see [www.bls.gov/oes/current/oes\\_47900.htm](http://www.bls.gov/oes/current/oes_47900.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.