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SOUTHEAST INFORMATION OFFICE: Atlanta, Ga.

Technical information: (404) 893-4222 BLSInfoAtlanta@bls.gov www.bls.gov/regions/southeast

Media contact: (404) 893-4220

## Occupational Employment and Wages in Winston-Salem — May 2018

Workers in the Winston-Salem Metropolitan Statistical Area had an average (mean) hourly wage of \$22.05 in May 2018, about 12 percent below the nationwide average of \$24.98, according to the U.S. Bureau of Labor Statistics. Regional Commissioner Janet S. Rankin noted that, after testing for statistical significance, 18 of the 22 major occupational groups had average wages in the local area that were significantly lower than their respective national averages, including including legal; construction and extraction; and building and grounds cleaning and maintenance. One group—management—had a significantly higher wage than its respective national average.

When compared to the nationwide distribution, local employment was more highly concentrated in 5 of the 22 occupational groups, including production; healthcare practitioners and technical; and healthcare support. Conversely, 12 groups had employment shares significantly below their national representation, including computer and mathematical; personal care and service; and management. (See [table A](#) and [box note](#) at end of release.)

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

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Winston	United States	Winston	Percent difference <sup>(1)</sup>
Total, all occupations .....	100.0	100.0	\$24.98	\$22.05*	-12
Management .....	5.3	4.0*	58.44	61.32*	5
Business and financial operations.....	5.3	4.2*	36.98	35.24*	-5
Computer and mathematical .....	3.0	1.7*	44.01	38.28*	-13
Architecture and engineering .....	1.8	1.1*	42.01	36.49*	-13
Life, physical, and social science .....	0.8	0.5*	36.62	32.37*	-12
Community and social service.....	1.5	1.1*	23.69	23.87	1
Legal.....	0.8	0.7	52.25	38.48*	-26
Education, training, and library.....	6.1	6.8*	27.22	28.02	3
Arts, design, entertainment, sports, and media.	1.3	0.8*	28.74	26.42*	-8
Healthcare practitioners and technical .....	6.0	8.7*	39.42	33.79*	-14
Healthcare support .....	2.8	4.4*	15.57	14.46*	-7
Protective service .....	2.4	1.8*	23.36	18.74*	-20
Food preparation and serving related .....	9.2	9.1	12.30	10.41*	-15
Building and grounds cleaning and maintenance.....	3.1	3.0	14.43	11.69*	-19
Personal care and service.....	3.8	2.5*	13.51	12.09*	-11
Sales and related .....	10.0	9.6*	20.09	18.39*	-8
Office and administrative support.....	15.1	14.6*	18.75	17.40*	-7
Farming, fishing, and forestry.....	0.3	(2)	14.49	15.70	8

Note: See footnotes at end of table.

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

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Winston	United States	Winston	Percent difference (1)
Construction and extraction.....	4.1	3.2*	24.62	19.28*	-22
Installation, maintenance, and repair .....	3.9	3.8	23.54	21.29*	-10
Production .....	6.3	10.2*	18.84	17.27*	-8
Transportation and material moving.....	7.1	8.2*	18.41	15.31*	-17

Footnotes:

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

(2) Estimate not released

\* 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—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Winston-Salem had 27,010 jobs in production, accounting for 10.2 percent of local area employment, significantly higher than the 6.3-percent share nationally. The average hourly wage for this occupational group locally was \$17.27, significantly below the national wage of \$18.84.

Some of the larger detailed occupations within the production group included assemblers and fabricators, all other, including team assemblers (4,780); production worker's helpers (2,070); and first-line supervisors of production and operating workers (1,580). Among the higher-paying jobs in this group were power plant operators, and first-line supervisors of production and operating workers, with mean hourly wages of \$40.38 and \$30.20, respectively. At the lower end of the wage scale were food batchmakers (\$11.22) and sewing machine operators (\$11.44). (Detailed data for production occupations are presented in [table 1](#); for a complete listing of detailed occupations available go to [www.bls.gov/oes/current/oes\\_49180.htm](http://www.bls.gov/oes/current/oes_49180.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 than it does nationally. In the Winston-Salem Metropolitan Statistical Area, above-average concentrations of employment were found in many of the occupations within the production group. For instance, textile winding, twisting, and drawing out machine setters, operators, and tenders were employed at 14.4 times the national rate in Winston, and food and tobacco roasting, baking, and drying machine operators and tenders, at 8.9 times the U.S. average. On the other hand, electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers had a location quotient of 1.1 in Winston, 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 North Carolina Department of Commerce.

## **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 area changes is available at [www.bls.gov/oes/areas\\_2018.htm](http://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](http://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](http://www.bls.gov/oes/tables.htm).

The OES survey is a cooperative effort between BLS and the 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 Winston-Salem Metropolitan Statistical Area included 2,313 establishments with a response rate of 81 percent. For more information about OES concepts and methodology, go to [www.bls.gov/oes/current/oes\\_tec.htm](http://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 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.

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](http://www.bls.gov/soc) and information about the 2017 NAICS is available at [www.bls.gov/bls/naics.htm](http://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 **Winston-Salem, NC Metropolitan Statistical Area** includes Davidson, Davie, Forsyth, Stokes, and Yadkin Counties.

### **Additional information**

OES data are available on our regional web page at [www.bls.gov/regions/southeast](http://www.bls.gov/regions/southeast). 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/current/methods\\_statement.pdf](http://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, Winston-Salem Metropolitan Statistical Area, May 2018**

Occupation (1)	Employment		Mean wages	
	Level (2)	Location quotient (3)	Hourly	Annual (4)
Production occupations .....	27,010	1.6	\$17.27	\$35,930
First-line supervisors of production and operating workers .....	1,580	1.4	30.20	62,820
Coil winders, tapers, and finishers .....	60	2.5	15.88	33,030
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers .....	530	1.1	16.53	34,380
Engine and other machine assemblers .....	50	0.5	21.04	43,750
Structural metal fabricators and fitters .....	120	0.9	17.96	37,360
Assemblers and fabricators, all other, including team assemblers .....	4,780	1.9	14.56	30,280
Bakers .....	350	1.1	11.54	24,010
Butchers and meat cutters .....	220	0.9	14.59	30,350
Slaughterers and meat packers .....	90	0.6	13.66	28,410
Food and tobacco roasting, baking, and drying machine operators and tenders .....	340	8.9	25.83	53,740
Food batchmakers .....	(5)	(5)	11.22	23,330
Computer-controlled machine tool operators, metal and plastic .....	80	0.3	18.23	37,930
Computer numerically controlled machine tool programmers, metal and plastic .....	30	0.7	19.47	40,500
Extruding and drawing machine setters, operators, and tenders, metal and plastic .....	220	1.6	15.51	32,270
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic .....	550	1.6	15.62	32,490
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic .....	160	1.2	16.75	34,830
Lathe and turning machine tool setters, operators, and tenders, metal and plastic .....	150	2.8	21.50	44,730
Machinists .....	1,010	1.4	21.16	44,010
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic .....	950	3.2	15.31	31,850
Multiple machine tool setters, operators, and tenders, metal and plastic .....	350	1.4	16.49	34,300
Tool and die makers .....	140	1.0	21.49	44,710
Welders, cutters, solderers, and brazers .....	1,110	1.6	17.90	37,230
Welding, soldering, and brazing machine setters, operators, and tenders .....	290	4.6	24.08	50,080
Plating and coating machine setters, operators, and tenders, metal and plastic .....	50	0.7	14.33	29,810
Prepress technicians and workers .....	70	1.3	18.78	39,060
Printing press operators .....	560	1.8	18.42	38,320
Print binding and finishing workers .....	90	1.1	14.21	29,570
Laundry and dry-cleaning workers .....	260	0.7	9.73	20,240
Pressers, textile, garment, and related materials .....	80	1.2	12.78	26,590
Sewing machine operators .....	670	2.7	11.44	23,790
Textile bleaching and dyeing machine operators and tenders .....	50	3.2	14.54	30,240
Textile cutting machine setters, operators, and tenders .....	100	4.1	14.35	29,840
Textile knitting and weaving machine setters, operators, and tenders .....	310	8.1	13.61	28,320
Textile winding, twisting, and drawing out machine setters, operators, and tenders .....	830	14.4	13.67	28,430
Upholsterers .....	(5)	(5)	18.25	37,970
Textile, apparel, and furnishings workers, all other ..	50	1.8	13.48	28,050
Cabinetmakers and bench carpenters .....	190	1.0	14.38	29,920
Sawing machine setters, operators, and tenders, wood .....	140	1.5	16.16	33,610

Note: See footnotes at end of table.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Winston-Salem Metropolitan Statistical Area, May 2018 - Continued**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Woodworking machine setters, operators, and tenders, except sawing.....	1,080	7.5	12.81	26,650
Power plant operators .....	170	2.7	40.38	83,980
Water and wastewater treatment plant and system operators .....	140	0.6	19.13	39,790
Chemical equipment operators and tenders .....	50	0.3	21.18	44,050
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	380	4.2	26.29	54,690
Mixing and blending machine setters, operators, and tenders .....	340	1.5	17.41	36,200
Cutting and slicing machine setters, operators, and tenders .....	250	2.3	16.07	33,420
Extruding, forming, pressing, and compacting machine setters, operators, and tenders.....	160	1.2	17.89	37,200
Furnace, kiln, oven, drier, and kettle operators and tenders .....	(5)	(5)	15.93	33,140
Inspectors, testers, sorters, samplers, and weighers .....	1,540	1.5	17.11	35,590
Jewelers and precious stone and metal workers .....	40	0.8	21.13	43,950
Dental laboratory technicians .....	50	0.8	18.91	39,340
Packaging and filling machine operators and tenders .....	840	1.2	20.44	42,510
Coating, painting, and spraying machine setters, operators, and tenders .....	320	2.0	16.36	34,040
Painters, transportation equipment .....	100	1.0	20.38	42,400
Painting, coating, and decorating workers .....	40	1.7	17.89	37,220
Photographic process workers and processing machine operators.....	30	1.0	15.65	32,550
Adhesive bonding machine operators and tenders..	60	2.1	18.71	38,910
Paper goods machine setters, operators, and tenders .....	260	1.4	16.85	35,040
Helpers--production workers .....	2,070	3.2	16.39	34,100
Production workers, all other.....	190	0.5	15.39	32,020

Footnotes:

(1) For a complete listing of all detailed occupations in the Winston-Salem, NC Metropolitan Statistical Area, see [www.bls.gov/oes/current/oes\\_49180.htm](http://www.bls.gov/oes/current/oes_49180.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) Estimate not released.