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## Occupational Employment and Wages in Warren-Troy-Farmington Hills — May 2017

Workers in the Warren-Troy-Farmington Hills Metropolitan Division had an average (mean) hourly wage of \$24.94 in May 2017, about 2 percent above the nationwide average of \$24.34, according to the U.S. Bureau of Labor Statistics. Assistant Commissioner for Regional Operations Charlene Peiffer noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 4 of the 22 major occupational groups, including management; sales and related; and construction and extraction. Nine groups had significantly lower wages than their respective national averages, including legal; computer and mathematical; and protective service.

When compared to the nationwide distribution, local employment was more highly concentrated in 6 of the 22 occupational groups, including production; architecture and engineering; and computer and mathematical. Conversely, 12 groups had employment shares significantly below their national representation, including education, training, and library; transportation and material moving; and protective service. (See [table A](#) and [box note](#) at end of release.)

**Table A. Occupational employment and wages by major occupational group, United States and the Warren-Troy-Farmington Hills Metropolitan Division, and measures of statistical significance, May 2017**

Major occupational group	Percent of total employment		Mean hourly wage		Percent difference <sup>(1)</sup>
	United States	Warren	United States	Warren	
Total, all occupations .....	100.0	100.0	\$24.34	\$24.94*	2
Management .....	5.1	4.9*	57.65	59.84*	4
Business and financial operations .....	5.2	5.5	36.70	36.75	0
Computer and mathematical .....	3.0	3.8*	43.18	39.79*	-8
Architecture and engineering .....	1.8	5.1*	41.44	41.15	-1
Life, physical, and social science .....	0.8	0.4*	35.76	34.66	-3
Community and social service .....	1.5	0.9*	23.10	22.71	-2
Legal .....	0.8	1.0*	51.62	43.95*	-15
Education, training, and library .....	6.1	4.2*	26.67	25.08*	-6
Arts, design, entertainment, sports, and media .....	1.4	1.6	28.34	28.16	-1
Healthcare practitioners and technical .....	6.0	5.7	38.83	39.26	1
Healthcare support .....	2.9	3.2*	15.05	14.61*	-3
Protective service .....	2.4	1.4*	22.69	19.84*	-13
Food preparation and serving related .....	9.3	8.9*	11.88	11.09*	-7
Building and grounds cleaning and maintenance .....	3.1	2.9*	13.91	13.19*	-5
Personal care and service .....	3.6	2.9*	13.11	12.85	-2
Sales and related .....	10.2	10.6*	19.56	21.36*	9
Office and administrative support .....	15.4	14.9	18.24	17.93*	-2
Farming, fishing, and forestry .....	0.3	(2)*	13.87	13.17	-5

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and the Warren-Troy-Farmington Hills Metropolitan Division, and measures of statistical significance, May 2017 - Continued**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Warren	United States	Warren	Percent difference <sup>(1)</sup>
Construction and extraction.....	4.0	3.3*	24.01	25.80*	7
Installation, maintenance, and repair .....	3.9	3.7*	23.02	23.51	2
Production .....	6.3	9.9*	18.30	19.31*	6
Transportation and material moving .....	7.0	5.4*	17.82	16.32*	-8

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Warren-Troy-Farmington Hills Metropolitan Division is above the national mean wage, while a negative difference reflects a lower wage.

(2) Indicates a value of less than 0.05 percent.

\* 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—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Warren-Troy-Farmington Hills had 121,400 jobs in production, accounting for 9.9 percent of local area employment, significantly higher than the 6.3-percent share nationally. The average hourly wage for this occupational group locally was \$19.31, significantly above the national wage of \$18.30.

Some of the larger detailed occupations within the production group included assemblers and fabricators, all other, including team assemblers (24,050); inspectors, testers, sorters, samplers, and weighers (10,370); and machinists (9,830). Among the higher paying jobs in this group were power plant operators with mean hourly wages of \$43.09 and power distributors and dispatchers, \$38.18. At the lower end of the wage scale were pressers, textile, garment, and related materials (\$10.10) and laundry and dry-cleaning workers (\$11.82). (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\\_47664.htm](http://www.bls.gov/oes/current/oes_47664.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 Warren-Troy-Farmington Hills Metropolitan Division, above-average concentrations of employment were found in many of the occupations within the production group. For instance, model makers, metal and plastic were employed at 16.9 times the national rate in Warren, and engine and other machine assemblers, at 9.4 times the U.S. average. On the other hand, welders, cutters, solderers, and brazers had a location quotient of 1.0 in Warren, 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 Michigan Department of Technology, Management, and Budget.

## Notes 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](http://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](http://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 Warren-Troy-Farmington Hills Metropolitan Division included 5,873 establishments with a response rate of 75 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).

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](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 **Warren-Troy-Farmington Hills, Mich. Metropolitan Division** includes Lapeer, Livingston, Macomb, Oakland, and St. Clair Counties.

### **Additional information**

OES data are available on our regional web page at [www.bls.gov/regions/midwest](http://www.bls.gov/regions/midwest). 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, Warren-Troy-Farmington Hills Metropolitan Division, May 2017**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Production occupations .....	121,400	1.6	\$19.31	\$40,160
First-line supervisors of production and operating workers .....	7,540	1.4	32.82	68,260
Coil winders, tapers, and finishers .....	(5)	(5)	16.36	34,020
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers ...	1,750	0.8	15.93	33,130
Engine and other machine assemblers .....	3,050	9.4	24.48	50,920
Structural metal fabricators and fitters .....	690	1.0	20.92	43,510
Fiberglass laminators and fabricators .....	40	0.3	16.52	34,360
Assemblers and fabricators, all other, including team assemblers .....	24,050	2.1	16.67	34,680
Bakers .....	1,480	0.9	13.43	27,940
Butchers and meat cutters .....	960	0.8	14.98	31,160
Meat, poultry, and fish cutters and trimmers .....	390	0.3	13.67	28,430
Slaughterers and meat packers .....	120	0.2	13.28	27,620
Food and tobacco roasting, baking, and drying machine operators and tenders .....	30	0.2	11.84	24,630
Food batchmakers .....	650	0.5	14.57	30,300
Computer-controlled machine tool operators, metal and plastic .....	2,540	2.0	20.51	42,650
Computer numerically controlled machine tool programmers, metal and plastic .....	820	4.0	26.25	54,600
Extruding and drawing machine setters, operators, and tenders, metal and plastic .....	1,010	1.6	17.17	35,710
Forging machine setters, operators, and tenders, metal and plastic .....	130	0.8	18.43	38,330
Rolling machine setters, operators, and tenders, metal and plastic .....	260	1.2	16.87	35,080
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic .....	5,430	3.3	20.21	42,040
Drilling and boring machine tool setters, operators, and tenders, metal and plastic .....	290	3.1	23.14	48,140
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic .....	1,340	2.1	16.59	34,510
Lathe and turning machine tool setters, operators, and tenders, metal and plastic .....	820	3.2	17.04	35,430
Milling and planing machine setters, operators, and tenders, metal and plastic .....	480	3.2	18.55	38,580
Machinists .....	9,830	3.0	21.14	43,960
Metal-refining furnace operators and tenders .....	90	0.6	15.14	31,500
Model makers, metal and plastic .....	850	16.9	31.43	65,370
Patternmakers, metal and plastic .....	30	1.2	21.31	44,320
Foundry mold and coremakers .....	230	1.9	16.29	33,890
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic .....	4,980	3.7	14.83	30,840
Multiple machine tool setters, operators, and tenders, metal and plastic .....	3,670	3.5	17.47	36,330
Tool and die makers .....	5,430	8.6	25.87	53,800
Welders, cutters, solderers, and brazers .....	3,220	1.0	19.89	41,360
Welding, soldering, and brazing machine setters, operators, and tenders .....	1,060	3.2	17.56	36,520
Heat treating equipment setters, operators, and tenders, metal and plastic .....	650	3.9	18.27	38,000
Layout workers, metal and plastic .....	90	1.2	28.27	58,790
Plating and coating machine setters, operators, and tenders, metal and plastic .....	610	1.9	16.17	33,640
Tool grinders, filers, and sharpeners .....	180	2.6	20.28	42,180
Metal workers and plastic workers, all other .....	960	5.0	21.89	45,540
Prepress technicians and workers .....	220	0.8	16.85	35,050
Printing press operators .....	1,620	1.1	17.12	35,610

Note: See footnotes at end of table.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Warren-Troy-Farmington Hills Metropolitan Division, May 2017 - Continued**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Print binding and finishing workers.....	510	1.2	16.02	33,320
Laundry and dry-cleaning workers .....	1,470	0.8	11.82	24,590
Pressers, textile, garment, and related materials .....	(5)	(5)	10.10	21,010
Sewing machine operators.....	750	0.6	13.85	28,820
Sewers, hand .....	30	0.6	12.66	26,340
Tailors, dressmakers, and custom sewers .....	510	2.9	17.69	36,790
Textile cutting machine setters, operators, and tenders ..	240	2.0	14.01	29,130
Upholsterers .....	100	0.3	16.82	34,970
Cabinetmakers and bench carpenters .....	380	0.5	19.03	39,580
Furniture finishers.....	130	0.9	17.77	36,970
Sawing machine setters, operators, and tenders, wood ..	(5)	(5)	17.39	36,160
Woodworking machine setters, operators, and tenders, except sawing.....	170	0.3	16.16	33,600
Power distributors and dispatchers .....	80	0.8	38.18	79,420
Power plant operators .....	220	0.8	43.09	89,620
Stationary engineers and boiler operators .....	(5)	(5)	35.43	73,690
Water and wastewater treatment plant and system operators .....	470	0.5	24.50	50,970
Gas plant operators.....	200	1.6	32.14	66,850
Chemical equipment operators and tenders .....	840	1.3	22.18	46,130
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	100	0.2	17.79	37,010
Crushing, grinding, and polishing machine setters, operators, and tenders .....	240	0.9	15.41	32,050
Grinding and polishing workers, hand .....	(5)	(5)	16.46	34,240
Mixing and blending machine setters, operators, and tenders .....	930	0.8	20.97	43,620
Cutters and trimmers, hand.....	40	0.4	14.03	29,190
Cutting and slicing machine setters, operators, and tenders .....	310	0.6	17.52	36,450
Extruding, forming, pressing, and compacting machine setters, operators, and tenders .....	250	0.4	16.56	34,440
Furnace, kiln, oven, drier, and kettle operators and tenders .....	(5)	(5)	22.17	46,110
Inspectors, testers, sorters, samplers, and weighers.....	10,370	2.2	17.66	36,740
Jewelers and precious stone and metal workers .....	220	1.0	16.64	34,610
Dental laboratory technicians .....	430	1.4	16.81	34,970
Medical appliance technicians.....	(5)	(5)	21.47	44,660
Ophthalmic laboratory technicians .....	410	1.6	18.71	38,910
Packaging and filling machine operators and tenders ....	1,800	0.5	16.07	33,430
Coating, painting, and spraying machine setters, operators, and tenders .....	1,660	2.2	14.45	30,070
Painters, transportation equipment .....	470	1.0	26.23	54,550
Painting, coating, and decorating workers .....	(5)	(5)	16.78	34,890
Photographic process workers and processing machine operators .....	260	1.3	13.76	28,610
Adhesive bonding machine operators and tenders.....	(5)	(5)	11.90	24,750
Cleaning, washing, and metal pickling equipment operators and tenders .....	40	0.2	13.54	28,170
Etchers and engravers .....	30	0.4	15.89	33,050
Molders, shapers, and casters, except metal and plastic .....	510	1.4	15.13	31,470
Paper goods machine setters, operators, and tenders ...	190	0.2	20.23	42,090
Helpers--production workers .....	5,160	1.5	14.23	29,610
Production workers, all other.....	2,020	0.9	19.03	39,590

Footnotes:

(1) For a complete listing of all detailed occupations in Warren-Troy-Farmington Hills, MI Metropolitan Division, see [www.bls.gov/oes/current/oes\\_47664.htm](http://www.bls.gov/oes/current/oes_47664.htm)

Note: See footnotes at end of table.

- (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.