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MIDWEST INFORMATION OFFICE: Chicago, Ill.

Technical information: (312) 353-1880 • BLSInfoChicago@bls.gov • www.bls.gov/regions/midwest/

Media contact: (312) 353-1138

Occupational Employment and Wages in Warren-Troy-Farmington Hills, Mich. Metropolitan Division – May 2013

Workers in the Warren-Troy-Farmington Hills Metropolitan Division had an average (mean) hourly wage of \$22.80 in May 2013, about 2 percent above the nationwide average of \$22.33, according to the U.S. Bureau of Labor Statistics. Regional Commissioner Charlene Peiffer noted that, after testing for statistical significance, wages in the local area were significantly higher than their respective national averages in 4 of the 22 major occupational groups, including construction and extraction; sales and related; and production. Five groups had significantly lower wages than their respective national averages, including computer and mathematical; life, physical, and social science; and protective service.

When compared to the nationwide distribution, local employment was more highly concentrated in 7 of the 22 occupational groups, including production; architecture and engineering; and sales and related. Conversely, 13 groups had employment shares significantly below their national representation, including education, training, and library; transportation and material moving; 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 Warren-Troy-Farmington Hills Metropolitan Division, and measures of statistical significance, May 2013

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Warren	United States	Warren	Percent difference ⁽¹⁾
Total, all occupations.....	100.0%	100.0%	\$22.33	\$22.80*	2
Management.....	4.9	5.3*	53.15	52.87	-1
Business and financial operations.....	5.0	5.2	34.14	33.62	-2
Computer and mathematical.....	2.8	3.4*	39.43	33.84*	-14
Architecture and engineering.....	1.8	4.5*	38.51	37.72	-2
Life, physical, and social science.....	0.9	0.3*	33.37	29.41*	-12
Community and social services.....	1.4	0.9*	21.50	22.02	2
Legal.....	0.8	0.9*	47.89	46.39	-3
Education, training, and library.....	6.3	4.4*	24.76	24.95	1
Arts, design, entertainment, sports, and media.....	1.3	1.2*	26.72	25.82	-3
Healthcare practitioner and technical.....	5.8	5.9	35.93	36.32	1
Healthcare support.....	3.0	3.4*	13.61	13.06*	-4
Protective service.....	2.5	1.6*	20.92	19.43*	-7
Food preparation and serving related.....	9.0	8.7*	10.38	10.24	-1
Building and grounds cleaning and maintenance.....	3.2	2.9*	12.51	12.25	-2
Personal care and service.....	3.0	2.7*	11.88	11.65	-2

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 2013 - Continued

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Warren	United States	Warren	Percent difference ⁽¹⁾
Sales and related.....	10.6	11.5*	18.37	19.67*	7
Office and administrative support.....	16.2	15.4*	16.78	16.53	-1
Farming, fishing, and forestry.....	0.3	(2) *	11.70	13.14*	12
Construction and extraction.....	3.8	2.7*	21.94	23.46*	7
Installation, maintenance, and repair.....	3.9	3.5*	21.35	21.13	-1
Production.....	6.6	10.5*	16.79	17.50*	4
Transportation and material moving.....	6.8	4.9*	16.28	15.41*	-5

⁽¹⁾ A positive percent difference measures how much the mean wage in Warren 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 117,030 jobs in production, accounting for 10.5 percent of local area employment, significantly higher than the 6.6-percent share nationally. The average hourly wage for this occupational group locally was \$17.50, measurably above the national wage of \$16.79.

With employment of 25,530, team assemblers was the largest occupation within the production group, followed by machinists (9,910) and inspectors, testers, sorters, samplers, and weighers (8,000). Among the higher paying jobs were power plant operators along with painters, transportation equipment, with mean hourly wages of \$35.14 and \$31.19, respectively. At the lower end of the wage scale were pressers of textile, garment, and related materials (\$9.83) and meat, poultry, and fish cutters and trimmers (\$11.19). (Detailed occupational data for production are presented in table 1; for a complete listing of detailed occupations available go to www.bls.gov/oes/2013/may/oes_47644.htm).

Location quotients allow for the exploration of an area's occupational make-up 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 of metal and plastic were employed at 11.6 times the national rate in Warren, and forging machine setters, operators, and tenders of metal and plastic, at 8.8 times the U.S. average. On the other hand, structural metal fabricators and fitters 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 Labor Economic Growth.

OES wage and employment data for the 22 major occupational groups in the Warren Metropolitan Division 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 sampled establishments in May and November each year for a 3-year period. May 2013 estimates are based on responses from six semiannual panels collected in May 2013, November 2012, May 2012, November 2011, May 2011, and November 2010. The overall national response rate for the six panels is 75.3 percent based on establishments and 71.6 percent based on employment. The sample in the Warren-Troy-Farmington Hills Metropolitan Division included 5,840 establishments with a response rate of 74 percent. For more information about OES concepts and methodology, go to 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 and www.bls.gov/oes/current/oessrcma.htm, respectively.

The May 2013 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 and information about the 2012 NAICS is available at 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 **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. 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/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, Warren-Troy-Farmington Hills Metropolitan Division, May 2013

Occupation ^{(1)<}	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Production Occupations.....	117,030	1.6	\$17.50	\$36,410
First-Line Supervisors of Production and Operating Workers.....	6,080	1.3	29.96	62,320
Coil Winders, Tapers, and Finishers.....	70	0.6	14.62	30,410
Electrical and Electronic Equipment Assemblers.....	1,900	1.1	15.47	32,180
Electromechanical Equipment Assemblers.....	130	0.3	17.40	36,190
Engine and Other Machine Assemblers.....	730	2.2	24.32	50,590
Structural Metal Fabricators and Fitters.....	650	1.0	20.26	42,130
Fiberglass Laminators and Fabricators.....	50	0.3	15.17	31,550
Team Assemblers.....	25,530	2.9	15.92	33,120
Assemblers and Fabricators, All Other.....	4,800	2.3	13.61	28,300
Bakers.....	1,400	1.0	13.39	27,850
Butchers and Meat Cutters.....	720	0.6	15.64	32,540
Meat, Poultry, and Fish Cutters and Trimmers.....	690	0.5	11.19	23,280
Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders.....	40	0.2	13.60	28,290
Food Batchmakers.....	320	0.4	13.41	27,900
Food Processing Workers, All Other.....	60	0.2	10.46	21,760
Computer-Controlled Machine Tool Operators, Metal and Plastic.....	2,800	2.4	18.42	38,310
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic.....	560	2.7	23.86	49,640
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic.....	1,150	1.9	14.66	30,490
Forging Machine Setters, Operators, and Tenders, Metal and Plastic.....	1,670	8.8	13.21	27,470
Rolling Machine Setters, Operators, and Tenders, Metal and Plastic.....	310	1.1	15.52	32,280
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic.....	4,750	3.0	16.49	34,290
Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic.....	350	2.1	18.51	38,500
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic.....	1,170	2.0	17.55	36,510
Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic.....	680	2.0	17.93	37,290
Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic.....	470	2.3	18.71	38,920
Machinists.....	9,910	3.0	20.32	42,270
Metal-Refining Furnace Operators and Tenders.....	50	0.3	14.97	31,130
Model Makers, Metal and Plastic.....	600	11.6	26.10	54,280
Patternmakers, Metal and Plastic.....	⁽⁵⁾	⁽⁵⁾	21.71	45,150
Foundry Mold and Coremakers.....	50	0.4	17.53	36,470
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic.....	3,400	3.2	13.20	27,450
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic.....	2,630	3.4	16.14	33,570
Tool and Die Makers.....	4,580	6.9	25.62	53,300
Welders, Cutters, Solderers, and Brazers.....	2,640	0.9	17.37	36,130
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders.....	510	1.2	15.42	32,060
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic.....	950	5.3	14.09	29,310
Layout Workers, Metal and Plastic.....	⁽⁵⁾	⁽⁵⁾	23.63	49,140
Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic.....	680	2.3	13.26	27,570
Tool Grinders, Filers, and Sharpeners.....	⁽⁵⁾	⁽⁵⁾	21.31	44,320
Metal Workers and Plastic Workers, All Other.....	500	2.7	14.81	30,800

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Warren-Troy-Farmington Hills Metropolitan Division, May 2013 - Continued

Occupation ^{(1)<}	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Prepress Technicians and Workers.....	300	0.9	17.82	37,070
Printing Press Operators.....	850	0.6	16.23	33,750
Print Binding and Finishing Workers.....	260	0.6	14.73	30,640
Laundry and Dry-Cleaning Workers.....	1,310	0.8	11.31	23,520
Pressers, Textile, Garment, and Related Materials.....	260	0.6	9.83	20,440
Sewing Machine Operators.....	800	0.7	11.85	24,650
Tailors, Dressmakers, and Custom Sewers.....	720	4.0	14.11	29,350
Textile Cutting Machine Setters, Operators, and Tenders.....	40	0.3	14.92	31,040
Textile Knitting and Weaving Machine Setters, Operators, and Tenders.....	40	0.2	12.64	26,290
Upholsterers.....	60	0.3	14.59	30,350
Textile, Apparel, and Furnishings Workers, All Other.....	50	0.4	11.59	24,110
Cabinetmakers and Bench Carpenters.....	470	0.7	16.60	34,520
Furniture Finishers.....	60	0.5	14.50	30,160
Patternmakers, Wood.....	70	9.2	21.34	44,390
Sawing Machine Setters, Operators, and Tenders, Wood.....	(5)	(5)	14.24	29,620
Woodworking Machine Setters, Operators, and Tenders, Except Sawing.....	90	0.2	15.20	31,610
Power Plant Operators.....	130	0.4	35.14	73,100
Stationary Engineers and Boiler Operators.....	60	0.2	32.90	68,440
Water and Wastewater Treatment Plant and System Operators.....	350	0.4	22.41	46,610
Chemical Plant and System Operators.....	90	0.3	18.91	39,330
Gas Plant Operators.....	140	1.2	30.99	64,450
Chemical Equipment Operators and Tenders.....	220	0.4	19.24	40,010
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders.....	130	0.4	16.21	33,710
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders.....	(5)	(5)	17.79	36,990
Grinding and Polishing Workers, Hand.....	200	0.8	13.61	28,310
Mixing and Blending Machine Setters, Operators, and Tenders.....	1,230	1.3	16.73	34,810
Cutting and Slicing Machine Setters, Operators, and Tenders.....	420	0.8	15.49	32,210
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders.....	250	0.4	14.10	29,340
Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders.....	150	0.9	18.66	38,800
Inspectors, Testers, Sorters, Samplers, and Weighers.....	8,000	2.0	17.53	36,470
Jewelers and Precious Stone and Metal Workers.....	370	1.9	18.00	37,440
Dental Laboratory Technicians.....	640	2.1	20.73	43,110
Medical Appliance Technicians.....	(5)	(5)	34.82	72,430
Ophthalmic Laboratory Technicians.....	660	2.7	17.68	36,760
Packaging and Filling Machine Operators and Tenders.....	1,090	0.4	14.54	30,230
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders.....	1,530	2.1	13.00	27,040
Painters, Transportation Equipment.....	340	0.9	31.19	64,870
Painting, Coating, and Decorating Workers.....	110	0.8	14.80	30,780
Photographic Process Workers and Processing Machine Operators.....	290	1.0	14.65	30,480
Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders.....	100	0.7	14.67	30,520
Etchers and Engravers.....	(5)	(5)	15.58	32,410
Molders, Shapers, and Casters, Except Metal and Plastic.....	330	1.2	17.31	36,000
Paper Goods Machine Setters, Operators, and Tenders.....	330	0.4	16.71	34,750
Helpers--Production Workers.....	5,290	1.5	14.83	30,860

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Warren-Troy-Farmington Hills Metropolitan Division, May 2013 - Continued

Occupation ^{(1)<}	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Production Workers, All Other.....	3,830	2.2	16.21	33,710

⁽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.