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OCCUPATIONAL EMPLOYMENT AND WAGES IN WARREN-TROY-FARMINGTON HILLS, MAY 2010

Workers in the Warren-Troy-Farmington Hills Metropolitan Division had an average (mean) hourly wage of \$22.49 in May 2010, roughly 5 percent above the nationwide average of \$21.35, 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 7 of the 22 major occupational groups, including production, sales and related, and construction and extraction. Three groups had significantly lower wages than their respective national averages: computer and mathematical, protective service, and transportation and material moving.

When compared to the nationwide distribution, local employment was more highly concentrated in 6 of the 22 occupational groups, including architecture and engineering, production, and sales and related. Conversely, 12 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 2010

Major occupational group	Percent of total employment		Average hourly wage	
	United States	Warren	United States	Warren
Total, all occupations	100.0%	100.0%	\$21.35	\$22.49 *
Management	4.7	4.6 *	50.69	51.51
Business and financial operations	4.8	5.3 *	32.54	33.48 *
Computer and mathematical	2.6	3.2 *	37.13	34.19 *
Architecture and engineering	1.8	4.3 *	36.32	38.66 *
Life, physical, and social science	0.8	0.4 *	31.92	30.67
Community and social service	1.5	1.4 *	20.76	21.73
Legal	0.8	0.8	46.60	45.40
Education, training, and library	6.7	4.8 *	24.25	24.11
Arts, design, entertainment, sports, and media	1.4	1.3	25.14	25.38
Healthcare practitioners and technical	5.8	5.9	34.27	35.04
Healthcare support	3.1	3.6 *	12.94	12.75
Protective service	2.5	1.7 *	20.43	19.07 *
Food preparation and serving related	8.7	8.1 *	10.21	10.31
Building and grounds cleaning and maintenance	3.3	3.0 *	12.16	13.19 *
Personal care and service	2.7	2.7	11.82	11.51
Sales and related	10.6	12.5 *	17.69	19.88 *
Office and administrative support	16.9	16.3 *	16.09	16.34
Farming, fishing, and forestry	0.3	***[1] *	11.70	11.65
Construction and extraction	4.0	2.6 *	21.09	23.46 *
Installation, maintenance, and repair	3.9	3.5 *	20.58	21.33 *
Production	6.5	8.7 *	16.24	18.96 *
Transportation and material moving	6.7	5.3 *	15.70	15.07 *

* 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] Indicates a value of less than 0.05 percent.

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 88,760 jobs in production, accounting for 8.7 percent of local area employment, significantly higher than the 6.5-percent share nationally. The average hourly wage for this occupational group locally was \$18.96, measurably above the national wage of \$16.24.

With employment of 10,450, team assemblers was the largest occupation within the production group, followed by machinists (6,960) and first-line supervisors of production and operating workers (5,280). Among the higher paying jobs were first-line supervisors of production and operating workers and power plant operators with mean hourly wages of \$32.28 and \$30.49, respectively. At the lower end of the wage scale were pressers, textile, garment, and related materials (\$8.92) and food cooking machine operators and tenders (\$9.65). (Detailed occupational data for production are presented in table 1; for a complete listing of detailed occupations available go to www.bls.gov/oes/current/oes_47644.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 some of the occupations within the production group. For instance, forging machine setters, operators, and tenders, metal and plastic were employed at 7.9 times the national rate in Warren, and tool and die makers, at 6.7 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 & Budget. The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and nearly 800 non-military 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 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 also are surveyed, but their data are not included in this release. 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 2010 survey was 78.2 percent based on establishments and 74.4 percent based on employment. May 2010 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2010, November 2009, May 2009, November 2008, May 2008, and November 2007. The sample in the Warren-Troy-Farmington Hills Metropolitan Division included 5,202 establishments with a response rate of 76 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The May 2010 OES estimates mark the first set of estimates 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 **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/ro5/home.htm. If you have additional questions, contact the Chicago Economic Analysis and Information Unit at (312) 353-1880. 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, Warren-Troy-Farmington Hills Metropolitan Statistical Division, May 2010

Occupation	Employment		Mean Wages	
	Level ^[1]	Location quotient ^[2]	Hourly	Annual
Production occupations	88,760	1.3	\$18.96	\$39,430
First-line supervisors of production and operating workers	5,280	1.2	32.28	67,140
Coil winders, tapers, and finishers	130	1.1	18.27	38,010
Electrical and electronic equipment assemblers	1,830	1.3	14.35	29,850
Electromechanical equipment assemblers	150	0.4	12.58	26,160
Engine and other machine assemblers	490	1.8	28.33	58,920
Structural metal fabricators and fitters	880	1.4	15.77	32,800
Fiberglass laminators and fabricators	40	0.3	15.96	33,190
Team assemblers	10,450	1.4	15.88	33,030
Timing device assemblers and adjusters	[3]	[3]	15.11	31,430
Assemblers and fabricators, all other	5,870	3.0	23.14	48,120
Bakers	960	0.9	12.31	25,600
Butchers and meat cutters	730	0.7	15.47	32,180
Meat, poultry, and fish cutters and trimmers	[3]	[3]	11.21	23,320
Food batchmakers	700	0.9	10.17	21,160
Food cooking machine operators and tenders	40	0.2	9.65	20,070
Computer-controlled machine tool operators, metal and plastic	2,600	2.6	17.79	37,010
Computer numerically controlled machine tool programmers, metal and plastic	380	2.9	25.75	53,560
Extruding and drawing machine setters, operators, and tenders, metal and plastic	1,440	2.4	14.36	29,870
Forging machine setters, operators, and tenders, metal and plastic	1,400	7.9	13.59	28,260
Rolling machine setters, operators, and tenders, metal and plastic	140	0.6	16.41	34,130
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	2,910	2.0	14.97	31,130
Drilling and boring machine tool setters, operators, and tenders, metal and plastic	610	3.4	18.28	38,020
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	1,360	2.4	21.78	45,300
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	620	1.9	17.77	36,960
Milling and planing machine setters, operators, and tenders, metal and plastic	390	2.4	18.99	39,490
Machinists	6,960	2.5	22.31	46,410
Metal-refining furnace operators and tenders	100	0.8	18.70	38,900
Patternmakers, metal and plastic	40	1.0	20.76	43,180
Foundry mold and coremakers	60	0.8	20.44	42,520
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	1,790	1.9	14.33	29,810
Multiple machine tool setters, operators, and tenders, metal and plastic	770	1.4	[3]	[3]
Tool and die makers	3,570	6.7	25.84	53,750
Welders, cutters, solderers, and brazers	2,630	1.0	19.83	41,250
Welding, soldering, and brazing machine setters, operators, and tenders	370	1.2	20.13	41,880
Heat treating equipment setters, operators, and tenders, metal and plastic	320	2.2	16.45	34,210

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 Statistical Division, May 2010--continued

Occupation	Employment		Mean Wages	
	Level ^[1]	Location quotient ^[2]	Hourly	Annual
Layout workers, metal and plastic	70	0.9	\$24.97	\$51,950
Plating and coating machine setters, operators, and tenders, metal and plastic	[3]	[3]	15.12	31,440
Tool grinders, filers, and sharpeners	630	6.6	19.24	40,010
Metal workers and plastic workers, all other	280	1.4	20.56	42,770
Prepress technicians and workers	430	1.1	21.18	44,040
Printing press operators	1,160	0.8	16.58	34,490
Print binding and finishing workers	270	0.6	16.92	35,200
Laundry and dry-cleaning workers	1,600	1.0	10.77	22,400
Pressers, textile, garment, and related materials	310	0.7	8.92	18,550
Sewing machine operators	470	0.4	14.29	29,720
Tailors, dressmakers, and custom sewers	[3]	[3]	13.77	28,650
Textile cutting machine setters, operators, and tenders	[3]	[3]	17.39	36,180
Textile knitting and weaving machine setters, operators, and tenders	40	0.2	11.09	23,060
Upholsterers	500	2.1	15.58	32,410
Textile, apparel, and furnishings workers, all other	150	1.5	12.64	26,300
Cabinetmakers and bench carpenters	450	0.7	15.16	31,540
Furniture finishers	120	0.9	14.88	30,950
Model makers, wood	[3]	[3]	32.94	68,520
Sawing machine setters, operators, and tenders, wood	[3]	[3]	16.64	34,610
Woodworking machine setters, operators, and tenders, except sawing	140	0.3	13.98	29,070
Power distributors and dispatchers	170	2.1	28.57	59,420
Power plant operators	330	1.0	30.49	63,420
Stationary engineers and boiler operators	130	0.5	29.74	61,870
Water and wastewater treatment plant and system operators	370	0.4	21.40	44,510
Gas plant operators	[3]	[3]	27.06	56,290
Plant and system operators, all other	[3]	[3]	25.34	52,700
Chemical equipment operators and tenders	30	0.1	18.06	37,570
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders	[3]	[3]	14.55	30,260
Crushing, grinding, and polishing machine setters, operators, and tenders	50	0.2	17.80	37,020
Grinding and polishing workers, hand	80	0.4	14.02	29,160
Mixing and blending machine setters, operators, and tenders	610	0.6	16.82	34,980
Cutters and trimmers, hand	90	0.7	14.41	29,960
Cutting and slicing machine setters, operators, and tenders	250	0.5	15.10	31,410
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	450	0.9	13.75	28,590
Inspectors, testers, sorters, samplers, and weighers	4,980	1.5	19.06	39,640
Jewelers and precious stone and metal workers	210	1.2	13.26	27,590
Dental laboratory technicians	410	1.3	18.96	39,440
Ophthalmic laboratory technicians	130	0.6	17.56	36,530
Packaging and filling machine operators and tenders	1,000	0.4	14.60	30,360

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 Statistical Division, May 2010--continued

Occupation	Employment		Mean Wages	
	Level ^[1]	Location quotient ^[2]	Hourly	Annual
Coating, painting, and spraying machine setters, operators, and tenders	720	1.2	\$13.11	\$27,260
Painters, transportation equipment	450	1.3	25.95	53,970
Painting, coating, and decorating workers	170	0.9	13.08	27,200
Photographic process workers and processing machine operators	460	1.0	11.91	24,760
Adhesive bonding machine operators and tenders	70	0.6	10.35	21,530
Cleaning, washing, and metal pickling equipment operators and tenders	120	0.8	15.11	31,420
Etchers and engravers	80	1.3	17.09	35,560
Molders, shapers, and casters, except metal and plastic	140	0.5	14.52	30,210
Paper goods machine setters, operators, and tenders	180	0.3	13.58	28,250
Helpers--production workers	4,160	1.3	12.52	26,030
Production workers, all other	6,850	3.7	19.02	39,570

[1] 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.

[2] 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.

[3] Estimate not released.