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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 For Selected Engineering Occupations in Michigan's Metropolitan Areas – May 2012**

Among Michigan's 15 metropolitan areas, Detroit-Warren-Livonia (mechanical engineers) and Flint (industrial engineers) were the only areas to have annual wages significantly above their respective national average wage among three selected engineering occupations, the U.S. Bureau of Labor Statistics reported today. Regional Commissioner Charlene Peiffer noted that Grand Rapids-Wyoming, Holland-Grand Haven, Kalamazoo-Portage, Lansing-East Lansing, and Muskegon-Norton Shores registered wages significantly below those of the nation for all three of the selected engineering occupations. Nationwide, the average (mean) wage for civil engineers was \$84,140, industrial engineers earned \$82,100 per year, and mechanical engineers annual pay averaged \$84,770. (See [table A](#). For comprehensive definitions of metropolitan areas in Michigan, please see Technical Note.)

**Table A. Average (mean) annual wages for selected engineering occupations in the United States and metropolitan areas in Michigan, May 2012**

Area	Civil Engineers	Industrial Engineers	Mechanical Engineers
United States .....	\$84,140	\$82,100	\$84,770
Michigan .....	70,290*	78,690*	86,280
Ann Arbor .....	68,140*	81,190	81,300
Battle Creek.....	72,300*	67,970*	76,880
Bay City .....	(1)	76,030	80,070
Detroit-Warren-Livonia .....	69,620*	83,440	90,550*
Flint.....	72,440*	88,760*	69,660*
Grand Rapids-Wyoming.....	74,690*	69,750*	67,150*
Holland-Grand Haven.....	70,330*	64,920*	66,240*
Jackson .....	78,860	70,120*	65,900*
Kalamazoo-Portage.....	64,790*	73,000*	75,560*
Lansing-East Lansing.....	74,470*	74,030*	69,050*
Monroe .....	79,170	81,180	78,660*
Muskegon-Norton Shores .....	68,890*	63,150*	66,290*
Niles-Benton Harbor .....	77,640	67,180*	73,060*
Saginaw-Saginaw Township North.....	58,730*	(1)	72,600*
South Bend-Mishawaka .....	74,800*	70,990*	76,920

Footnotes:

(1) Data not available.

Of the 15 metropolitan areas located entirely or partially in the state, Detroit-Warren-Livonia was one of the larger employers of industrial engineers (13,050) and civil engineers (3,270). Outside of the Detroit area, Grand Rapids-Wyoming was among the largest employers of civil engineers (520), industrial engineers (2,130), and mechanical engineers (1,150). (See [table B](#).)

**Table B. Employment for selected engineering occupations in the United States and metropolitan areas in Michigan, May 2012**

Area	Civil Engineers	Industrial Engineers	Mechanical Engineers
United States .....	258,100	220,130	252,540
Michigan .....	5,970	23,940	30,450
Ann Arbor .....	260	1,070	780
Battle Creek.....	(1)	240	130
Bay City .....	(1)	60	80
Detroit-Warren-Livonia .....	3,270	13,050	(1)
Flint.....	110	340	190
Grand Rapids-Wyoming.....	520	2,130	1,150
Holland-Grand Haven.....	140	930	460
Jackson .....	120	(1)	100
Kalamazoo-Portage.....	150	980	580
Lansing-East Lansing.....	380	520	430
Monroe .....	50	470	200
Muskegon-Norton Shores .....	60	210	170
Niles-Benton Harbor.....	80	110	580
Saginaw-Saginaw Township North.....	70	(1)	320
South Bend-Mishawaka .....	100	230	400

Footnotes:

(1) Data not available.

### **Wages for civil engineers in metropolitan areas in Michigan**

Civil engineers employed in Monroe (\$79,170), Jackson (\$78,860), and Niles-Benton Harbor (\$77,640) were among the better paid in the state; however, wages were not significantly higher than the national average of \$84,140 in these or any of Michigan's other metropolitan areas. In fact, eleven areas reported wages that were significantly below the U.S. average. Saginaw-Saginaw Township North (\$58,730) and Kalamazoo-Portage (\$64,790) were among the lower paying areas.

### **Wages for industrial engineers in metropolitan areas in Michigan**

Flint's \$88,760 annual wage was the only metropolitan area in the state to be measurably higher than the U.S. average of \$82,100 for industrial engineers. Detroit-Warren-Livonia (\$83,440), Ann Arbor (\$81,190), and Monroe (\$81,180) were among the top paid areas, all having earnings similar to the national average. Nine other areas had average annual wages below that of the nation for this occupation including Muskegon-Norton Shores at \$63,150 and Holland-Grand Haven at \$64,920.

### **Wages for mechanical engineers in metropolitan areas in Michigan**

At \$90,550, Detroit-Warren-Livonia was the only metropolitan area in Michigan to record an annual wage above the national average of \$84,770 for mechanical engineers. Annual mean wages in ten metropolitan areas in the state were measurably below the U.S. average for this occupation including Jackson (\$65,900), Holland-Grand Haven (\$66,240), and Muskegon-Norton Shores (\$66,290).

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 and the Indiana Department of Workforce Development. The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and about 800 non-military detailed occupations for the nation, states, metropolitan statistical areas, metropolitan divisions, and nonmetropolitan areas.

OES wage and employment data for civil, industrial and mechanical engineers in the state and metropolitan areas 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 establishments in May and the other in November. May 2012 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2012, November 2011, May 2011, November 2010, May 2010, and November 2009. The overall national response rate for the six panels is 76.6 percent based on establishments and 72.9 percent based on employment. 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).

With the release of the May 2012 estimates, OES data are based on the 2010 Standard Occupational Classification (SOC) system for the first time. The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and more than 800 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 for the first time. Information about the 2010 SOC is available on the BLS website at [www.bls.gov/soc](http://www.bls.gov/soc).

The May 2012 OES estimates are the first to be produced using the 2012 North American Industry Classification System (NAICS). Information about the 2012 NAICS is available on the BLS website at [www.bls.gov/bls/naics.htm](http://www.bls.gov/bls/naics.htm).

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.

### **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.

**Ann Arbor, Mich. MSA** consists of Washtenaw County.

**Battle Creek, Mich. MSA** consists of Calhoun County

**Bay City, Mich. MSA** consists of Bay County.

**Detroit-Warren-Livonia, Mich. MSA** consists of Lapeer, Livingston, Macomb, Oakland, St. Clair and Wayne Counties.

**Flint, Mich. MSA** consists of Genesee County.

**Grand Rapids-Wyoming, Mich. MSA** consists of Barry, Ionia, Kent, and Newaygo Counties.

**Holland-Grand Haven, Mich. MSA** consists of Ottawa County.

**Jackson, Mich. MSA** consists of Jackson County.

**Kalamazoo-Portage, Mich. MSA** consists of Kalamazoo and Van Buren Counties.

**Lansing-East Lansing, Mich. MSA** consists of Clinton, Eaton, and Ingham Counties.

**Monroe, Mich. MSA** consists of Monroe County.

**Muskegon-Norton Shores, Mich. MSA** consists of Muskegon County.

**Niles-Benton Harbor, Mich. MSA** consists of Berrien County.

**Saginaw-Saginaw Township North, Mich. MSA** consists of Saginaw County.

**South Bend-Mishawaka, Mich. MSA** consists of Cass County in Michigan and St. Joseph County in Indiana.