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## Occupational Employment and Wages in Cleveland-Elyria — May 2020

Workers in the Cleveland-Elyria, OH Metropolitan Statistical Area had an average (mean) hourly wage of \$26.26 in May 2020, about 3 percent below the nationwide average of \$27.07, the U.S. Bureau of Labor Statistics reported today. Regional Commissioner Jason Palmer noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 1 of the 22 major occupational groups: construction and extraction. Thirteen groups had significantly lower wages than their respective national averages, including legal; arts, design, entertainment, sports, and media; and life, physical, and social science.

When compared to the nationwide distribution, Cleveland area employment was more highly concentrated in 5 of the 22 occupational groups, including production, healthcare practitioners and technical, and office and administrative support. Nine groups had employment shares significantly below their national representation, including construction and extraction, transportation and material moving, and management. (See [table A.](#))

**Table A. Occupational employment and wages by major occupational group, United States and the Cleveland metropolitan area, and measures of statistical significance, May 2020**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Cleveland	United States	Cleveland	Percent difference <sup>(1)</sup>
Total, all occupations .....	100.0	100.0	\$27.07	\$26.26*	-3
Management .....	5.7	5.0*	60.81	58.51*	-4
Business and financial operations .....	6.0	6.6*	38.79	37.01*	-5
Computer and mathematical .....	3.3	3.3	46.53	42.89*	-8
Architecture and engineering .....	1.8	1.7*	43.41	39.48*	-9
Life, physical, and social science .....	0.9	0.8*	38.15	34.18*	-10
Community and social service .....	1.6	1.5	25.09	23.44*	-7
Legal .....	0.8	1.0*	54.00	49.03*	-9
Educational instruction and library .....	6.1	5.4*	28.75	29.71	3
Arts, design, entertainment, sports, and media .....	1.3	1.2*	30.96	26.30*	-15
Healthcare practitioners and technical .....	6.2	7.9*	41.30	40.09	-3
Healthcare support .....	4.6	4.5	15.50	14.97*	-3
Protective service .....	2.4	2.5	25.11	22.99*	-8
Food preparation and serving related .....	8.1	7.5*	13.30	11.92*	-10
Building and grounds cleaning and maintenance .....	2.9	2.8	15.75	15.37	-2
Personal care and service .....	1.9	2.0	15.68	14.23*	-9
Sales and related .....	9.4	9.2	22.00	22.06	0
Office and administrative support .....	13.3	14.1*	20.38	20.26	-1
Farming, fishing, and forestry .....	0.3	(2)	16.02	16.40	2
Construction and extraction .....	4.3	2.9*	25.93	27.03*	4
Installation, maintenance, and repair .....	3.9	3.8	25.17	24.33*	-3
Production .....	6.1	8.4*	20.08	19.79	-1

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and the Cleveland metropolitan area, and measures of statistical significance, May 2020 - Continued**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Cleveland	United States	Cleveland	Percent difference <sup>(1)</sup>
Transportation and material moving .....	8.7	7.7*	19.08	18.45	-3

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Cleveland-Elyria, OH Metropolitan Statistical Area 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 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. Cleveland had 82,550 jobs in production, accounting for 8.4 percent of local area employment, significantly higher than the 6.1-percent share nationally. The average hourly wage for this occupational group locally was \$19.79, compared to the national wage of \$20.08.

Some of the larger detailed occupations within the production group included miscellaneous assemblers and fabricators (13,820); machinists (5,550); and inspectors, testers, sorters, samplers, and weighers (5,420). Among the higher-paying jobs in this group were power distributors and dispatchers as well as power plant operators, with mean hourly wages of \$36.83 and \$36.06, respectively. At the lower end of the wage scale were pressers, textile, garment, and related materials (\$12.22) and cutters and trimmers, hand (\$12.40). (Detailed data for the production occupations are presented in [table 1](#); for a complete listing of detailed occupations available go to [www.bls.gov/oes/current/oes\\_17460.htm](http://www.bls.gov/oes/current/oes_17460.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 Cleveland area, above-average concentrations of employment were found in many of the occupations within the production group. For instance, foundry mold and coremakers were employed at 10.0 times the national rate in Cleveland, and rolling machine setters, operators, and tenders, metal and plastic, at 6.0 times the U.S. average. Laundry and dry-cleaning workers had a location quotient of 1.0 in Cleveland, indicating that this particular occupation’s local and national employment shares were similar.

These statistics are from the Occupational Employment and Wage Statistics (OEWS) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Ohio Department of Job & Family Services.

## **Occupational Employment and Wage Statistics (OEWS) Name Change**

The Occupational Employment Statistics (OES) program has changed its name to Occupational Employment and Wage Statistics (OEWS) to better reflect the range of data available from the program. Data released on or after March 31, 2021, will reflect the new program name. Webpages, publications, and other materials associated with previous data releases will retain the Occupational Employment Statistics name.

## **Coronavirus (COVID-19) Impact on May 2020 Occupational Employment and Wage Statistics**

Due to features of the OEWS methodology, the May 2020 OEWS estimates do not fully reflect the impact of the COVID-19 pandemic. The May 2020 OEWS estimates are based on survey panels collected for May 2020, November 2019, May 2019, November 2018, May 2018, and November 2017. Because 5 of the 6 survey panels used to produce the estimates date from before the COVID-19 pandemic, only the most recent (May 2020) survey panel reflects changes in occupational proportions related to the COVID-19 pandemic.

The May 2020 OEWS employment estimates are benchmarked to the average of May 2020 and November 2019 employment from the Quarterly Census of Employment and Wages (QCEW). Although the May 2020 QCEW data reflect the early employment effects of the COVID-19 pandemic, the November 2019 QCEW employment data precede the pandemic, and therefore do not reflect its impact.

In addition, as a result of the pandemic, response rates for the November 2019 and May 2020 panels were lower in some areas. Lower response rates may negatively affect data availability and data quality. More information is available at [www.bls.gov/covid19/effects-of-covid-19-pandemic-on-occupational-employment-and-wage-statistics.htm](http://www.bls.gov/covid19/effects-of-covid-19-pandemic-on-occupational-employment-and-wage-statistics.htm).

## **Implementing the 2018 Standard Occupational Classification (SOC) System**

With the May 2019 estimates, the OEWS program began implementing the 2018 Standard Occupational Classification (SOC) system. Because the May 2019 and May 2020 estimates are based on a combination of survey data collected using the 2010 SOC and survey data collected using the 2018 SOC, these estimates use a hybrid of the two classification systems that contains some combinations of occupations that are not found in either the 2010 or 2018 SOC. This is the second and final year that the hybrid occupational structure will be used. The May 2021 estimates, to be published in Spring 2022, will be the first OEWS estimates based entirely on survey data collected using the 2018 SOC. For more information on the occupational classification system used in the May 2019 and May 2020 estimates, please see [www.bls.gov/oes/soc\\_2018.htm](http://www.bls.gov/oes/soc_2018.htm) and [www.bls.gov/oes/oes\\_ques.htm#qf10](http://www.bls.gov/oes/oes_ques.htm#qf10).

## **Upcoming Changes to the Occupational Employment and Wage Statistics Methodology**

With the May 2021 estimates, to be released in Spring 2022, the OEWS program plans to begin using a new estimation methodology. The new model-based methodology, called MB3, has advantages over the existing methodology, as described in the Monthly Labor Review article at [www.bls.gov/opub/mlr/2019/article/model-based-estimates-for-the-occupational-employment-statistics-program.htm](http://www.bls.gov/opub/mlr/2019/article/model-based-estimates-for-the-occupational-employment-statistics-program.htm). OEWS estimates for the years 2015-2018 were recalculated using the new estimation methodology and are available as research estimates at [www.bls.gov/oes/oes-mb3-methods.htm](http://www.bls.gov/oes/oes-mb3-methods.htm).

## Technical Note

The Occupational Employment and Wage Statistics (OEWS) survey is a semiannual survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OEWS 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. OEWS data are available at [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.htm).

The OEWS 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. OEWS estimates are constructed from a sample of about 1.1 million establishments. Each year, two semiannual panels of approximately 180,000 to 185,000 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 2020 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2020, November 2019, May 2019, November 2018, May 2018, and November 2017. The unweighted sample employment of 83 million across all six semiannual panels represents approximately 56 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 69 percent based on establishments and 66 percent based on weighted sampled employment. The sample in the Cleveland-Elyria, OH Metropolitan Statistical Area included 4,973 establishments with a response rate of 69 percent. For more information about OEWS 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.

### 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 **Cleveland-Elyria, OH Metropolitan Statistical Area** includes Cuyahoga, Geauga, Lake, Lorain, and Medina Counties in Ohio.

### For more information

Answers to frequently asked questions about the OEWS data are available at [www.bls.gov/oes/oes\\_ques.htm](http://www.bls.gov/oes/oes_ques.htm). Detailed information about the OEWS program is available at [www.bls.gov/oes/oes\\_doc.htm](http://www.bls.gov/oes/oes_doc.htm).

Information in this release will be made available to individuals with sensory impairments upon request. Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

**Table 1. Employment and wage data for production occupations, Cleveland metropolitan area, May 2020**

Occupation (1)	Employment		Mean wages	
	Level (2)	Location quotient (3)	Hourly	Annual (4)
Production occupations .....	82,550	1.4	\$19.79	\$41,150
First-line supervisors of production and operating workers .....	5,370	1.3	32.10	66,760
Coil winders, tapers, and finishers .....	170	2.0	19.39	40,340
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers ...	1,770	0.9	16.22	33,740
Structural metal fabricators and fitters .....	520	1.1	18.88	39,260
Fiberglass laminators and fabricators .....	(5)	(5)	14.67	30,510
Miscellaneous assemblers and fabricators .....	13,820	1.6	17.03	35,430
Bakers .....	1,690	1.4	14.20	29,530
Butchers and meat cutters .....	620	0.6	16.81	34,970
Meat, poultry, and fish cutters and trimmers .....	290	0.3	15.25	31,710
Food batchmakers .....	870	0.8	15.56	32,360
Food cooking machine operators and tenders .....	(5)	(5)	18.79	39,070
Food processing workers, all other .....	70	0.2	14.51	30,190
Extruding and drawing machine setters, operators, and tenders, metal and plastic .....	820	1.7	17.26	35,900
Forging machine setters, operators, and tenders, metal and plastic .....	440	4.5	22.01	45,790
Rolling machine setters, operators, and tenders, metal and plastic .....	1,450	6.0	23.62	49,120
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic .....	2,900	2.3	20.30	42,220
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic .....	1,660	3.4	18.69	38,880
Lathe and turning machine tool setters, operators, and tenders, metal and plastic .....	830	5.0	20.68	43,010
Milling and planing machine setters, operators, and tenders, metal and plastic .....	520	4.7	21.60	44,930
Machinists .....	5,550	2.2	20.93	43,530
Metal-refining furnace operators and tenders .....	120	1.1	18.41	38,290
Pourers and casters, metal .....	(5)	(5)	17.93	37,300
Foundry mold and coremakers .....	1,140	10.0	15.80	32,850
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic .....	3,110	2.8	15.84	32,950
Multiple machine tool setters, operators, and tenders, metal and plastic .....	2,520	2.7	18.11	37,670
Tool and die makers .....	1,220	2.8	25.06	52,130
Welders, cutters, solderers, and brazers .....	2,040	0.7	21.15	43,980
Welding, soldering, and brazing machine setters, operators, and tenders .....	260	1.1	19.07	39,660
Heat treating equipment setters, operators, and tenders, metal and plastic .....	360	3.1	15.83	32,930
Plating machine setters, operators, and tenders, metal and plastic .....	910	3.4	15.87	33,010
Tool grinders, filers, and sharpeners .....	80	1.8	23.95	49,810
Metal workers and plastic workers, all other .....	40	0.3	19.89	41,380
Prepress technicians and workers .....	310	1.6	20.17	41,950
Printing press operators .....	1,670	1.5	18.42	38,310
Print binding and finishing workers .....	320	1.1	15.89	33,040
Laundry and dry-cleaning workers .....	1,280	1.0	12.52	26,030
Pressers, textile, garment, and related materials .....	100	0.4	12.22	25,410
Sewing machine operators .....	820	1.0	12.93	26,890
Sewers, hand .....	(5)	(5)	14.41	29,980
Tailors, dressmakers, and custom sewers .....	240	1.7	17.76	36,940
Extruding and forming machine setters, operators, and tenders, synthetic and glass fibers .....	40	0.3	16.32	33,940
Upholsterers .....	(5)	(5)	19.93	41,450
Cabinetmakers and bench carpenters .....	590	0.9	21.39	44,480
Furniture finishers .....	(5)	(5)	15.71	32,670

Note: See footnotes at end of table.

**Table 1. Employment and wage data for production occupations, Cleveland metropolitan area, May 2020 - Continued**

Occupation (1)	Employment		Mean wages	
	Level (2)	Location quotient (3)	Hourly	Annual (4)
Sawing machine setters, operators, and tenders, wood	(5)	(5)	15.90	33,080
Woodworking machine setters, operators, and tenders, except sawing.....	(5)	(5)	18.17	37,790
Woodworkers, all other.....	(5)	(5)	22.03	45,810
Power distributors and dispatchers .....	140	2.0	36.83	76,610
Power plant operators .....	30	0.1	36.06	75,010
Stationary engineers and boiler operators .....	220	1.1	30.64	63,730
Water and wastewater treatment plant and system operators .....	590	0.7	25.92	53,910
Chemical plant and system operators .....	210	1.0	32.52	67,640
Petroleum pump system operators, refinery operators, and gaugers .....	40	0.1	35.31	73,430
Plant and system operators, all other.....	(5)	(5)	25.27	52,570
Chemical equipment operators and tenders .....	1,320	2.0	25.38	52,800
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	120	0.3	26.46	55,040
Crushing, grinding, and polishing machine setters, operators, and tenders .....	320	1.4	19.27	40,090
Grinding and polishing workers, hand.....	150	0.9	18.96	39,430
Mixing and blending machine setters, operators, and tenders .....	1,380	1.7	19.15	39,830
Cutters and trimmers, hand.....	(5)	(5)	12.40	25,790
Cutting and slicing machine setters, operators, and tenders .....	380	1.0	17.09	35,560
Extruding, forming, pressing, and compacting machine setters, operators, and tenders .....	760	1.7	16.19	33,680
Furnace, kiln, oven, drier, and kettle operators and tenders .....	160	1.3	21.38	44,460
Inspectors, testers, sorters, samplers, and weighers.....	5,420	1.4	21.60	44,930
Dental laboratory technicians .....	410	1.9	21.78	45,290
Medical appliance technicians.....	120	1.2	22.24	46,260
Ophthalmic laboratory technicians .....	(5)	(5)	25.02	52,050
Packaging and filling machine operators and tenders ....	2,300	0.9	15.77	32,800
Painting, coating, and decorating workers .....	70	0.8	16.51	34,350
Coating, painting, and spraying machine setters, operators, and tenders .....	1,370	1.4	18.48	38,430
Photographic process workers and processing machine operators .....	50	0.8	16.76	34,850
Computer numerically controlled tool operators.....	2,660	2.5	20.57	42,790
Computer numerically controlled tool programmers .....	630	3.5	27.02	56,210
Adhesive bonding machine operators and tenders.....	180	2.1	14.88	30,940
Cleaning, washing, and metal pickling equipment operators and tenders .....	(5)	(5)	13.40	27,880
Etchers and engravers .....	(5)	(5)	14.24	29,610
Molders, shapers, and casters, except metal and plastic .....	240	0.8	17.59	36,590
Paper goods machine setters, operators, and tenders ...	610	0.9	18.40	38,270
Helpers--production workers .....	1,080	0.6	17.15	35,660
Production workers, all other.....	1,050	0.8	16.98	35,310

Footnotes:

(1) For a complete listing of all detailed occupations in the Cleveland-Elyria, OH Metropolitan Statistical Area, see [www.bls.gov/oes/current/oes\\_17460.htm](http://www.bls.gov/oes/current/oes_17460.htm)

(2) Estimates for detailed occupations may not sum to the totals due to rounding, and because the totals may include occupations that are 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.