

Grand Rapids—Muskegon—Holland, MI National Compensation Survey July 1998



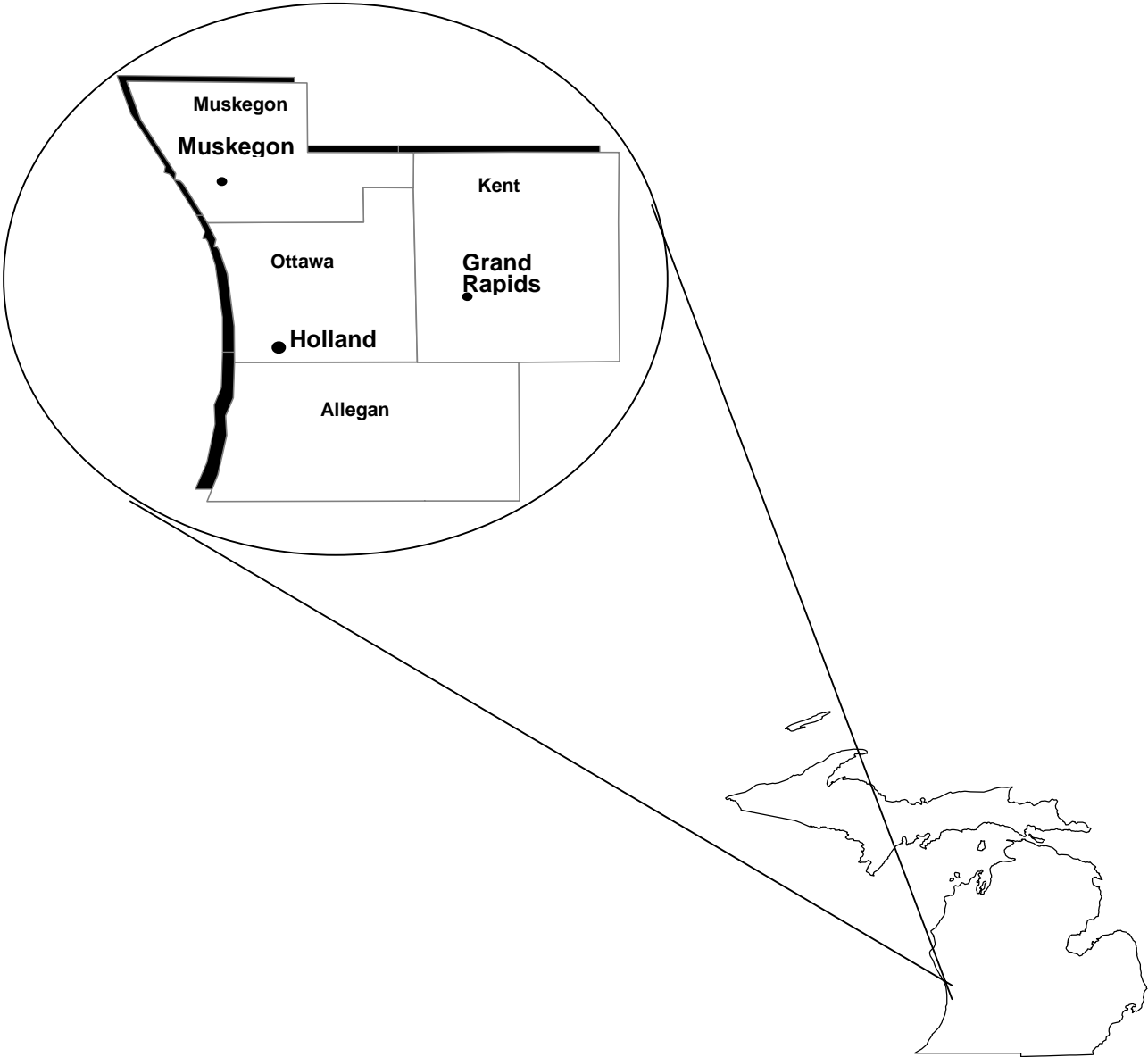
U.S. Department of Labor
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Bureau of Labor Statistics
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Grand Rapids—Muskegon—Holland, MI Metropolitan Statistical Area



Preface

This bulletin provides results of a July 1998 survey of occupational pay in the Grand Rapids-Muskegon-Holland, MI, Metropolitan Statistical Area (MSA). Data shown in this bulletin were collected as part of the Bureau of Labor Statistics' (BLS) new program known as the National Compensation Survey (NCS).

The survey could not have been conducted without the cooperation of the many private firms and government jurisdictions that provided pay data included in this bulletin. The Bureau thanks these respondents for their cooperation.

Survey data were collected and reviewed by Bureau of Labor Statistics field economists under the direction of Greg Philipaitis, Assistant Regional Commissioner for Operations of the Chicago Regional Office. The Office of Compensation and Working Conditions, in cooperation with the Office of Field Operations and the Office of Technology and Survey Processing in the BLS National Office, designed the survey, processed the data, and analyzed the survey results.

For additional information regarding this survey, please contact the BLS Chicago Regional Office at (312) 353-1880. You may also write to the Bureau of Labor Statistics at: Division of Compensation Data Analysis and Planning, 2 Massachusetts Avenue, NE, Room 4175, Washington, DC 20212-0001, or call (202) 606-6220, or send e-mail to ocltinfo@bls.gov.

The data contained in this bulletin are also available at the BLS Internet site (<http://stats.bls.gov/comhome.htm>). Data are in three formats: an ASCII file containing the published table formats; an ASCII file containing positional columns of data for manipulation as a data base or spreadsheet; and a Portable Document Format (PDF) file containing the entire bulletin.

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Introduction

This survey of occupational pay was conducted in the Grand Rapids—Muskegon—Holland, MI, Metropolitan Statistical Area (MSA). The MSA includes Allegan, Kent, Muskegon, and Ottawa Counties, MI.

This bulletin consists primarily of tables whose data are analyzed in the initial textual section. Tabulations provide information on earnings of workers in a variety of occupations and at a wide range of work levels. Also contained in this bulletin is information on the program, a technical note describing survey procedures, and several appendixes with detailed information on occupational classifications and the generic leveling methodology.

NCS design and products

The Bureau of Labor Statistics' (BLS) new National Compensation Survey (NCS) is designed to provide data on the levels and rates of change of occupational wages and employee benefits for localities, broad geographic regions, and the nation as a whole. One output of the NCS will be the Employment Cost Index, a quarterly measure of the change in employer costs for wages and benefits. This bulletin is limited to data on wages and salaries. These data are similar to those released under the Occupational Compensation Survey (OCS), which has been discontinued.

Due to the limited amount of time available to initiate this phase of the program, a number of companies were unable to provide complete data before the publication deadline. As a result, some surveys have a high nonresponse rate for the all industries or the private industry iterations. Such instances are noted in the bulletin table footnotes.

NCS more extensive than OCS

The wage data in this bulletin differ from those in previous Occupational Compensation Surveys by providing broader coverage of occupations and establishments within the survey area.

Occupations surveyed for this bulletin were selected using probability techniques from a list of all those present in each establishment. Previous OCS bulletins were limited to a preselected list of occupations, which represented a small subset of all occupations in the economy. Information in the new bulletin is published for a variety of occupation-based data. This new approach includes data on broad occupational classifications such as white-collar workers, major occupational groups such as sales workers, and individual occupations such as cashiers.

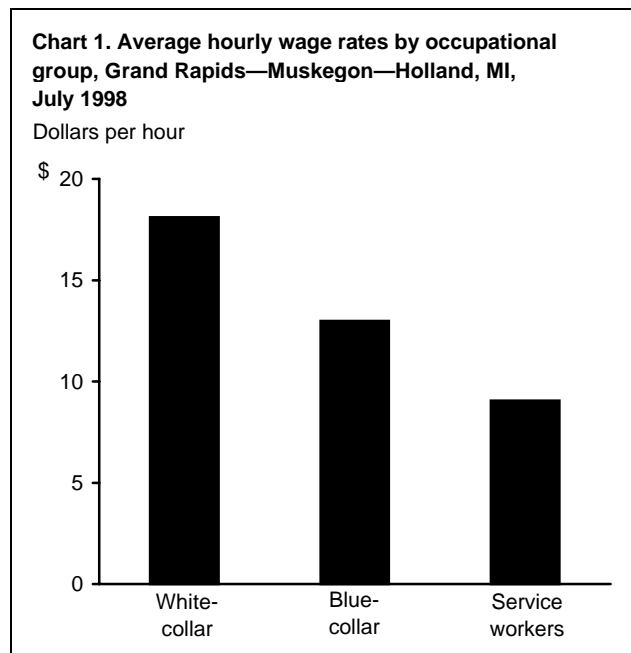
In tables containing work levels within occupational series, the work levels are derived from generic standards that *apply to all* occupational groups. The job levels in the OCS bulletins were based on narrowly-defined descriptions that were not comparable across specific occupations.

Occupational data in this bulletin are also tabulated for other classifications such as industry group, full-time versus part-time workers, union versus nonunion status, time versus incentive status, and establishment employment size. Not all of these series were generated by the OCS program.

The establishments surveyed for this bulletin were limited to those with 50 or more employees. Eventually, NCS will be expanded to cover those now-excluded establishments. Then, virtually all workers in the civilian economy will be surveyed, excluding only agriculture, private households, and employees of the Federal Government.

Wages in the Grand Rapids—Muskegon—Holland, MI Metropolitan Statistical Area

Straight-time wages in the Grand Rapids—Muskegon—Holland, MI, Metropolitan Statistical Area averaged \$14.72 per hour during July 1998. White-collar workers had an average wage of \$18.11 per hour. Blue-collar workers averaged \$12.99 per hour, while service workers had average earnings of \$9.06 per hour. (All hourly rates in this summary cover both full- and part-time workers, unless otherwise noted.)



Within each of these occupational groups, average hourly wages for individual occupations were estimated. For example, white-collar occupations included registered nurses at \$20.11 per hour, secretaries at \$11.76, and general office clerks at \$9.94. Among occupations in the blue-collar category, truck drivers averaged \$12.69 per hour while stock handlers and baggers averaged \$8.07. Finally, service occupations included janitors and cleaners at \$11.29 per hour and nursing aides, orderlies and attendants at \$9.54 per hour. Table A-1 presents earnings data for 72 detailed occupations; data for other detailed occupations surveyed could not be reported separately due to concerns about the confidentiality of survey respondents and the reliability of the data.

Survey results show that private industry workers in Grand Rapids—Muskegon—Holland, MI earned \$13.93 per hour, while surveyed State and local government workers averaged \$21.50. Table A-2 reports the average hourly rate for white-collar occupations as \$16.85 in private industry and \$24.86 in State and local government. Blue-collar occupations showed an average hourly rate of \$12.93 in private industry and \$15.24 in State and local government. Service occupations within private industry averaged \$7.66 per hour while those found in State and local government averaged \$14.97.

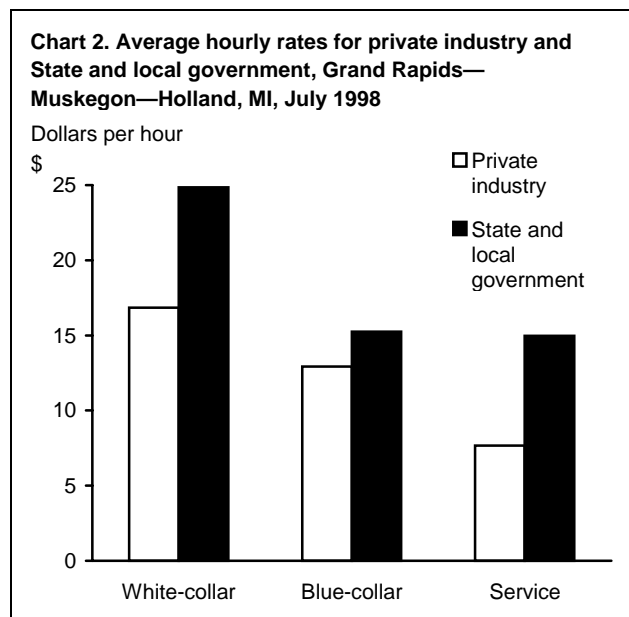
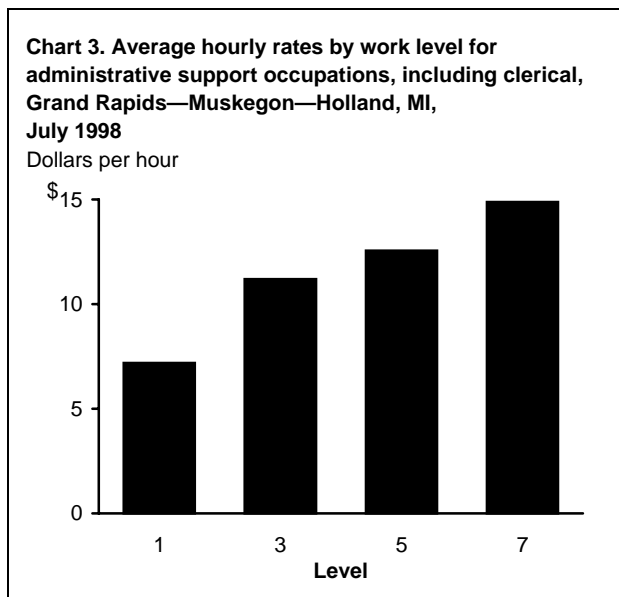


Table A-3 presents data for workers considered by the survey respondents to be either full-time or part-time. Average wages for full-time workers, all occupations, were \$15.48 per hour, compared with an average of \$9.31 per hour for part-time workers.

Data for specific work levels within major occupational groups are reported in table B-1. Occasionally, wage estimates for lower levels of work within major occupational groups are greater than estimates for higher levels. This can occur due to the mix of specific occupations (and industries) represented by the broad group as well as by the variability of the estimate. Some levels within a group may

not be published because no workers were identified at that level or because there were not enough data to guarantee confidentiality and reliability.

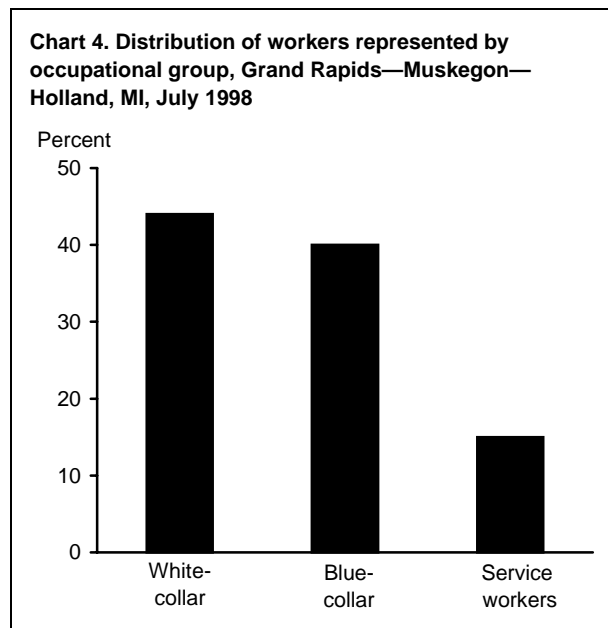
Work levels for all major groups span several levels, with professional specialty occupations and executive, administrative, and managerial occupations typically starting and ending at higher work levels than the other groups. Published data for administrative support occupations, including clerical, ranged from level 1 to level 7. As illustrated in chart 3, the average hourly rate was \$7.18 for level 1, \$11.19 for level 3, \$12.56 for level 5, and \$14.88 for level 7.



Surveyed union workers had an average hourly rate of \$16.67, as reported in table C-1. Wages for nonunion workers averaged \$14.13. Time workers, whose wages were based solely on an hourly rate or a salary, averaged \$14.59 per hour. Incentive workers, whose wages were at least partially based on productivity payments, averaged \$16.88 per hour.

Table C-2 shows wage data for specific industry divisions within private industry. Hourly wages averaged \$17.61 in finance, insurance and real estate, and \$11.83 in services. Data for other industry divisions did not meet publication criteria.

Table C-4 reports that a total of 341,446 workers were represented by the Grand Rapids—Muskegon—Holland, MI survey. White-collar occupations included 151,230 workers, or 44 percent, blue-collar occupations included 138,364 workers, or 41 percent; and service occupations included 51,852 workers, or 15 percent.



Data are also presented in appendix table 1 on the number of establishments studied by industry group and employment size. The relative standard errors of published mean hourly earnings for all industries, private industry, and State and local government are available in appendix table 2. The average work levels for published occupational groups and selected occupations are presented in appendix table 3.

Table A-1. Hourly earnings¹ for selected occupations, all workers², all industries, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupation ³	All industries					
	Mean	Percentiles				
		10	25	Median 50	75	90
All occupations	\$14.72	\$7.10	\$9.08	\$12.74	\$18.02	\$23.96
All occupations excluding sales	14.75	7.14	9.12	12.88	18.18	23.90
White-collar occupations	18.11	8.50	10.48	15.16	22.69	31.13
White-collar occupations excluding sales	18.66	8.75	10.80	16.40	23.37	31.79
Professional specialty and technical occupations	22.48	12.33	15.82	21.00	26.44	36.70
Professional specialty occupations	24.70	13.72	18.63	23.01	29.09	40.39
Engineers, architects, and surveyors	25.73	19.23	21.97	25.62	29.30	32.73
Industrial engineers	26.90	21.97	23.56	26.66	29.54	32.86
Engineers, N.E.C.	25.25	19.04	19.17	23.89	28.46	34.59
Mathematical and computer scientists	21.90	16.66	18.99	20.19	26.37	26.46
Computer systems analysts and scientists	21.42	15.94	18.99	20.19	26.37	26.44
Natural scientists	—	—	—	—	—	—
Health related occupations	21.07	16.31	18.63	20.81	22.38	26.12
Registered nurses	20.11	16.15	18.21	20.81	22.16	22.50
Teachers, college and university	35.71	26.49	29.92	36.70	40.24	45.31
Teachers, except college and university	28.93	10.00	15.71	28.67	40.63	44.77
Prekindergarten and kindergarten	14.47	8.45	8.75	10.00	13.83	31.16
Elementary school teachers	31.86	14.09	22.70	33.33	41.66	44.73
Secondary school teachers	32.80	16.87	23.75	30.41	40.94	50.38
Teachers, special education	37.34	26.94	30.33	36.83	44.41	49.34
Teachers, N.E.C.	23.50	11.22	15.08	21.46	29.57	42.34
Substitute teachers	9.95	9.09	10.00	10.00	10.00	10.27
Librarians, archivists, and curators	—	—	—	—	—	—
Social scientists and urban planners	—	—	—	—	—	—
Social, recreation, and religious workers	17.26	11.47	13.79	17.20	20.96	21.35
Social workers	18.13	12.71	14.72	18.12	20.96	22.22
Writers, authors, entertainers, athletes, and professionals, N.E.C.	18.66	8.00	10.13	19.81	25.44	25.44
Technical occupations	17.13	11.12	13.18	16.50	21.00	22.02
Licensed practical nurses	13.16	11.39	12.59	13.18	13.52	14.13
Health technologists and technicians, N.E.C.	12.74	10.37	11.03	12.76	14.46	14.69
Electrical and electronic technicians	18.46	11.94	12.76	21.41	22.02	22.02
Technical and related occupations, N.E.C.	20.27	13.75	18.75	21.00	21.00	27.71
Executive, administrative, and managerial occupations ...	26.32	16.40	18.52	24.04	30.85	38.46
Executives, administrators, and managers	30.45	17.48	21.63	27.43	35.17	46.15
Financial managers	37.79	22.69	26.77	32.45	46.15	52.88
Managers, marketing, advertising and public relations	26.67	17.48	18.55	21.63	38.46	38.46
Administrators, education and related fields	36.97	19.97	34.70	40.93	41.93	44.43
Managers and administrators, N.E.C.	29.41	17.07	21.54	25.97	30.85	35.85
Management related occupations	20.90	14.01	17.31	19.87	24.31	27.33
Accountants and auditors	18.57	14.57	17.31	17.31	19.87	24.04
Personnel, training, and labor relations specialists	18.60	9.49	11.28	16.65	22.97	24.04
Purchasing agents and buyers, N.E.C.	21.62	19.24	19.81	21.75	24.38	24.42
Management related occupations, N.E.C.	25.23	19.32	22.52	24.31	26.90	33.42
Sales occupations	14.34	6.87	8.55	12.70	16.44	26.65
Supervisors, sales occupations	25.82	11.50	13.78	22.73	32.67	40.05
Cashiers	9.00	6.50	7.00	7.92	11.15	13.00
Administrative support occupations, including clerical	11.28	8.00	9.00	10.50	13.57	15.70
Secretaries	11.76	9.00	10.28	11.70	13.20	15.03
Receptionists	8.71	7.52	8.00	8.83	9.00	10.00
Bookkeepers, accounting and auditing clerks	10.90	8.50	9.00	10.00	12.44	14.42
Billing clerks	10.42	8.93	9.62	10.17	11.18	13.91
Production coordinators	13.46	10.35	10.35	11.79	16.45	18.23
Stock and inventory clerks	10.03	7.50	8.70	9.88	10.65	12.59
General office clerks	9.94	7.75	8.50	9.05	11.49	12.94
Teachers' aides	10.91	8.30	9.98	11.00	11.76	13.10
Administrative support occupations, N.E.C.	12.56	8.00	9.15	12.69	15.59	16.88
Blue-collar occupations	12.99	7.41	9.26	12.34	15.99	20.09
Precision production, craft, and repair occupations	17.05	10.79	13.59	16.72	20.00	23.39
Supervisors, mechanics and repairers	26.64	15.52	15.89	21.48	41.65	41.65
Automobile mechanics	17.50	11.60	13.26	15.48	20.76	28.27

See footnotes at end of table.

Table A-1. Hourly earnings¹ for selected occupations, all workers², all industries, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³	All industries					
	Mean	Percentiles				
		10	25	Median 50	75	90
Blue-collar occupations (-Continued)						
Precision production, craft, and repair occupations (-Continued)						
Industrial machinery repairers	\$16.65	\$11.75	\$14.82	\$16.60	\$19.71	\$20.24
Electricians	19.89	14.19	17.99	20.54	22.56	23.57
Supervisors, production occupations	18.82	14.23	15.27	18.25	21.44	23.95
Tool and die makers	20.39	14.95	18.02	20.99	23.66	23.66
Machinists	13.95	10.16	11.88	14.11	16.00	17.30
Machine operators, assemblers, and inspectors	12.33	7.84	9.37	11.60	14.42	19.04
Punching and stamping press operators	12.42	8.90	9.83	12.60	13.85	14.56
Grinding, abrading, buffing, and polishing machine operators	11.30	7.35	8.14	9.22	13.22	18.56
Fabricating machine operators, N.E.C.	13.93	8.91	9.60	12.07	19.22	20.29
Molding and casting machine operators	10.24	6.63	7.51	10.20	12.12	14.39
Packaging and filling machine operators	14.20	11.74	13.29	14.42	14.67	17.11
Painting and paint spraying machine operators ...	11.44	8.70	10.33	11.55	13.64	13.85
Miscellaneous machine operators, N.E.C.	11.34	7.25	9.25	11.48	13.18	14.90
Welders and cutters	17.58	9.90	15.07	19.05	20.40	20.92
Assemblers	11.31	7.75	9.04	10.38	13.00	16.26
Production inspectors, checkers and examiners ..	12.38	6.87	8.42	11.15	16.93	20.09
Transportation and material moving occupations	12.19	8.50	10.07	11.87	13.69	15.98
Truck drivers	12.69	9.61	10.44	12.33	15.53	15.97
Bus drivers	12.00	9.33	10.74	12.90	13.25	13.25
Industrial truck and tractor equipment operators ..	11.65	7.50	9.15	10.89	13.34	16.08
Handlers, equipment cleaners, helpers, and laborers	9.87	5.50	6.50	8.73	13.00	16.59
Groundskeepers and gardeners except farm	9.16	6.11	6.50	7.28	11.74	15.21
Stock handlers and baggers	8.07	5.40	5.50	7.50	9.35	13.00
Machine feeders and offbearers	9.89	6.25	8.15	8.65	13.48	13.85
Freight, stock, and material handlers, N.E.C.	11.10	7.50	8.56	9.17	16.13	17.62
Hand packers and packagers	9.39	7.00	7.35	8.11	13.00	13.16
Laborers except construction, N.E.C.	8.75	6.00	6.50	8.50	10.29	13.36
Service occupations						
Protective service occupations	16.70	8.15	14.23	17.13	20.40	21.84
Firefighting occupations	14.85	10.72	13.52	16.38	16.73	16.73
Police and detectives, public service	18.84	14.76	17.29	19.74	20.89	21.84
Protective service occupations, N.E.C.	8.66	6.00	7.50	8.15	11.00	12.33
Food service occupations	6.33	2.65	3.64	6.30	8.00	9.95
Waiters and waitresses	3.45	2.65	2.65	2.70	3.35	6.24
Cooks	8.12	6.00	7.00	8.00	9.00	10.00
Food counter, fountain, and related occupations ..	7.29	5.15	6.25	7.65	7.65	10.35
Kitchen workers, food preparation	6.81	4.90	5.50	6.39	7.90	9.20
Food preparation occupations, N.E.C.	6.89	5.31	5.95	6.65	7.10	8.98

See footnotes at end of table.

Table A-1. Hourly earnings¹ for selected occupations, all workers², all industries, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³	All industries					
	Mean	Percentiles				
		10	25	Median 50	75	90
Service occupations (-Continued)						
Health service occupations	\$9.98	\$8.00	\$8.46	\$9.05	\$11.42	\$12.84
Health aides, except nursing	11.18	8.00	8.25	11.90	12.37	15.98
Nursing aides, orderlies and attendants	9.54	8.25	8.46	8.84	10.46	11.42
Cleaning and building service occupations	10.94	6.59	8.21	10.38	13.50	14.30
Janitors and cleaners	11.29	7.67	8.97	11.00	13.50	14.40
Personal service occupations	7.50	5.75	6.25	6.87	8.33	10.20
Early childhood teachers' assistants	7.44	6.00	6.64	6.87	7.83	10.10

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours. The 10th, 25th, 50th, 75th and 90th percentiles designate position in the earnings distribution. At the 50th percentile, the median, half of the workers receive the same as or more than the rate shown, and half receive the same as or less than the rate shown. At the 25th percentile, one-fourth of the workers earn the same as or less than the rate shown. At the 75th percentile, one-fourth earn the same as or more than the rate shown. The 10th and 90th percentiles follow the same logic.

² All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

³ A classification system including about 480 individual

occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means not elsewhere classified. IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data—at the quote level—with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.

Table A-2. Hourly earnings¹ for selected occupations, all workers², private industry and State and local government, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupation ³	Private industry						State and local government					
	Mean	Percentiles					Mean	Percentiles				
		10	25	Median 50	75	90		10	25	Median 50	75	90
All occupations	\$13.93	\$7.00	\$8.93	\$12.34	\$17.31	\$23.04	\$21.50	\$10.44	\$13.25	\$17.22	\$28.06	\$41.26
All occupations excluding sales	13.90	7.00	8.97	12.26	17.31	22.84	21.50	10.44	13.25	17.22	28.06	41.26
White-collar occupations	16.85	8.25	10.00	14.37	21.54	27.43	24.86	11.03	14.77	20.96	35.75	43.25
White-collar occupations excluding sales	17.30	8.50	10.30	15.10	22.01	27.43	24.86	11.03	14.77	20.96	35.75	43.25
Professional specialty and technical occupations	19.65	11.80	14.37	19.95	23.38	27.57	29.79	15.71	19.76	28.50	40.47	44.77
Professional specialty occupations	21.21	13.00	17.42	21.49	25.44	29.09	30.77	15.76	21.26	29.31	41.05	45.15
Engineers, architects, and surveyors	25.78	19.23	21.97	25.96	29.30	32.73	-	-	-	-	-	-
Industrial engineers	26.90	21.97	23.56	26.66	29.54	32.86	-	-	-	-	-	-
Mathematical and computer scientists	22.11	16.66	18.99	20.19	26.37	27.21	-	-	-	-	-	-
Natural scientists	-	-	-	-	-	-	-	-	-	-	-	-
Health related occupations	21.06	16.31	18.63	20.81	22.38	26.12	21.19	15.93	17.74	19.71	21.27	29.13
Registered nurses	20.24	16.15	18.45	20.81	22.22	22.77	19.26	16.00	17.74	19.32	21.27	21.55
Teachers, college and university	-	-	-	-	-	-	36.69	26.93	30.03	37.37	44.07	49.89
Teachers, except college and university	-	-	-	-	-	-	34.16	19.58	26.94	35.46	42.54	45.97
Elementary school teachers	-	-	-	-	-	-	36.53	25.11	28.95	38.27	42.69	45.59
Secondary school teachers	-	-	-	-	-	-	35.53	23.35	27.54	34.72	42.64	51.79
Teachers, special education	-	-	-	-	-	-	37.34	26.94	30.33	36.83	44.41	49.34
Teachers, N.E.C.	-	-	-	-	-	-	26.64	15.36	15.71	25.86	32.45	42.40
Substitute teachers	-	-	-	-	-	-	9.94	9.09	10.00	10.00	10.00	10.27
Librarians, archivists, and curators	-	-	-	-	-	-	-	-	-	-	-	-
Social scientists and urban planners	-	-	-	-	-	-	-	-	-	-	-	-
Social, recreation, and religious workers	-	-	-	-	-	-	18.46	7.00	16.05	18.44	20.96	22.33
Social workers	-	-	-	-	-	-	20.13	15.57	17.07	19.31	21.26	22.33
Writers, authors, entertainers, athletes, and professionals, N.E.C.	18.57	8.00	10.06	20.46	25.44	25.44	-	-	-	-	-	-
Technical occupations	17.08	11.03	12.92	15.43	21.00	22.66	17.77	14.24	16.46	18.00	19.81	21.63
Licensed practical nurses	12.91	11.39	12.59	13.18	13.37	13.72	-	-	-	-	-	-
Health technologists and technicians, N.E.C.	12.71	10.37	11.03	12.75	14.46	14.69	-	-	-	-	-	-
Electrical and electronic technicians	18.46	11.94	12.76	21.41	22.02	22.02	-	-	-	-	-	-
Technical and related occupations, N.E.C.	20.43	13.65	18.75	21.00	21.00	27.92	-	-	-	-	-	-
Executive, administrative, and managerial occupations	25.57	15.38	18.16	23.44	29.48	36.16	32.21	17.54	21.16	34.36	40.93	42.79
Executives, administrators, and managers	29.41	17.48	21.54	26.49	32.45	46.15	36.29	22.36	30.85	36.12	41.36	44.43
Financial managers	38.55	22.69	32.45	32.45	46.15	52.88	-	-	-	-	-	-
Managers, marketing, advertising and public relations	26.67	17.48	18.55	21.63	38.46	38.46	-	-	-	-	-	-
Administrators, education and related fields	-	-	-	-	-	-	40.95	34.95	40.11	41.26	41.93	46.03
Managers and administrators, N.E.C.	28.83	17.07	21.15	25.97	30.23	33.65	-	-	-	-	-	-
Management related occupations	21.00	13.92	17.31	20.19	24.31	27.51	19.37	16.03	17.47	18.52	21.16	27.33
Accountants and auditors	18.49	14.57	17.31	17.31	19.87	24.04	-	-	-	-	-	-
Personnel, training, and labor relations specialists	18.60	9.49	11.28	16.65	22.97	24.04	-	-	-	-	-	-
Purchasing agents and buyers, N.E.C.	21.62	19.24	19.81	21.75	24.38	24.42	-	-	-	-	-	-
Management related occupations, N.E.C.	25.46	19.48	22.52	24.31	26.27	33.42	-	-	-	-	-	-
Sales occupations	14.34	6.87	8.55	12.70	16.44	26.65	-	-	-	-	-	-
Supervisors, sales occupations	25.82	11.50	13.78	22.73	32.67	40.05	-	-	-	-	-	-
Cashiers	9.00	6.50	7.00	7.92	11.15	13.00	-	-	-	-	-	-
Administrative support occupations, including clerical	11.00	8.00	8.78	10.17	12.88	15.60	13.03	9.89	11.06	12.94	14.96	17.03
Secretaries	11.53	9.00	10.05	11.50	12.84	14.73	12.45	9.97	10.86	12.36	13.57	15.57
Receptionists	8.71	7.52	8.00	8.83	9.00	10.00	-	-	-	-	-	-
Bookkeepers, accounting and auditing clerks	10.49	8.50	9.00	10.00	11.50	14.42	14.79	12.37	12.41	14.82	15.99	18.03
Billing clerks	10.35	8.93	9.62	10.17	11.18	13.91	-	-	-	-	-	-
Production coordinators	13.46	10.35	10.35	11.79	16.45	18.23	-	-	-	-	-	-
Stock and inventory clerks	10.03	7.50	8.70	9.88	10.65	12.59	-	-	-	-	-	-
General office clerks	9.17	7.00	8.20	9.00	9.85	11.82	11.87	8.60	10.24	12.60	13.25	15.41

See footnotes at end of table.

Table A-2. Hourly earnings¹ for selected occupations, all workers², private industry and State and local government, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³	Private industry						State and local government						
	Mean	Percentiles					Mean	Percentiles					
		10	25	Median 50	75	90		10	25	Median 50	75	90	
White-collar occupations (-Continued)													
Administrative support occupations, including clerical (-Continued)													
Teachers' aides	-	-	-	-	-	-	\$10.91	\$8.30	\$9.98	\$11.00	\$11.76	\$13.10	
Administrative support occupations, N.E.C.	\$12.24	\$8.00	\$9.11	\$11.77	\$15.91	\$17.60	-	-	-	-	-	-	-
Blue-collar occupations	12.93	7.41	9.25	12.22	15.95	20.09	15.24	10.85	13.03	15.48	17.33	19.98	
Precision production, craft, and repair occupations	17.07	10.48	13.46	16.72	20.24	23.57	16.65	14.71	15.48	16.72	17.78	19.30	
Industrial machinery repairers	16.55	11.75	14.82	16.08	19.71	20.24	-	-	-	-	-	-	-
Electricians	19.99	14.19	19.33	20.54	22.56	23.57	-	-	-	-	-	-	-
Supervisors, production occupations ..	18.82	14.23	15.27	18.25	21.44	23.95	-	-	-	-	-	-	-
Tool and die makers	20.39	14.95	18.02	20.99	23.66	23.66	-	-	-	-	-	-	-
Machinists	13.95	10.16	11.88	14.11	16.00	17.30	-	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	12.33	7.84	9.37	11.60	14.42	19.04	-	-	-	-	-	-	-
Punching and stamping press operators	12.42	8.90	9.83	12.60	13.85	14.56	-	-	-	-	-	-	-
Grinding, abrading, buffing, and polishing machine operators	11.30	7.35	8.14	9.22	13.22	18.56	-	-	-	-	-	-	-
Fabricating machine operators, N.E.C.	13.93	8.91	9.60	12.07	19.22	20.29	-	-	-	-	-	-	-
Molding and casting machine operators	10.24	6.63	7.51	10.20	12.12	14.39	-	-	-	-	-	-	-
Packaging and filling machine operators	14.20	11.74	13.29	14.42	14.67	17.11	-	-	-	-	-	-	-
Painting and paint spraying machine operators	11.44	8.70	10.33	11.55	13.64	13.85	-	-	-	-	-	-	-
Miscellaneous machine operators, N.E.C.	11.34	7.25	9.25	11.48	13.18	14.90	-	-	-	-	-	-	-
Welders and cutters	17.62	9.90	13.44	19.10	20.40	20.92	-	-	-	-	-	-	-
Assemblers	11.31	7.75	9.04	10.38	13.00	16.26	-	-	-	-	-	-	-
Production inspectors, checkers and examiners	12.38	6.87	8.42	11.15	16.93	20.09	-	-	-	-	-	-	-
Transportation and material moving occupations	12.11	8.50	10.00	11.82	13.73	15.98	13.37	9.61	12.03	13.23	13.43	16.43	
Truck drivers	12.65	9.61	10.39	12.31	15.53	15.95	-	-	-	-	-	-	-
Bus drivers	-	-	-	-	-	-	12.56	11.04	12.03	13.01	13.25	13.25	
Industrial truck and tractor equipment operators	11.65	7.50	9.15	10.89	13.34	16.08	-	-	-	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	9.75	5.50	6.50	8.70	13.00	16.35	14.72	5.15	6.75	15.21	23.14	23.14	
Stock handlers and baggers	8.07	5.40	5.50	7.50	9.35	13.00	-	-	-	-	-	-	-
Machine feeders and offbearers	9.89	6.25	8.15	8.65	13.48	13.85	-	-	-	-	-	-	-
Freight, stock, and material handlers, N.E.C.	11.10	7.50	8.56	9.17	16.13	17.62	-	-	-	-	-	-	-
Hand packers and packagers	9.39	7.00	7.35	8.11	13.00	13.16	-	-	-	-	-	-	-
Laborers except construction, N.E.C.	9.34	6.00	6.50	8.50	10.73	13.88	-	-	-	-	-	-	-
Service occupations	7.66	2.70	5.50	7.30	9.50	12.00	14.97	8.69	11.44	14.30	17.63	21.14	
Protective service occupations	-	-	-	-	-	-	17.45	11.78	14.76	17.52	20.79	21.84	
Firefighting occupations	-	-	-	-	-	-	14.85	10.72	13.52	16.38	16.73	16.73	
Police and detectives, public service ..	-	-	-	-	-	-	18.84	14.76	17.29	19.74	20.89	21.84	
Protective service occupations, N.E.C.	-	-	-	-	-	-	8.66	6.00	7.50	8.15	11.00	12.33	
Food service occupations	6.18	2.65	3.35	6.25	7.79	9.88	10.57	7.59	9.32	10.37	11.42	14.48	
Waiters and waitresses	3.45	2.65	2.65	2.70	3.35	6.24	-	-	-	-	-	-	-
Cooks	7.85	6.00	6.75	8.00	8.82	9.40	-	-	-	-	-	-	-
Kitchen workers, food preparation	6.81	4.90	5.50	6.39	7.90	9.20	-	-	-	-	-	-	-
Food preparation occupations, N.E.C.	6.57	5.31	5.79	6.50	7.10	8.00	10.47	9.09	9.59	10.34	11.27	11.62	
Health service occupations	9.72	8.00	8.46	8.84	11.16	11.90	12.19	6.84	11.42	11.42	14.68	14.68	
Health aides, except nursing	11.06	8.00	8.00	11.90	12.08	15.98	-	-	-	-	-	-	-
Nursing aides, orderlies and attendants	9.19	8.25	8.46	8.78	9.95	11.16	12.01	6.59	11.42	11.42	14.68	14.68	

See footnotes at end of table.

Table A-2. Hourly earnings¹ for selected occupations, all workers², private industry and State and local government, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³	Private industry						State and local government						
	Mean	Percentiles					Mean	Percentiles					
		10	25	Median 50	75	90		10	25	Median 50	75	90	
Service occupations (-Continued)													
Cleaning and building service occupations	\$10.20	\$6.40	\$7.75	\$9.75	\$12.97	\$13.90	\$13.53	\$10.74	\$12.09	\$13.14	\$14.13	\$15.11	
Janitors and cleaners	10.79	7.50	8.25	10.10	13.50	13.90	12.78	10.63	12.09	13.00	13.93	15.11	
Personal service occupations	6.99	5.75	6.23	6.87	7.25	8.75	9.48	6.25	6.87	9.27	11.18	13.14	

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours. The 10th, 25th, 50th, 75th and 90th percentiles designate position in the earnings distribution. At the 50th percentile, the median, half of the workers receive the same as or more than the rate shown, and half receive the same as or less than the rate shown. At the 25th percentile, one-fourth of the workers earn the same as or less than the rate shown. At the 75th percentile, one-fourth earn the same as or more than the rate shown. The 10th and 90th percentiles follow the same logic.

² All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

³ A classification system including about 480 individual occupations is used to cover

all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means not elsewhere classified. IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data—at the quote level—with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.

Table A-3. Hourly earnings¹ for selected occupations, full-time and part-time workers², all industries, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupation ³	All industries											
	Full-time						Part-time					
	Mean	Percentiles					Mean	Percentiles				
		10	25	Median 50	75	90		10	25	Median 50	75	90
All occupations	\$15.48	\$7.85	\$9.87	\$13.46	\$18.71	\$24.93	\$9.31	\$5.15	\$6.25	\$8.25	\$10.00	\$16.31
All occupations excluding sales	15.48	7.85	9.85	13.56	18.75	24.69	9.45	5.15	6.25	8.40	10.27	16.65
White-collar occupations	19.24	9.03	11.82	16.71	24.04	32.48	11.71	6.84	8.25	9.25	14.00	21.00
White-collar occupations excluding sales	19.78	9.20	12.00	17.31	24.38	33.13	12.34	8.00	8.50	10.00	14.69	21.00
Professional specialty and technical occupations	23.07	12.43	16.05	21.41	27.29	38.66	18.45	10.00	14.69	19.78	21.63	23.44
Professional specialty occupations	25.39	14.13	18.99	23.38	30.12	41.24	19.30	10.00	16.00	20.11	22.38	25.00
Engineers, architects, and surveyors	25.73	19.23	21.97	25.62	29.30	32.73	-	-	-	-	-	-
Industrial engineers	26.90	21.97	23.56	26.66	29.54	32.86	-	-	-	-	-	-
Engineers, N.E.C.	25.25	19.04	19.17	23.89	28.46	34.59	-	-	-	-	-	-
Mathematical and computer scientists	21.90	16.66	18.99	20.19	26.37	26.46	-	-	-	-	-	-
Computer systems analysts and scientists	21.42	15.94	18.99	20.19	26.37	26.44	-	-	-	-	-	-
Natural scientists	-	-	-	-	-	-	-	-	-	-	-	-
Health related occupations	21.41	16.63	18.63	20.81	22.50	29.09	20.52	15.96	18.10	21.19	22.38	24.36
Registered nurses	20.18	16.53	18.40	20.81	21.64	22.77	20.02	15.55	18.17	20.63	22.22	22.38
Teachers, college and university	35.71	26.49	29.92	36.70	40.24	45.31	-	-	-	-	-	-
Teachers, except college and university	29.77	11.99	17.77	29.21	41.24	44.84	17.86	10.00	10.00	10.27	26.26	34.12
Elementary school teachers	31.89	14.07	22.70	33.66	41.72	44.77	-	-	-	-	-	-
Secondary school teachers	32.98	17.00	23.75	30.41	41.72	50.38	-	-	-	-	-	-
Teachers, special education	37.34	26.94	30.33	36.83	44.41	49.34	-	-	-	-	-	-
Teachers, N.E.C.	23.78	11.22	15.08	21.46	30.90	42.34	-	-	-	-	-	-
Substitute teachers	-	-	-	-	-	-	9.95	9.09	10.00	10.00	10.00	10.27
Librarians, archivists, and curators	-	-	-	-	-	-	-	-	-	-	-	-
Social scientists and urban planners	-	-	-	-	-	-	-	-	-	-	-	-
Social, recreation, and religious workers	18.13	12.71	14.72	18.12	20.96	22.22	-	-	-	-	-	-
Social workers	18.13	12.71	14.72	18.12	20.96	22.22	-	-	-	-	-	-
Writers, authors, entertainers, athletes, and professionals, N.E.C.	18.68	8.00	10.13	19.81	25.44	25.44	-	-	-	-	-	-
Technical occupations	17.14	11.64	13.18	16.16	20.75	24.38	17.03	9.00	13.92	19.17	21.00	21.00
Licensed practical nurses	13.12	11.38	12.63	13.18	13.52	13.72	-	-	-	-	-	-
Technical and related occupations, N.E.C.	19.94	13.39	14.24	18.75	24.80	28.57	-	-	-	-	-	-
Executive, administrative, and managerial occupations	26.33	16.25	18.55	24.04	30.85	38.46	-	-	-	-	-	-
Executives, administrators, and managers	30.38	17.48	21.63	27.43	35.17	46.15	-	-	-	-	-	-
Financial managers	37.79	22.69	26.77	32.45	46.15	52.88	-	-	-	-	-	-
Managers, marketing, advertising and public relations	26.67	17.48	18.55	21.63	38.46	38.46	-	-	-	-	-	-
Administrators, education and related fields	36.61	19.97	34.36	40.11	41.46	46.03	-	-	-	-	-	-
Managers and administrators, N.E.C.	29.41	17.07	21.54	25.97	30.85	35.85	-	-	-	-	-	-
Management related occupations	20.97	13.92	17.31	20.19	24.31	27.49	-	-	-	-	-	-
Accountants and auditors	18.57	14.57	17.31	17.31	19.87	24.04	-	-	-	-	-	-
Purchasing agents and buyers, N.E.C.	21.62	19.24	19.81	21.75	24.38	24.42	-	-	-	-	-	-
Management related occupations, N.E.C.	25.23	19.32	22.52	24.31	26.90	33.42	-	-	-	-	-	-
Sales occupations	15.55	7.56	10.21	12.70	17.79	27.93	7.36	5.51	6.03	7.10	8.55	9.87
Supervisors, sales occupations	27.19	12.78	13.78	22.73	32.67	40.05	-	-	-	-	-	-
Cashiers	-	-	-	-	-	-	7.29	5.69	6.15	7.10	7.25	11.15
Administrative support occupations, including clerical	11.89	8.18	9.36	11.39	14.42	16.56	9.40	7.50	8.25	9.00	10.00	12.00
Secretaries	12.36	10.08	11.02	12.06	13.61	15.18	-	-	-	-	-	-
Receptionists	8.71	7.36	7.89	8.83	9.43	10.40	-	-	-	-	-	-
Bookkeepers, accounting and auditing clerks	12.24	8.76	10.10	12.41	14.42	14.82	-	-	-	-	-	-
Billing clerks	10.42	8.93	9.62	10.17	11.18	13.91	-	-	-	-	-	-
Production coordinators	13.46	10.35	10.35	11.79	16.45	18.23	-	-	-	-	-	-
Stock and inventory clerks	10.03	7.50	8.70	9.88	10.65	12.59	-	-	-	-	-	-
General office clerks	10.84	8.20	9.00	10.86	12.60	13.88	8.70	7.00	8.00	8.50	9.00	11.20

See footnotes at end of table.

Table A-3. Hourly earnings¹ for selected occupations, full-time and part-time workers², all industries, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³	All industries											
	Full-time					Part-time						
	Mean	Percentiles					Mean	Percentiles				
10		25	Median 50	75	90	10		25	Median 50	75	90	
White-collar occupations (-Continued)												
Administrative support occupations, including clerical (-Continued)												
Teachers' aides	\$11.31	\$8.82	\$10.38	\$11.47	\$12.50	\$13.47	\$10.10	\$8.12	\$9.59	\$10.57	\$10.94	\$11.59
Administrative support occupations, N.E.C.	12.61	8.00	9.15	12.69	15.59	16.88	-	-	-	-	-	-
Blue-collar occupations	13.30	7.75	9.60	12.66	16.31	20.21	7.47	5.27	5.52	6.90	9.00	10.73
Precision production, craft, and repair occupations	17.07	10.80	13.64	16.72	20.00	23.39	-	-	-	-	-	-
Supervisors, mechanics and repairers	26.64	15.52	15.89	21.48	41.65	41.65	-	-	-	-	-	-
Automobile mechanics	17.50	11.60	13.26	15.48	20.76	28.27	-	-	-	-	-	-
Industrial machinery repairers	16.65	11.75	14.82	16.60	19.71	20.24	-	-	-	-	-	-
Electricians	19.89	14.19	17.99	20.54	22.56	23.57	-	-	-	-	-	-
Supervisors, production occupations ..	18.82	14.23	15.27	18.25	21.44	23.95	-	-	-	-	-	-
Tool and die makers	20.39	14.95	18.02	20.99	23.66	23.66	-	-	-	-	-	-
Machinists	13.95	10.16	11.88	14.11	16.00	17.30	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	12.46	8.00	9.52	11.74	14.42	19.10	7.71	5.25	6.50	8.00	9.00	9.40
Punching and stamping press operators	12.42	8.90	9.83	12.60	13.85	14.56	-	-	-	-	-	-
Grinding, abrading, buffing, and polishing machine operators	11.30	7.35	8.14	9.22	13.22	18.56	-	-	-	-	-	-
Fabricating machine operators, N.E.C.	13.93	8.91	9.60	12.07	19.22	20.29	-	-	-	-	-	-
Molding and casting machine operators	10.24	6.63	7.51	10.20	12.12	14.39	-	-	-	-	-	-
Packaging and filling machine operators	14.20	11.74	13.29	14.42	14.67	17.11	-	-	-	-	-	-
Painting and paint spraying machine operators	11.44	8.70	10.33	11.55	13.64	13.85	-	-	-	-	-	-
Miscellaneous machine operators, N.E.C.	11.65	7.25	9.95	11.87	13.27	15.25	-	-	-	-	-	-
Welders and cutters	17.58	9.90	15.07	19.05	20.40	20.92	-	-	-	-	-	-
Assemblers	11.53	8.00	9.45	10.50	13.44	16.83	7.44	5.25	6.00	7.75	8.50	9.00
Production inspectors, checkers and examiners	12.38	6.87	8.42	11.15	16.93	20.09	-	-	-	-	-	-
Transportation and material moving occupations	12.27	8.75	10.07	11.87	13.93	15.98	10.63	6.00	8.00	11.82	12.33	13.81
Truck drivers	12.83	9.80	10.39	12.41	15.53	15.98	-	-	-	-	-	-
Industrial truck and tractor equipment operators	11.65	7.50	9.15	10.89	13.34	16.08	-	-	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	10.59	5.50	7.73	9.30	13.85	16.92	6.85	5.25	5.35	6.11	7.50	9.20
Stock handlers and baggers	8.73	5.50	6.00	8.00	9.54	14.14	-	-	-	-	-	-
Machine feeders and offbearers	10.14	7.64	8.15	8.70	13.48	13.85	-	-	-	-	-	-
Freight, stock, and material handlers, N.E.C.	12.01	7.50	8.56	9.36	17.05	17.92	-	-	-	-	-	-
Hand packers and packagers	9.56	7.25	7.35	8.25	13.00	13.16	-	-	-	-	-	-
Laborers except construction, N.E.C.	-	-	-	-	-	-	7.33	5.15	5.15	7.25	8.78	10.73
Service occupations	10.18	5.17	7.05	9.10	12.87	17.00	5.99	2.65	3.42	6.00	7.35	8.98
Protective service occupations	17.98	13.48	16.16	17.39	20.59	21.84	7.75	6.50	6.64	6.64	8.15	10.69
Police and detectives, public service ..	19.21	15.86	17.63	19.81	20.89	21.84	-	-	-	-	-	-
Food service occupations	7.03	2.70	5.25	7.10	9.02	11.25	5.19	2.65	3.00	5.31	6.75	8.00
Waiters and waitresses	-	-	-	-	-	-	3.83	2.65	2.65	3.00	3.64	7.45
Cooks	8.22	6.25	7.25	8.01	9.02	9.95	-	-	-	-	-	-
Food preparation occupations, N.E.C.	7.01	5.25	6.25	7.10	7.10	9.02	6.67	5.40	5.65	6.00	7.25	8.70
Health service occupations	9.88	8.00	8.46	9.00	11.26	12.08	10.67	7.59	8.31	9.99	11.66	15.98
Health aides, except nursing	10.92	8.00	8.00	11.90	11.95	13.28	-	-	-	-	-	-
Nursing aides, orderlies and attendants	9.58	8.25	8.46	8.84	10.60	11.42	-	-	-	-	-	-

See footnotes at end of table.

Table A-3. Hourly earnings¹ for selected occupations, full-time and part-time workers², all industries, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³	All industries											
	Full-time						Part-time					
	Mean	Percentiles					Mean	Percentiles				
		10	25	Median 50	75	90		10	25	Median 50	75	90
Service occupations (-Continued)												
Cleaning and building service occupations	\$11.41	\$7.22	\$9.10	\$11.52	\$13.50	\$15.11	\$7.41	\$5.50	\$6.59	\$7.40	\$8.00	\$8.40
Janitors and cleaners	11.70	8.21	9.75	12.00	13.75	15.11	7.56	5.50	6.68	7.92	8.00	9.41
Personal service occupations	—	—	—	—	—	—	6.95	5.65	5.75	6.87	6.87	9.27
Early childhood teachers' assistants ..	—	—	—	—	—	—	7.64	6.85	6.87	6.87	7.25	10.20

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours. The 10th, 25th, 50th, 75th and 90th percentiles designate position in the earnings distribution. At the 50th percentile, the median, half of the workers receive the same as or more than the rate shown, and half receive the same as or less than the rate shown. At the 25th percentile, one-fourth of the workers earn the same as or less than the rate shown. At the 75th percentile, one-fourth earn the same as or more than the rate shown. The 10th and 90th percentiles follow the same logic.

² Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

³ A classification system including about 480 individual occupations is used to cover

all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means not elsewhere classified. IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data—at the quote level—with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.

Table A-4. Weekly and annual earnings¹ and hours for selected occupations, full-time workers only², all industries, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupation ³	All industries					
	Mean weekly hours ⁴	Weekly earnings		Mean annual hours	Annual earnings	
		Mean	Median		Mean	Median
All occupations	39.6	\$613	\$538	2,017	\$31,231	\$27,955
All occupations excluding sales	39.5	612	539	2,010	31,116	28,038
White-collar occupations	39.4	758	664	1,964	37,784	34,039
White-collar occupations excluding sales	39.1	774	692	1,940	38,375	35,006
Professional specialty and technical occupations	37.9	874	850	1,781	41,088	40,934
Professional specialty occupations	37.7	956	925	1,708	43,350	43,706
Engineers, architects, and surveyors	40.0	1,029	1,025	2,080	53,528	53,290
Industrial engineers	40.0	1,076	1,066	2,080	55,945	55,453
Engineers, N.E.C.	40.0	1,010	956	2,080	52,530	49,691
Mathematical and computer scientists	40.2	881	808	2,092	45,815	41,995
Computer systems analysts and scientists	40.3	862	808	2,094	44,845	41,995
Natural scientists	-	-	-	-	-	-
Health related occupations	37.8	809	773	1,941	41,550	40,186
Registered nurses	36.9	744	754	1,918	38,705	39,187
Teachers, college and university	38.9	1,388	1,397	1,406	50,216	52,774
Teachers, except college and university	35.0	1,040	1,027	1,366	40,668	39,009
Elementary school teachers	34.7	1,105	1,151	1,319	42,051	42,220
Secondary school teachers	33.9	1,118	1,042	1,282	42,286	39,524
Teachers, special education	32.1	1,200	1,216	1,197	44,707	44,978
Teachers, N.E.C.	36.9	877	762	1,418	33,724	28,189
Librarians, archivists, and curators	-	-	-	-	-	-
Social scientists and urban planners	-	-	-	-	-	-
Social, recreation, and religious workers	39.8	721	725	2,038	36,935	37,690
Social workers	39.8	721	725	2,038	36,935	37,690
Writers, authors, entertainers, athletes, and professionals, N.E.C.	40.0	747	792	2,080	38,854	41,199
Technical occupations	38.5	660	588	2,002	34,316	30,570
Licensed practical nurses	37.8	497	527	1,968	25,825	27,421
Technical and related occupations, N.E.C.	40.0	798	750	2,080	41,480	39,000
Executive, administrative, and managerial occupations ...	40.4	1,064	972	2,083	54,848	50,565
Executives, administrators, and managers	40.6	1,233	1,097	2,079	63,165	57,061
Financial managers	40.0	1,512	1,298	2,080	78,603	67,496
Managers, marketing, advertising and public relations	43.1	1,148	961	2,239	59,721	49,993
Administrators, education and related fields	39.2	1,434	1,604	1,798	65,851	70,594
Managers and administrators, N.E.C.	40.7	1,197	1,058	2,116	62,236	54,990
Management related occupations	40.2	843	808	2,088	43,791	41,995
Accountants and auditors	40.2	747	692	2,092	38,850	36,005
Purchasing agents and buyers, N.E.C.	40.0	865	870	2,080	44,972	45,247
Management related occupations, N.E.C.	40.5	1,021	972	2,100	52,975	50,565
Sales occupations	41.2	641	508	2,145	33,356	26,416
Supervisors, sales occupations	43.8	1,191	1,137	2,277	61,928	59,098
Administrative support occupations, including clerical	39.5	470	440	2,014	23,937	21,996
Secretaries	39.0	482	471	1,914	23,663	23,795
Receptionists	37.9	330	353	1,972	17,185	18,366
Bookkeepers, accounting and auditing clerks	40.0	490	496	2,080	25,463	25,813
Billing clerks	38.8	405	400	2,020	21,045	20,800
Production coordinators	40.0	538	472	2,080	27,989	24,523
Stock and inventory clerks	40.0	401	395	2,080	20,852	20,550
General office clerks	39.5	428	417	2,055	22,272	21,658
Teachers' aides	31.8	359	346	1,105	12,501	12,517
Administrative support occupations, N.E.C.	39.9	503	507	2,074	26,147	26,386
Blue-collar occupations	40.0	532	506	2,075	27,600	26,208
Precision production, craft, and repair occupations	40.1	684	669	2,083	35,556	34,778
Supervisors, mechanics and repairers	40.0	1,066	859	2,080	55,406	44,678
Automobile mechanics	40.3	705	619	2,096	36,667	32,198
Industrial machinery repairers	40.0	666	664	2,080	34,628	34,528
Electricians	40.0	796	822	2,080	41,379	42,731
Supervisors, production occupations	40.6	765	744	2,114	39,786	38,709
Tool and die makers	40.0	816	840	2,080	42,412	43,659
Machinists	40.0	558	564	2,080	29,008	29,348
Machine operators, assemblers, and inspectors	40.0	498	470	2,078	25,897	24,419
Punching and stamping press operators	40.0	497	504	2,080	25,834	26,208

See footnotes at end of table.

Table A-4. Weekly and annual earnings¹ and hours for selected occupations, full-time workers only², all industries, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³	All industries					
	Mean weekly hours ⁴	Weekly earnings		Mean annual hours	Annual earnings	
		Mean	Median		Mean	Median
Blue-collar occupations (-Continued)						
Machine operators, assemblers, and inspectors (-Continued)						
Grinding, abrading, buffing, and polishing machine operators	40.0	\$452	\$369	2,080	\$23,506	\$19,177
Fabricating machine operators, N.E.C.	40.0	557	483	2,080	28,980	25,108
Molding and casting machine operators	40.0	410	408	2,080	21,308	21,216
Packaging and filling machine operators	40.0	568	577	2,080	29,530	29,994
Painting and paint spraying machine operators ...	40.0	458	462	2,080	23,796	24,024
Miscellaneous machine operators, N.E.C.	40.0	466	475	2,080	24,241	24,690
Welders and cutters	40.0	703	762	2,080	36,563	39,624
Assemblers	39.8	459	420	2,069	23,868	21,840
Production inspectors, checkers and examiners ..	40.0	495	446	2,080	25,743	23,190
Transportation and material moving occupations	39.9	490	475	2,052	25,179	24,648
Truck drivers	40.3	517	504	2,094	26,861	26,208
Industrial truck and tractor equipment operators ..	40.0	466	436	2,080	24,226	22,651
Handlers, equipment cleaners, helpers, and laborers	39.9	423	367	2,072	21,943	19,067
Stock handlers and baggers	39.9	348	320	2,073	18,089	16,640
Machine feeders and offbearers	40.0	405	348	2,080	21,086	18,096
Freight, stock, and material handlers, N.E.C.	40.0	480	374	2,080	24,973	19,459
Hand packers and packagers	40.0	382	330	2,080	19,886	17,160
Service occupations	38.7	394	330	1,986	20,214	17,153
Protective service occupations	41.1	740	718	2,139	38,457	37,336
Police and detectives, public service	40.0	768	792	2,080	39,960	41,205
Food service occupations	38.5	270	268	1,988	13,984	13,923
Cooks	36.8	302	288	1,913	15,724	14,988
Food preparation occupations, N.E.C.	38.3	269	271	1,953	13,692	13,832
Health service occupations	35.6	352	320	1,850	18,288	16,640
Health aides, except nursing	40.0	437	476	2,080	22,715	24,752
Nursing aides, orderlies and attendants	34.5	330	301	1,793	17,181	15,654
Cleaning and building service occupations	39.5	451	451	2,053	23,430	23,469
Janitors and cleaners	39.6	463	480	2,060	24,096	24,960
Personal service occupations	-	-	-	-	-	-

¹ Earnings are the straight-time wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours. The median designates position--one-half of the workers receive the same as or more, and one-half receive the same as or less than the rate shown.

² Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

³ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

⁴ Mean weekly hours are the hours an employee is scheduled to work in a

week, exclusive of overtime.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means not elsewhere classified. IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data--at the quote level--with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.

Table B-1. Mean hourly earnings¹ by occupational group and levels², all industries, private industry, State and local government, full-time and part-time workers, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupational group ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
All occupations	\$14.72	\$13.93	\$21.50	\$15.48	\$9.31
All occupations excluding sales	14.75	13.90	21.50	15.48	9.45
White-collar occupations	18.11	16.85	24.86	19.24	11.71
Level 1	7.23	7.18	—	—	7.11
Level 2	8.80	8.74	9.79	9.11	7.90
Level 3	11.04	10.97	11.67	11.44	9.31
Level 4	11.08	10.74	13.04	11.79	—
Level 5	14.19	14.29	13.10	14.45	12.59
Level 6	14.78	14.37	16.86	14.84	13.13
Level 7	19.58	17.95	26.27	19.49	20.35
Level 8	23.92	20.17	33.14	23.97	—
Level 9	25.55	24.11	31.07	25.98	21.32
Level 10	28.51	26.98	—	28.97	—
Level 11	29.70	26.75	39.66	29.63	—
Level 12	36.01	36.05	—	36.01	—
Not able to be leveled	18.49	18.60	—	18.80	—
White-collar occupations excluding sales	18.66	17.30	24.86	19.78	12.34
Level 1	7.18	7.09	—	—	6.97
Level 2	8.37	8.22	9.79	8.40	8.28
Level 3	11.20	11.14	11.67	11.56	9.62
Level 4	11.03	10.58	13.04	11.81	—
Level 5	13.25	13.27	13.10	13.37	12.59
Level 6	14.94	14.41	16.86	15.04	13.13
Level 7	19.77	18.06	26.27	19.69	20.35
Level 8	23.83	19.90	33.14	23.87	—
Level 9	25.22	23.55	31.07	25.65	21.32
Level 10	28.51	26.98	—	28.97	—
Level 11	29.50	26.24	39.66	29.42	—
Level 12	36.01	36.05	—	36.01	—
Not able to be leveled	18.49	18.60	—	18.80	—
Professional specialty and technical occupations	22.48	19.65	29.79	23.07	18.45
Professional specialty occupations	24.70	21.21	30.77	25.39	19.30
Level 5	12.15	—	12.62	12.60	9.83
Level 6	12.44	—	16.17	12.41	12.58
Level 7	24.38	19.49	29.08	24.76	20.52
Level 8	27.18	19.75	35.37	27.22	—
Level 9	25.58	22.48	32.35	26.44	21.32
Level 10	29.61	—	—	31.22	—
Level 11	28.04	27.02	—	28.58	—
Level 12	33.48	—	—	33.48	—
Engineers, architects, and surveyors	25.73	25.78	—	25.73	—
Level 9	25.67	25.70	—	25.67	—
Mathematical and computer scientists	21.90	22.11	—	21.90	—
Natural scientists	—	—	—	—	—
Health related occupations	21.07	21.06	21.19	21.41	20.52
Level 7	20.71	—	20.74	20.91	20.30
Level 9	21.37	21.16	—	22.18	20.42
Teachers, college and university	35.71	—	36.69	35.71	—
Teachers, except college and university	28.93	—	34.16	29.77	17.86
Level 5	10.27	—	11.59	—	—
Level 6	13.98	—	—	—	12.58
Level 7	32.09	—	—	32.09	—
Level 8	30.40	—	37.12	30.45	—
Level 9	36.69	—	36.69	36.82	—
Librarians, archivists, and curators	—	—	—	—	—
Social scientists and urban planners	—	—	—	—	—
Social, religious, and recreation workers	17.26	—	18.46	18.13	—
Level 9	19.95	—	—	19.95	—
Writers, authors, entertainers, athletes, and professionals, N.E.C.	18.66	18.57	—	18.68	—
Technical occupations	17.13	17.08	17.77	17.14	17.03
Level 5	13.12	13.08	—	13.00	—
Level 6	14.89	14.23	—	14.99	—

See footnotes at end of table.

Table B-1. Mean hourly earnings¹ by occupational group and levels², all industries, private industry, State and local government, full-time and part-time workers, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupational group ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
White-collar occupations (-Continued)					
Technical occupations (-Continued)					
Level 7	\$19.35	\$19.37	—	\$18.82	—
Executive, administrative, and managerial occupations ...	26.32	25.57	\$32.21	26.33	—
Level 7	18.19	18.29	—	18.30	—
Level 8	21.41	21.13	—	21.41	—
Level 9	24.58	24.59	—	24.58	—
Level 11	29.96	25.95	40.45	29.68	—
Level 12	36.48	36.58	—	36.48	—
Executives, administrators, and managers	30.45	29.41	36.29	30.38	—
Level 8	21.42	20.47	—	21.42	—
Level 9	25.62	25.41	—	25.62	—
Level 11	30.40	25.06	40.45	30.05	—
Level 12	37.90	38.13	—	37.90	—
Management related occupations	20.90	21.00	19.37	20.97	—
Level 7	18.42	18.48	—	18.58	—
Level 8	21.39	—	—	21.39	—
Level 9	22.98	23.23	—	22.98	—
Sales occupations	14.34	14.34	—	15.55	\$7.36
Level 3	9.72	9.72	—	—	—
Level 4	11.29	11.29	—	11.71	—
Level 9	30.05	30.05	—	30.05	—
Administrative support occupations, including clerical	11.28	11.00	13.03	11.89	9.40
Level 1	7.18	7.09	—	—	6.97
Level 2	8.37	8.22	9.79	8.40	8.28
Level 3	11.19	11.13	11.67	11.51	9.66
Level 4	11.08	10.59	13.24	11.87	—
Level 5	12.56	12.49	—	12.50	—
Level 6	15.71	—	—	15.71	—
Level 7	14.88	14.63	—	14.88	—
Blue-collar occupations	12.99	12.93	15.24	13.30	7.47
Level 1	7.61	7.62	—	7.89	6.61
Level 2	10.64	10.64	—	10.78	7.84
Level 3	13.19	13.20	12.73	13.22	11.29
Level 4	13.37	13.38	—	13.52	—
Level 5	13.62	13.57	—	13.64	—
Level 6	16.18	16.21	—	16.18	—
Level 7	18.75	18.91	16.92	18.75	—
Level 8	19.04	—	—	19.04	—
Precision production, craft, and repair occupations	17.05	17.07	16.65	17.07	—
Level 4	13.68	13.68	—	13.68	—
Level 5	13.97	13.93	—	13.97	—
Level 6	18.20	18.32	—	18.20	—
Level 7	19.01	19.23	16.63	19.01	—
Level 8	19.04	—	—	19.04	—
Machine operators, assemblers, and inspectors	12.33	12.33	—	12.46	7.71
Level 1	8.20	8.20	—	8.34	—
Level 2	11.02	11.02	—	11.22	—
Level 3	13.18	13.18	—	13.18	—
Level 4	13.67	13.67	—	13.74	—
Level 5	13.06	13.05	—	13.06	—
Level 6	14.15	14.15	—	14.15	—
Transportation and material moving occupations	12.19	12.11	13.37	12.27	10.63
Level 2	9.83	9.79	—	9.89	—
Level 3	13.08	13.17	—	13.08	—
Level 4	12.95	12.95	—	12.98	—
Handlers, equipment cleaners, helpers, and laborers	9.87	9.75	14.72	10.59	6.85
Level 1	7.20	7.22	—	7.51	6.47
Level 2	10.60	10.64	—	10.81	—
Level 3	13.36	13.34	—	13.57	—
Service occupations	9.06	7.66	14.97	10.18	5.99
Level 1	6.01	5.95	8.77	6.51	5.15

See footnotes at end of table.

Table B-1. Mean hourly earnings¹ by occupational group and levels², all industries, private industry, State and local government, full-time and part-time workers, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupational group ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
Service occupations (-Continued)					
Level 2	\$6.60	\$6.32	\$10.68	\$7.57	\$5.26
Level 3	9.63	9.20	11.59	10.26	7.50
Level 4	12.88	13.61	11.92	13.38	9.96
Level 5	12.76	12.38	13.27	12.82	—
Level 6	14.65	—	16.92	14.74	—
Level 7	15.95	—	20.61	15.96	—
Level 9	19.79	—	19.79	19.79	—
Protective service occupations	16.70	—	17.45	17.98	7.75
Level 6	16.92	—	16.92	17.37	—
Level 7	20.12	—	20.61	20.23	—
Level 9	18.28	—	18.28	18.28	—
Food service occupations	6.33	6.18	10.57	7.03	5.19
Level 1	5.22	5.20	—	5.47	4.87
Level 2	5.42	5.35	—	6.56	4.56
Level 3	8.10	7.90	—	8.16	7.95
Health service occupations	9.98	9.72	12.19	9.88	10.67
Level 3	9.60	9.19	—	9.61	—
Cleaning and building service occupations	10.94	10.20	13.53	11.41	7.41
Level 1	8.62	8.54	—	8.88	—
Level 2	9.10	—	—	—	—
Level 3	12.92	12.76	13.26	13.33	—
Level 4	12.58	—	—	—	—
Personal service occupations	7.50	6.99	9.48	—	6.95
Level 1	6.31	—	—	—	5.97
Level 3	7.79	—	—	—	—

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours.

² Each occupation for which wage data are collected in an establishment is evaluated based on 10 factors, including knowledge, complexity, work environment, etc. Points are assigned based on the occupation's ranking within each factor. The points are summed to determine the overall level of the occupation. See technical note for more information.

³ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

⁴ All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a

full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means not elsewhere classified. IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data—at the quote level—with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.

Table B-2. Mean hourly earnings¹ for selected occupations and levels², all industries, private industry, State and local government, full-time and part-time workers, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupation ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
White-collar occupations:					
Professional specialty and technical occupations:					
Professional specialty occupations:					
Industrial engineers	\$26.90	\$26.90	—	\$26.90	—
Engineers, N.E.C.	25.25	—	—	25.25	—
Computer systems analysts and scientists	21.42	—	—	21.42	—
Registered nurses	20.11	20.24	\$19.26	20.18	\$20.02
Level 7	19.99	—	19.15	—	20.30
Level 9	20.12	20.10	—	—	19.69
Prekindergarten and kindergarten	14.47	—	—	—	—
Elementary school teachers	31.86	—	36.53	31.89	—
Level 8	29.14	—	38.31	29.14	—
Level 9	35.80	—	35.80	36.05	—
Secondary school teachers	32.80	—	35.53	32.98	—
Level 8	33.66	—	37.78	34.03	—
Teachers, special education	37.34	—	37.34	37.34	—
Teachers, N.E.C.	23.50	—	26.64	23.78	—
Substitute teachers	9.95	—	9.94	—	9.95
Social workers	18.13	—	20.13	18.13	—
Level 9	19.95	—	—	19.95	—
Technical occupations:					
Licensed practical nurses	13.16	12.91	—	13.12	—
Health technologists and technicians, N.E.C.	12.74	12.71	—	—	—
Level 5	12.82	12.82	—	—	—
Electrical and electronic technicians	18.46	18.46	—	—	—
Technical and related occupations, N.E.C.	20.27	20.43	—	19.94	—
Executive, administrative, and managerial occupations:					
Financial managers	37.79	38.55	—	37.79	—
Managers, marketing, advertising and public relations	26.67	26.67	—	26.67	—
Administrators, education and related fields	36.97	—	40.95	36.61	—
Level 11	40.45	—	40.45	40.25	—
Managers and administrators, N.E.C.	29.41	28.83	—	29.41	—
Level 8	21.47	21.47	—	21.47	—
Level 11	24.79	24.79	—	24.79	—
Accountants and auditors	18.57	18.49	—	18.57	—
Personnel, training, and labor relations specialists	18.60	18.60	—	—	—
Purchasing agents and buyers, N.E.C.	21.62	21.62	—	21.62	—
Management related occupations, N.E.C.	25.23	25.46	—	25.23	—
Sales occupations:					
Supervisors, sales occupations	25.82	25.82	—	27.19	—
Cashiers	9.00	9.00	—	—	7.29
Administrative support occupations, including clerical:					
Secretaries	11.76	11.53	12.45	12.36	—
Level 2	7.79	—	—	—	—
Level 4	11.80	11.47	12.57	12.37	—
Receptionists	8.71	8.71	—	8.71	—
Bookkeepers, accounting and auditing clerks	10.90	10.49	14.79	12.24	—
Level 4	—	—	—	11.85	—
Billing clerks	10.42	10.35	—	10.42	—
Production coordinators	13.46	13.46	—	13.46	—
Stock and inventory clerks	10.03	10.03	—	10.03	—
General office clerks	9.94	9.17	11.87	10.84	8.70
Level 3	9.52	9.11	—	—	—
Level 4	11.11	9.58	—	11.35	—
Teachers' aides	10.91	—	10.91	11.31	10.10
Level 3	10.19	—	10.19	—	—
Administrative support occupations, N.E.C.	12.56	12.24	—	12.61	—
Blue-collar occupations:					
Precision production, craft, and repair occupations:					
Supervisors, mechanics and repairers	26.64	—	—	26.64	—
Automobile mechanics	17.50	—	—	17.50	—
Industrial machinery repairers	16.65	16.55	—	16.65	—

See footnotes at end of table.

Table B-2. Mean hourly earnings¹ for selected occupations and levels², all industries, private industry, State and local government, full-time and part-time workers, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
Blue-collar occupations: (-Continued)					
Precision production, craft, and repair occupations: (-Continued)					
Industrial machinery repairers (-Continued)					
Level 7	\$17.58	\$17.54	—	\$17.58	—
Electricians	19.89	19.99	—	19.89	—
Level 7	19.99	20.13	—	19.99	—
Supervisors, production occupations	18.82	18.82	—	18.82	—
Tool and die makers	20.39	20.39	—	20.39	—
Machinists	13.95	13.95	—	13.95	—
Machine operators, assemblers, and inspectors:					
Punching and stamping press operators	12.42	12.42	—	12.42	—
Grinding, abrading, buffing, and polishing machine operators	11.30	11.30	—	11.30	—
Fabricating machine operators, N.E.C.	13.93	13.93	—	13.93	—
Level 3	13.26	13.26	—	13.26	—
Molding and casting machine operators	10.24	10.24	—	10.24	—
Packaging and filling machine operators	14.20	14.20	—	14.20	—
Painting and paint spraying machine operators ...	11.44	11.44	—	11.44	—
Miscellaneous machine operators, N.E.C.	11.34	11.34	—	11.65	—
Level 1	8.14	8.14	—	—	—
Level 2	11.45	11.45	—	12.14	—
Level 3	12.40	12.40	—	12.40	—
Level 4	12.84	12.84	—	12.84	—
Welders and cutters	17.58	17.62	—	17.58	—
Assemblers	11.31	11.31	—	11.53	\$7.44
Level 1	8.26	8.26	—	8.46	—
Level 2	11.31	11.31	—	11.45	—
Level 3	12.88	12.88	—	12.88	—
Level 4	11.14	11.14	—	11.14	—
Production inspectors, checkers and examiners ..	12.38	12.38	—	12.38	—
Level 3	13.73	13.73	—	13.73	—
Transportation and material moving occupations:					
Truck drivers	12.69	12.65	—	12.83	—
Bus drivers	12.00	—	\$12.56	—	—
Industrial truck and tractor equipment operators ..	11.65	11.65	—	11.65	—
Level 2	9.67	9.67	—	9.67	—
Level 3	13.36	13.36	—	13.36	—
Handlers, equipment cleaners, helpers, and laborers:					
Groundskeepers and gardeners except farm	9.16	—	—	—	—
Stock handlers and baggers	8.07	8.07	—	8.73	—
Level 1	6.72	6.72	—	7.16	—
Machine feeders and offbearers	9.89	9.89	—	10.14	—
Freight, stock, and material handlers, N.E.C.	11.10	11.10	—	12.01	—
Level 1	8.58	8.58	—	—	—
Hand packers and packagers	9.39	9.39	—	9.56	—
Laborers except construction, N.E.C.	8.75	9.34	—	—	7.33
Service occupations:					
Protective service occupations:					
Firefighting occupations	14.85	—	14.85	—	—
Police and detectives, public service	18.84	—	18.84	19.21	—
Protective service occupations, N.E.C.	8.66	—	8.66	—	—
Food service occupations:					
Waiters and waitresses	3.45	3.45	—	—	3.83
Level 1	3.42	3.42	—	—	3.86
Cooks	8.12	7.85	—	8.22	—
Level 3	8.06	8.02	—	—	—
Food counter, fountain, and related occupations	7.29	—	—	—	—
Level 1	7.29	—	—	—	—
Kitchen workers, food preparation	6.81	6.81	—	—	—
Level 1	6.23	6.23	—	—	—
Food preparation occupations, N.E.C.	6.89	6.57	10.47	7.01	6.67
Level 1	6.47	6.42	—	6.57	6.24

See footnotes at end of table.

Table B-2. Mean hourly earnings¹ for selected occupations and levels², all industries, private industry, State and local government, full-time and part-time workers, Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

Occupation ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
Service occupations: (-Continued)					
Health service occupations:					
Health aides, except nursing	\$11.18	\$11.06	—	\$10.92	—
Nursing aides, orderlies and attendants	9.54	9.19	\$12.01	9.58	—
Level 3	9.45	9.02	—	9.45	—
Cleaning and building service occupations:					
Janitors and cleaners	11.29	10.79	12.78	11.70	\$7.56
Level 1	9.27	9.20	—	9.77	—
Level 2	9.49	—	—	—	—
Level 3	13.33	13.38	13.26	13.33	—
Level 4	12.58	—	—	—	—
Personal service occupations:					
Early childhood teachers' assistants	7.44	—	—	—	7.64

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours.

² Each occupation for which wage data are collected in an establishment is evaluated based on 10 factors, including knowledge, complexity, work environment, etc. Points are assigned based on the occupation's ranking within each factor. The points are summed to determine the overall level of the occupation. See technical note for more information.

³ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

⁴ All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a

full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

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Table C-1. Mean hourly earnings¹ by occupational group and selected characteristics, all industries, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupational group ²	Full-time workers ³	Part-time workers ³	Union ⁴	Nonunion ⁴	Time ⁵	Incentive ⁵
All occupations	\$15.48	\$9.31	\$16.67	\$14.13	\$14.59	\$16.88
All occupations excluding sales	15.48	9.45	16.95	14.06	14.69	15.72
White-collar occupations	19.24	11.71	22.38	17.29	17.95	22.88
White-collar excluding sales	19.78	12.34	24.32	17.59	18.61	—
Professional specialty and technical occupations	23.07	18.45	28.31	19.90	22.48	—
Professional specialty occupations	25.39	19.30	31.12	21.31	24.70	—
Technical occupations	17.14	17.03	17.33	17.07	17.13	—
Executive, administrative, and managerial occupations ...	26.33	—	28.13	26.25	26.33	—
Sales occupations	15.55	7.36	—	15.21	12.58	22.57
Administrative support including clerical occupations	11.89	9.40	13.71	10.99	11.26	—
Blue-collar occupations	13.30	7.47	14.38	12.36	12.75	15.12
Precision production, craft, and repair occupations	17.07	—	16.75	17.16	16.64	25.15
Machine operators, assemblers, and inspectors	12.46	7.71	14.91	11.04	12.10	14.49
Transportation and material moving occupations	12.27	10.63	13.82	11.67	11.78	—
Handlers, equipment cleaners, helpers, and laborers	10.59	6.85	—	9.50	9.59	—
Service occupations	10.18	5.99	13.55	7.67	9.07	—

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours.

² A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

³ Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

⁴ Union workers are those whose wages are determined through collective bargaining.

⁵ Time workers' wages are based solely on an hourly rate or salary; incentive workers are those whose wages are at least partially based on productivity payments such as piece rates, commissions, and production

bonuses.

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NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data—at the quote level—with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.

Table C-2. Mean hourly earnings¹ by occupational group and industry division, private industry, all workers², Grand Rapids-Muskegon-Holland, MI, July 1998

Occupational group ³	All private industries	Goods-producing industries ⁴				Service-producing industries ⁵				
		Total	Mining	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services
All occupations	\$13.93	-	-	-	-	-	-	-	\$17.61	\$11.83
All occupations excluding sales	13.90	-	-	-	-	-	-	-	17.88	11.82
White-collar occupations	16.85	-	-	-	-	-	-	-	17.73	13.67
White-collar excluding sales	17.30	-	-	-	-	-	-	-	18.02	13.73
Professional specialty and technical occupations	19.65	-	-	-	-	-	-	-	-	17.63
Professional specialty occupations	21.21	-	-	-	-	-	-	-	-	19.13
Technical occupations	17.08	-	-	-	-	-	-	-	-	14.66
Executive, administrative, and managerial occupations	25.57	-	-	-	-	-	-	-	-	23.30
Sales occupations	14.34	-	-	-	-	-	-	-	-	-
Administrative support, including clerical occupations	11.00	-	-	-	-	-	-	-	11.48	9.63
Blue-collar occupations	12.93	-	-	-	-	-	-	-	-	8.39
Precision production, craft, and repair occupations	17.07	-	-	-	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	12.33	-	-	-	-	-	-	-	-	7.57
Transportation and material moving occupations	12.11	-	-	-	-	-	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	9.75	-	-	-	-	-	-	-	-	7.35
Service occupations	7.66	-	-	-	-	-	-	-	-	8.32

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² All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

³ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

⁴ Goods-producing industries include mining, construction, and manufacturing.

⁵ Service-producing industries include transportation and public utilities; wholesale

and retail trade; finance, insurance, and real estate; and services.

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Table C-3. Mean hourly earnings¹ by occupational group and establishment employment size, private industry, all workers², Grand Rapids-Muskegon-Holland, MI, July 1998

Occupational group ³	All private industry workers	50 - 99 workers	100 workers or more		
			Total	100 - 499 workers	500 workers or more
All occupations	\$13.93	\$11.43	\$14.36	\$13.20	\$15.77
All occupations excluding sales	13.90	11.40	14.33	12.87	16.05
White-collar occupations	16.85	16.10	16.96	15.55	18.67
White-collar excluding sales	17.30	16.92	17.36	15.21	19.69
Professional specialty and technical occupations	19.65	16.62	20.10	19.34	20.62
Professional specialty occupations	21.21	18.08	21.75	20.18	22.96
Technical occupations	17.08	—	17.52	17.87	17.30
Executive, administrative, and managerial occupations ...	25.57	26.43	25.40	22.41	28.39
Sales occupations	14.34	11.81	14.75	16.99	—
Administrative support, including clerical occupations	11.00	9.79	11.17	10.07	12.84
Blue-collar occupations	12.93	11.50	13.08	12.04	14.38
Precision production, craft, and repair occupations	17.07	—	17.12	16.52	18.15
Machine operators, assemblers, and inspectors	12.33	—	12.51	10.89	14.60
Transportation and material moving occupations	12.11	—	11.69	10.33	13.77
Handlers, equipment cleaners, helpers, and laborers	9.75	9.65	9.76	8.27	10.79
Service occupations	7.66	5.72	8.93	8.19	9.74

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours.

² All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

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Table C-4. Number of workers¹ represented by occupational group, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupational group ²	All workers		
	All industries	Private industry	State and local government
All occupations	341,446	296,824	44,622
All occupations excluding sales	322,547	277,925	44,622
White-collar occupations	151,230	121,181	30,050
White-collar excluding sales	132,331	102,281	30,050
Professional specialty and technical occupations	51,791	33,830	17,961
Professional specialty occupations	38,816	21,742	17,074
Technical occupations	12,974	12,088	886
Executive, administrative, and managerial occupations ...	26,738	23,399	3,339
Sales occupations	18,900	18,900	—
Administrative support including clerical occupations	53,802	45,052	8,750
Blue-collar occupations	138,364	134,147	4,217
Precision production, craft, and repair occupations	31,250	29,547	1,703
Machine operators, assemblers, and inspectors	61,635	61,600	—
Transportation and material moving occupations	17,105	15,580	1,525
Handlers, equipment cleaners, helpers, and laborers	28,373	27,420	954
Service occupations	51,852	41,496	10,356

¹ Both full-time and part-time workers were included in the survey. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another establishment, where a 40-hour week is the minimum full-time schedule.

² A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for

categories not shown separately. N.E.C. means not elsewhere classified. IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data—at the quote level—with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.

Appendix A. Technical Note

This section provides basic information on the procedures and concepts used to produce the data contained in this bulletin. It is divided into three parts: Planning for the survey; data collection; and processing and analyzing the data. While this section answers some questions commonly asked by data users, it is not a comprehensive description of all the steps required to produce the data.

Planning for the survey

The overall design of the survey is based on the type of data to be produced. Establishments that participate in the NCS are studied for several collection cycles. This allows changes in wages within these establishments to be observed over time. Individual wage data are collected for selected jobs during each establishment's initial cycle and updated during subsequent cycles. When data are not available during a collection cycle, efforts are made to collect the data during subsequent cycles and include it in later tabulations. Beginning in the year 2001, the current NCS sample will be replenished on a rotating basis.

Survey scope

This survey of the Grand Rapids-Muskegon-Holland, MI, Metropolitan Statistical Area covered establishments employing 50 workers or more in goods-producing industries (mining, construction and manufacturing); service-producing industries (transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and services industries); and State and local governments. Agriculture, private households, and the Federal Government were excluded from the scope of the survey. For purposes of this survey an establishment was an economic unit which produces goods or services, a central administrative office, or an auxiliary unit providing support services to a company. For private industries in this survey, the establishment was usually at a single physical location. For State and local governments, an establishment was defined as all locations of a government entity.

The Grand Rapids-Muskegon-Holland, MI, MSA includes Allegan, Kent, Muskegon, and Ottawa Counties, MI.

Sampling frame

The list of establishments from which the survey sample was selected (sampling frame) was developed from the State unemployment insurance reports for the Grand Rapids-Muskegon-Holland, MI, Metropolitan Statistical Area. The reference month for the public sector is June 1994. Due to the volatility of industries within the private

sector, sampling frames were developed using the most recent month of reference available at the time the sample was selected. The reference month for the private sector is March 1996. The sampling frame was reviewed prior to the survey and, when necessary, missing establishments were added, out-of-business and out-of-scope establishments were removed, and addresses, employment levels, industry classification, and other information were updated.

Sample design

The sample for this survey area was selected using a two stage stratified design with probability proportional to employment sampling at each stage. The first stage of sample selection was a probability sample of establishments. The sample of establishments was drawn by first stratifying the sampling frame where the strata are determined by industry and whether the establishment is Private, State government or Local government. The number of sample establishments allocated to each stratum is approximately proportional to the stratum employment. Each sampled establishment is selected within a stratum with a probability proportional to its employment. Use of this technique means that the larger an establishment's employment, the greater its chance of selection. Weights were applied to each establishment when the data were tabulated so that the sample units within each stratum represent all the units within the stratum, both sampled and nonsampled. See appendix table 1 for a count of establishments in the survey by employment size. The second stage of sample selection, detailed below, was a probability sample of occupations within a sampled establishment.

Data collection

Detailed procedures are followed when collecting data from survey respondents. For the initial data collection, field economists, working out of the Regional Office, visited each establishment surveyed. The field economists - through mail, phone, or personal visit - completed update collection, which involved obtaining current pay data.

The following procedures are used for schedules initiated for the first time or reinitiated during an update.

Occupational selection and classification

Identification of the occupations for which wage data were to be collected was a multi-step process:

1. Probability-proportional-to-size selection of establishment jobs.

2. Classification of jobs into occupations based on the Census of Population system.
3. Characterization of jobs as full-time v. part-time, union v. nonunion, and time v. incentive.
4. Determination of the level of work of each job.

For each occupation, wage data were collected for those workers who met all the criteria identified in the last three steps. Special procedures were developed for jobs for which a correct classification or level could not be determined.

In step one, the jobs to be sampled were selected at each establishment by the BLS field economist during a personal visit. A complete list of employees was used for sampling, with each selected worker representing a job within the establishment.

As with the selection of establishments, the selection of a job was based on probability proportional to its size in the establishment. The greater the number of people working in a job in the establishment, the greater its chance of selection.

The number of jobs collected in each establishment was based on an establishment's employment size as shown in the following schedule:

<i>Number of employees</i>	<i>Number of selected jobs</i>
50-99	8
100-249	10
250-999	12
1000-2,499	16
2,500+	20

The second step of the process entailed classifying the selected jobs into occupations based on their duties. The National Compensation Survey occupational classification system is based on the 1990 Census of Population. A selected job may fall into any one of about 480 occupational classifications, from accountant to wood lathe operator. In cases where a job's duties overlapped two or more census classification codes, the duties used to set the wage level were used to classify the job. Classification by primary duties was the fallback.

Each occupational classification is an element of a broader classification known as a major occupational group (MOG). Occupations can fall into any of the following MOG's:

- Professional specialty and technical
- Executive, administrative, and managerial
- Sales
- Administrative support including clerical
- Precision production, craft, and repair
- Machine operators, assemblers, and inspectors
- Transportation and material moving
- Handlers, equipment cleaners, helpers, and laborers
- Service occupations

A complete list of all individual occupations, classified by the MOG to which they belong, is contained in appendix B.

In step three, certain other job characteristics of the chosen worker were identified. First, the worker was identified as holding either a full-time or part-time job, based on the establishment's definition of those terms. Then the worker was classified as having a time versus incentive job, depending on whether any part of pay was directly based on the actual production of the worker, rather than solely on hours worked. Finally, the worker was identified as being in a union job or a nonunion job. See the "Definition of Terms" section on the following page for more detail.

Generic leveling through point factor analysis

In the last step before wage data were collected, the work level of each selected job was determined using a "generic leveling" process. Generic leveling ranks and compares all occupations randomly selected in an establishment using the same criteria. This is a major departure from the method used in the past in the Bureau's Occupational Compensation Surveys which studied specifically defined occupations with leveling definitions unique to each occupation.

For this survey, the level of each occupation in an establishment was determined by an analysis of each of 10 leveling factors. Nine of these factors are drawn from the U.S. Government Office of Personnel Management's Factor Evaluation System, which is the underlying structure for evaluation of General Schedule Federal employees. The tenth factor, supervisory duties, attempts to account for the effect of supervisory duties. It is considered experimental. The 10 factors are:

- Knowledge
- Supervision received
- Guidelines
- Complexity
- Scope and effect
- Personal contacts
- Purpose of contacts
- Physical demands
- Work environment
- Supervisory duties

Each factor contains a number of levels and each level has an associated written description and point value. The number and range of points differ among the factors. For each factor, an occupation was assigned a level based on which written description best matched the job. Within each occupation, the points for 9 factors (supervisory duties was excluded) were recorded and totaled. The total determines the overall level of the occupation. Appendix table 3 presents average work levels for published occupational groups and selected occupations. A description of the levels for each factor is shown in appendix C.

Tabulations of levels of work for occupations in the survey follow the Federal Government's white-collar Gen-

eral Schedule. Point ranges for each of the 15 levels are shown in appendix D. It also includes an example of a leveled job and a guide to help data users evaluate jobs in their firm.

Wage data collected in prior surveys using the new generic leveling method were evaluated by BLS researchers using regression techniques. For each of the major occupational groups, wages were compared to the 10 generic level factors (and levels within those factors). The analysis showed that several of the generic level factors, most notably knowledge and supervision received, had strong explanatory power for wages. That is, as the levels within a given factor increased, the wages also increased. Detailed research continues in the area. The results of this research will be published by BLS in the future.

Collection period

The survey was collected from April 1998 through August 1998. The average payroll reference month was July 1998. For each establishment in the survey, the data reflect the establishment's practices on the day of collection.

Earnings

Earnings were defined as regular payments from the employer to the employee as compensation for straight-time hourly work, or for any salaried work performed. The following components were included as part of earnings:

- Incentive pay, including commissions, production bonuses, and piece rates
- Cost-of-living allowances
- Hazard pay
- Payments of income deferred due to participation in a salary reduction plan
- Deadhead pay, defined as pay given to transportation workers returning in a vehicle without freight or passengers

The following forms of payments were *not* considered part of straight-time earnings:

- Shift differentials, defined as extra payment for working a schedule that varies from the norm, such as night or weekend work
- Premium pay for overtime, holidays, and weekends
- Bonuses not directly tied to production (e.g., Christmas bonuses, profit-sharing bonuses)
- Uniform and tool allowances
- Free room and board
- Payments made by third parties (e.g., tips, bonuses given by manufacturers to department store salespeople, referral incentives in real estate)
- On-call pay

In order to calculate earnings for various time periods (hourly, weekly, and annual), data on work schedules were

also collected. For hourly workers, scheduled hours worked per day and per week, exclusive of overtime, were recorded. Annual weeks worked were determined. Because salaried workers, exempt from overtime provisions, often work beyond the assigned work schedule, their typical number of hours actually worked was collected.

Definition of terms

Full-time worker. Any employee that the employer considers to be full time.

Incentive worker. Any employee whose earnings are tied, at least in part, to commissions, piece rates, production bonuses, or other incentives based on production or sales.

Level. A ranking of an occupation based on the requirements of the position. (See the description in the technical note and the example for more details on the leveling process.)

Nonunion worker. An employee in an occupation not meeting the conditions for union coverage (see below).

Part-time worker. Any employee that the employer considers to be part-time.

Straight-time. Time worked at the standard rate of pay for the job.

Time-based worker. Any employee whose earnings are tied to an hourly rate or salary, and not to a specific level of production.

Union worker. Any employee is in a union occupation when all of the following conditions are met:

- A labor organization is recognized as the bargaining agent for all workers in the occupation.
- Wage and salary rates are determined through collective bargaining or negotiations.
- Settlement terms, which must include earnings provisions and may include benefit provisions, are embodied in a signed mutually binding collective bargaining agreement.

Processing and analyzing the data

Data were processed and analyzed at the Bureau's National Office following collection.

Weighting and nonresponse

Sample weights were calculated for each establishment/occupation in the survey. These weights reflected the relative size of the occupation within the establishment and of the establishment within the sample universe. Weights

were used to aggregate the individual establishment/occupations into the various data series. Of the establishments surveyed, 28.3 percent (representing 106,327 employees) refused to supply information. If data were not provided by a sample member, the weights of responding sample members in the same or similar “cells” were adjusted to account for the missing data. This technique assumes that the mean value of the nonrespondents equals the mean value of the respondents at some detailed “cell” level. Responding and nonresponding establishments were classified into these cells according to industry and employment size. Responding and nonresponding occupations within responding establishments were classified into cells which were additionally defined by major occupation group and job level.

Establishments which were determined to be out of business or outside the scope of the survey (3.9 percent of the total sample) had their weights changed to zero. If only partial data were given by a sample establishment or occupation, or data were missing, the response was treated as a refusal.

Estimation

The wage series in the tables are computed by combining the wages for individual establishment/occupations. Before being combined, individual wage rates are weighted by: number of workers; the sample weight adjusted for nonresponding establishments and other factors; and the occupation work schedule, varying depending on whether hourly, weekly, or annual rates are being calculated. The respondent has the option of giving mean data instead of individual wages in the years following the initiation.

In 1998, the publication criteria were changed to allow more data to publish. Not all series that were calculated met the criteria for publication. Before any series was published, it was reviewed to make sure that the number of observations underlying it was sufficient. This review prevented publishing a series that could have revealed information about a specific establishment.

As a result of the use of sampling weights, the number of workers estimates represent the total in all establishments within the scope of the study not the actual number of workers surveyed.

Data reliability

The data in this bulletin are estimates from a scientifically selected probability sample. There are two types of errors possible in an estimate based on a sample survey, sampling and nonsampling.

Sampling errors occur because observations come only from a sample and not from an entire population. The sample used for this survey is one of a number of possible samples of the same size that could have been selected using the sample design. Estimates derived from the different samples would differ from each other.

A measure of the variation among these differing estimates is called the standard error or sampling error. It indicates the precision with which an estimate from a particular sample approximates the average result of all possible samples. The relative standard error (RSE) is the standard error divided by the estimate. Appendix table 2 contains RSE data for selected series in this bulletin. RSE data for all series in this bulletin are available on the Internet web site and by request to the BLS National Office.

The standard error can be used to calculate a “confidence interval” around a sample estimate. As an example, suppose table A-1 shows that mean hourly earnings for all workers was \$12.79 per hour, and appendix table 2 shows a relative standard error of 3.6 percent for this estimate. At the 90-percent level, the confidence interval for this estimate is \$13.55 to \$12.03 (\$12.79 plus and minus 1.645 times 3.6 percent times \$12.79). If all possible samples were selected to estimate the population value, the interval from each sample would include the true population value approximately 90 percent of the time.

Nonsampling errors also affect survey results. They can stem from many sources, such as inability to obtain information for some establishments, difficulties with survey definitions, inability of the respondents to provide correct information, or mistakes in recording or coding the data obtained. A Technical Reinterview Program done in all survey areas will be used in the development of a formal quality assessment process to help compute nonsampling error. Although they also were not specifically measured, efforts were made to minimize nonsampling errors by the extensive training of field economists who gathered survey data, computer editing of the data, and detailed data review.

Appendix table 1. Number of establishments studied by industry division and establishment employment size, and number of establishments represented, Grand Rapids-Muskegon-Holland, MI, July 1998

Industry	Number of establishments represented	Number of establishments studied				
		Total studied	50 - 99 workers	100 workers or more		
				Total	100 - 499 workers	500 workers or more
All industries	1,588	154	26	128	75	53
Private industry	1,495	116	24	92	57	35
Goods-producing industries	541	55	4	51	32	19
Mining	1	1	1	-	-	-
Construction	94	1	-	1	1	-
Manufacturing	446	53	3	50	31	19
Service-producing industries	954	61	20	41	25	16
Transportation and public utilities	84	3	2	1	1	-
Wholesale and retail trade	492	25	9	16	13	3
Finance, insurance and real estate	32	3	1	2	-	2
Services	345	30	8	22	11	11
State and local government	93	38	2	36	18	18

NOTE: Dashes indicate that no data were reported. Overall industry and industry groups may include data for categories not shown separately.

Appendix table 2. Relative standard errors of mean hourly earnings¹ for selected occupations, all industries, private industry, and State and local government, all workers², Grand Rapids-Muskegon-Holland, MI, July 1998

(in percent)

Occupation ³	All industries	Private industry	State and local government
All occupations	2.3	2.6	3.2
All occupations excluding sales	2.2	2.6	3.2
White-collar occupations	3.6	4.0	3.6
White-collar occupations excluding sales	3.7	4.3	3.6
Professional specialty and technical occupations	2.7	3.2	3.7
Professional specialty occupations	3.2	4.0	3.9
Engineers, architects, and surveyors	2.9	2.9	—
Industrial engineers	4.9	4.9	—
Engineers, N.E.C.	10.2	—	—
Mathematical and computer scientists	4.4	4.8	—
Computer systems analysts and scientists	4.1	—	—
Natural scientists	—	—	—
Health related occupations	2.4	2.5	7.5
Registered nurses	1.4	1.5	2.8
Teachers, college and university	4.8	—	7.4
Teachers, except college and university	7.7	—	3.7
Prekindergarten and kindergarten	29.5	—	—
Elementary school teachers	8.9	—	2.6
Secondary school teachers	8.4	—	6.3
Teachers, special education	6.8	—	6.8
Teachers, N.E.C.	17.5	—	13.9
Substitute teachers	0.8	—	1.0
Librarians, archivists, and curators	—	—	—
Social scientists and urban planners	—	—	—
Social, recreation, and religious workers	8.0	—	10.4
Social workers	7.7	—	7.0
Writers, authors, entertainers, athletes, and professionals, N.E.C.	16.9	18.9	—
Technical occupations	5.8	6.3	5.1
Licensed practical nurses	2.0	1.9	—
Health technologists and technicians, N.E.C.	4.8	4.9	—
Electrical and electronic technicians	13.0	13.0	—
Technical and related occupations, N.E.C.	8.5	9.5	—
Executive, administrative, and managerial occupations ...	4.3	4.8	6.9
Executives, administrators, and managers	5.5	6.6	5.9
Financial managers	12.0	12.0	—
Managers, marketing, advertising and public relations	15.9	15.9	—
Administrators, education and related fields	7.6	—	3.0
Managers and administrators, N.E.C.	8.6	8.9	—
Management related occupations	4.0	4.2	5.3
Accountants and auditors	4.5	4.7	—
Personnel, training, and labor relations specialists	15.6	15.6	—
Purchasing agents and buyers, N.E.C.	4.7	4.7	—
Management related occupations, N.E.C.	4.8	4.9	—
Sales occupations	8.3	8.3	—
Supervisors, sales occupations	16.8	16.8	—
Cashiers	5.9	5.9	—
Administrative support occupations, including clerical	3.0	3.2	2.5
Secretaries	3.1	3.7	4.4
Receptionists	1.9	1.9	—
Bookkeepers, accounting and auditing clerks	6.7	6.1	6.0
Billing clerks	5.1	5.3	—
Production coordinators	8.9	8.9	—
Stock and inventory clerks	4.4	4.4	—
General office clerks	4.6	3.7	5.9
Teachers' aides	3.0	—	3.0
Administrative support occupations, N.E.C.	8.1	10.1	—
Blue-collar occupations	3.0	3.1	4.7
Precision production, craft, and repair occupations	3.3	3.5	2.2
Supervisors, mechanics and repairers	21.0	—	—

See footnotes at end of table.

Appendix table 2. Relative standard errors of mean hourly earnings¹ for selected occupations, all industries, private industry, and State and local government, all workers², Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

(in percent)

Occupation ³	All industries	Private industry	State and local government
Blue-collar occupations (-Continued)			
Precision production, craft, and repair occupations (-Continued)			
Automobile mechanics	10.5	—	—
Industrial machinery repairers	4.6	5.1	—
Electricians	5.1	5.2	—
Supervisors, production occupations	5.5	5.5	—
Tool and die makers	4.8	4.8	—
Machinists	9.8	9.8	—
Machine operators, assemblers, and inspectors	3.6	3.6	—
Punching and stamping press operators	6.6	6.6	—
Grinding, abrading, buffing, and polishing machine operators	15.5	15.5	—
Fabricating machine operators, N.E.C.	9.9	9.9	—
Molding and casting machine operators	8.7	8.7	—
Packaging and filling machine operators	4.2	4.2	—
Painting and paint spraying machine operators ...	5.5	5.5	—
Miscellaneous machine operators, N.E.C.	4.6	4.6	—
Welders and cutters	9.0	9.2	—
Assemblers	4.8	4.8	—
Production inspectors, checkers and examiners ..	9.2	9.2	—
Transportation and material moving occupations	3.0	3.2	5.6
Truck drivers	3.7	3.7	—
Bus drivers	5.0	—	3.1
Industrial truck and tractor equipment operators ..	6.5	6.5	—
Handlers, equipment cleaners, helpers, and laborers	6.9	7.0	22.1
Groundskeepers and gardeners except farm	16.3	—	—
Stock handlers and baggers	9.9	9.9	—
Machine feeders and offbearers	11.9	11.9	—
Freight, stock, and material handlers, N.E.C.	12.3	12.3	—
Hand packers and packagers	9.6	9.6	—
Laborers except construction, N.E.C.	13.9	14.3	—
Service occupations	4.7	4.8	3.9
Protective service occupations	4.4	—	4.2
Firefighting occupations	5.0	—	5.0
Police and detectives, public service	2.8	—	2.8
Protective service occupations, N.E.C.	12.0	—	12.0
Food service occupations	5.4	5.6	6.1
Waiters and waitresses	12.1	12.1	—
Cooks	3.7	2.9	—
Food counter, fountain, and related occupations	4.8	—	—
Kitchen workers, food preparation	7.5	7.5	—
Food preparation occupations, N.E.C.	3.3	3.0	2.3

See footnotes at end of table.

Appendix table 2. Relative standard errors of mean hourly earnings¹ for selected occupations, all industries, private industry, and State and local government, all workers², Grand Rapids-Muskegon-Holland, MI, July 1998 — Continued

(in percent)

Occupation ³	All industries	Private industry	State and local government
Service occupations (-Continued)			
Health service occupations	2.9	3.1	6.3
Health aides, except nursing	8.5	8.8	—
Nursing aides, orderlies and attendants	2.5	2.2	7.2
Cleaning and building service occupations	5.3	6.5	5.9
Janitors and cleaners	4.2	5.7	2.4
Personal service occupations	5.0	3.7	10.3
Early childhood teachers' assistants	3.5	—	—

¹ The relative standard error is the standard error expressed as a percent of the estimate. Hourly earnings for these occupations are presented in Tables A-1 and A-2. Reliable relative standard errors could not be determined for all occupations.

² All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

³ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or

that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means not elsewhere classified. IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data—at the quote level—with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.

Appendix table 3. Average work levels for selected occupations, all workers, full-time and part-time workers, Grand Rapids-Muskegon-Holland, MI, July 1998

Occupation ¹	All workers	Full-time workers	Part-time workers
All occupations	5	5	3
All occupations excluding sales	5	5	3
White-collar occupations	6	7	5
White-collar occupations excluding sales	6	7	5
Professional specialty and technical occupations	8	8	7
Professional specialty occupations	8	8	8
Engineers, architects, and surveyors	9	9	—
Industrial engineers	10	10	—
Engineers, N.E.C.	9	9	—
Mathematical and computer scientists	9	9	—
Computer systems analysts and scientists	9	9	—
Natural scientists	—	—	—
Health related occupations	9	9	9
Registered nurses	8	8	9
Teachers, college and university	10	10	—
Teachers, except college and university	8	8	6
Prekindergarten and kindergarten	6	—	—
Elementary school teachers	8	8	—
Secondary school teachers	8	8	—
Teachers, special education	8	8	—
Teachers, N.E.C.	7	7	—
Substitute teachers	6	—	6
Librarians, archivists, and curators	—	—	—
Social scientists and urban planners	—	—	—
Social, recreation, and religious workers	7	8	—
Social workers	8	8	—
Writers, authors, entertainers, athletes, and professionals, N.E.C.	7	7	—
Technical occupations	6	6	6
Licensed practical nurses	6	6	—
Health technologists and technicians, N.E.C.	5	—	—
Electrical and electronic technicians	6	—	—
Technical and related occupations, N.E.C.	7	7	—
Executive, administrative, and managerial occupations	9	9	—
Executives, administrators, and managers	10	10	—
Financial managers	11	11	—
Managers, marketing, advertising and public relations ..	11	11	—
Administrators, education and related fields	11	11	—
Managers and administrators, N.E.C.	10	10	—
Management related occupations	8	8	—
Accountants and auditors	7	7	—
Personnel, training, and labor relations specialists	8	—	—
Purchasing agents and buyers, N.E.C.	8	8	—
Management related occupations, N.E.C.	9	9	—
Sales occupations	4	5	2
Supervisors, sales occupations	8	8	—
Cashiers	2	—	2
Administrative support occupations, including clerical	4	4	3
Secretaries	4	4	—
Receptionists	3	3	—
Bookkeepers, accounting and auditing clerks	4	4	—
Billing clerks	3	3	—
Production coordinators	5	5	—
Stock and inventory clerks	4	4	—
General office clerks	3	3	3
Teachers' aides	3	3	3
Administrative support occupations, N.E.C.	5	5	—
Blue-collar occupations	4	4	2
Precision production, craft, and repair occupations	6	6	—
Supervisors, mechanics and repairers	8	8	—
Automobile mechanics	6	6	—
Industrial machinery repairers	6	6	—
Electricians	7	7	—
Supervisors, production occupations	7	7	—
Tool and die makers	6	6	—
Machinists	6	6	—

See footnotes at end of table.

Appendix table 3. Average work levels for selected occupations, all workers, full-time and part-time workers, Grand Rapids-Muskegon-Holland, MI, July 1998
— Continued

Occupation ¹	All workers	Full-time workers	Part-time workers
Blue-collar occupations (-Continued)			
Machine operators, assemblers, and inspectors	3	3	2
Punching and stamping press operators	5	5	—
Grinding, abrading, buffing, and polishing machine operators	2	2	—
Fabricating machine operators, N.E.C.	3	3	—
Molding and casting machine operators	3	3	—
Packaging and filling machine operators	3	3	—
Painting and paint spraying machine operators	4	4	—
Miscellaneous machine operators, N.E.C.	3	3	—
Welders and cutters	3	3	—
Assemblers	3	3	1
Production inspectors, checkers and examiners	4	4	—
Transportation and material moving occupations	3	3	3
Truck drivers	4	4	—
Bus drivers	3	—	—
Industrial truck and tractor equipment operators	3	3	—
Handlers, equipment cleaners, helpers, and laborers	2	2	2
Groundskeepers and gardeners except farm	3	—	—
Stock handlers and baggers	2	2	—
Machine feeders and offbearers	2	2	—
Freight, stock, and material handlers, N.E.C.	2	2	—
Hand packers and packagers	2	2	—
Laborers except construction, N.E.C.	2	—	2
Service occupations	3	3	2
Protective service occupations	6	7	4
Firefighting occupations	6	—	—
Police and detectives, public service	7	7	—
Protective service occupations, N.E.C.	3	—	—
Food service occupations	2	2	2
Waiters and waitresses	2	—	2
Cooks	3	3	—
Food counter, fountain, and related occupations	1	—	—
Kitchen workers, food preparation	2	—	—
Food preparation occupations, N.E.C.	2	2	2
Health service occupations	3	3	3
Health aides, except nursing	3	3	—
Nursing aides, orderlies and attendants	3	3	—
Cleaning and building service occupations	2	3	2
Janitors and cleaners	3	3	2
Personal service occupations	2	—	2
Early childhood teachers' assistants	2	—	3

¹ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups. The occupations titled authors, musicians, actors, painters, photographers, dancers, artists, athletes, and legislators cannot be assigned a work level.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may

include data for categories not shown separately. N.E.C. means "not elsewhere classified."

NOTE: Individual and average wage rates were collected in this update survey. A procedure was put into place to "move" the positional statistics where averages were collected. This procedure compares current locality survey data—at the quote level—with the same quote from the prior survey. Individual rates from the prior survey are moved by the average change in mean wages for the occupation.