

Delta County, MI

National Compensation Survey

March 1998



U.S. Department of Labor
Bureau of Labor Statistics
July 1998

This summary provides results of a March 1998 survey of occupational pay in Delta County, MI. Data shown in this summary were collected as part of the Bureau of Labor Statistics' (BLS) new program known as the National Compensation Survey (NCS). The 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 summary 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.

Hourly wage rates for various occupational classifications compose the majority of the information contained in this summary. The A-tables present data for all industries, private industry vs. State and local government, and full-time vs. part-time workers. Also shown are weekly and annual earnings and hours for full-time workers. Table B-1 provides hourly rates for a range of work levels within occupational groups. Also contained in this summary is a technical note describing survey procedures and a table listing the number of establishments studied.

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 summary. The Bureau thanks these respondents for their cooperation. Survey data were collected and reviewed by Bureau of Labor Statistics field economists. 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.

Where to find more information

For additional information regarding this survey, including a list of occupational classifications and the factors determining work levels, 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 telephone (202) 606-6220, or send e-mail to ocltinfo@bls.gov.

The data contained in this summary are also available on the Internet's World Wide Web through the BLS 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 summary.

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Table A-1. Hourly earnings¹ for selected occupations, all workers², all industries, Delta County, MI, March 1998

Occupation ³	All industries					
	Mean	Percentiles				
		10	25	Median 50	75	90
All occupations	\$16.03	\$6.17	\$9.20	\$13.14	\$18.96	\$32.08
All occupations excluding sales	16.56	7.24	9.86	14.42	19.07	32.67
White-collar occupations	19.40	5.84	9.50	17.39	29.68	36.80
White-collar occupations excluding sales	21.05	9.00	11.75	17.57	32.08	38.00
Professional specialty and technical occupations	27.41	13.77	16.72	27.45	36.80	40.58
Professional specialty occupations	28.68	16.11	17.99	31.25	36.80	40.75
Engineers, architects, and surveyors	-	-	-	-	-	-
Mathematical and computer scientists	-	-	-	-	-	-
Natural scientists	-	-	-	-	-	-
Health related occupations	-	-	-	-	-	-
Teachers, college and university	-	-	-	-	-	-
Teachers, except college and university	-	-	-	-	-	-
Social scientists and urban planners	-	-	-	-	-	-
Social, recreation, and religious workers	-	-	-	-	-	-
Technical occupations	-	-	-	-	-	-
Executive, administrative, and managerial occupations ...	20.79	15.20	17.53	17.53	26.67	32.08
Executives, administrators, and managers	22.32	15.20	17.39	19.00	31.13	32.08
Management related occupations	-	-	-	-	-	-
Sales occupations	-	-	-	-	-	-
Administrative support occupations, including clerical	11.60	5.84	9.00	9.86	17.07	18.96
Blue-collar occupations	14.28	8.38	11.30	13.00	18.00	20.92
Precision production, craft, and repair occupations	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	-	-	-	-	-	-
Transportation and material moving occupations	12.72	8.38	12.02	12.32	14.72	15.95
Handlers, equipment cleaners, helpers, and laborers	9.85	5.94	6.47	8.70	10.00	18.00
Service occupations	10.40	6.46	7.32	8.58	13.10	16.24
Protective service occupations	15.45	8.58	13.35	15.72	16.73	21.44
Food service occupations	-	-	-	-	-	-
Health service occupations	-	-	-	-	-	-
Cleaning and building service occupations	11.29	8.76	9.22	11.17	12.88	14.15
Janitors and cleaners	11.29	8.76	9.22	11.17	12.88	14.15
Personal service occupations	-	-	-	-	-	-

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."

Table A-2. Hourly earnings¹ for selected occupations, all workers², private industry and State and local government, Delta County, MI, March 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	\$14.88	\$5.90	\$8.52	\$12.50	\$18.79	\$25.81	\$19.73	\$11.61	\$12.88	\$15.38	\$24.87	\$38.88
All occupations excluding sales	15.50	6.46	9.00	13.00	18.96	30.44	19.73	11.61	12.88	15.38	24.87	38.88
White-collar occupations	17.31	5.84	9.00	16.11	20.74	36.80	24.82	12.39	15.20	22.36	35.37	42.53
White-collar occupations excluding sales	19.33	5.84	9.86	17.53	30.44	36.80	24.82	12.39	15.20	22.36	35.37	42.53
Professional specialty and technical occupations	25.33	11.75	16.11	23.50	36.80	38.61	31.34	18.44	24.19	31.25	40.10	45.76
Professional specialty occupations	26.67	16.11	16.30	30.01	36.80	38.61	32.52	18.44	25.10	33.64	40.81	45.76
Engineers, architects, and surveyors	-	-	-	-	-	-	-	-	-	-	-	-
Mathematical and computer scientists	-	-	-	-	-	-	-	-	-	-	-	-
Natural scientists	-	-	-	-	-	-	-	-	-	-	-	-
Health related occupations	-	-	-	-	-	-	-	-	-	-	-	-
Teachers, college and university	-	-	-	-	-	-	-	-	-	-	-	-
Teachers, except college and university	-	-	-	-	-	-	-	-	-	-	-	-
Social scientists and urban planners	-	-	-	-	-	-	-	-	-	-	-	-
Social, recreation, and religious workers	-	-	-	-	-	-	-	-	-	-	-	-
Technical occupations	-	-	-	-	-	-	-	-	-	-	-	-
Executive, administrative, and managerial occupations	-	-	-	-	-	-	-	-	-	-	-	-
Executives, administrators, and managers	-	-	-	-	-	-	-	-	-	-	-	-
Management related occupations	-	-	-	-	-	-	-	-	-	-	-	-
Sales occupations	-	-	-	-	-	-	-	-	-	-	-	-
Administrative support occupations, including clerical	10.97	5.84	5.84	9.20	17.57	18.96	13.74	11.50	12.08	13.42	15.23	17.07
Blue-collar occupations	14.44	8.17	10.80	13.00	18.79	20.92	13.08	12.02	12.32	12.93	13.14	15.00
Precision production, craft, and repair occupations	-	-	-	-	-	-	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	-	-	-	-	-	-	-	-	-	-	-	-
Transportation and material moving occupations	-	-	-	-	-	-	13.05	12.02	12.32	12.93	13.24	14.86
Handlers, equipment cleaners, helpers, and laborers	9.85	5.94	6.47	8.70	10.00	18.00	-	-	-	-	-	-
Service occupations	7.82	5.84	7.13	7.75	8.52	9.22	14.20	9.10	12.26	14.15	16.17	18.54
Protective service occupations	-	-	-	-	-	-	15.45	8.58	13.35	15.72	16.73	21.44
Food service occupations	-	-	-	-	-	-	-	-	-	-	-	-
Health service occupations	-	-	-	-	-	-	-	-	-	-	-	-
Cleaning and building service occupations	-	-	-	-	-	-	-	-	-	-	-	-
Personal service occupations	-	-	-	-	-	-	-	-	-	-	-	-

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."

Table A-3. Hourly earnings¹ for selected occupations, full-time and part-time workers², all industries, Delta County, MI, March 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	\$17.36	\$8.52	\$11.30	\$15.57	\$20.14	\$32.75	\$8.08	\$5.40	\$5.65	\$5.84	\$8.50	\$15.59
All occupations excluding sales	17.59	8.70	11.75	16.11	20.92	32.75	8.80	5.65	5.84	6.25	10.17	16.26
White-collar occupations	21.92	9.20	12.92	17.57	32.75	38.61	-	-	-	-	-	-
White-collar occupations excluding sales	22.72	9.86	15.04	18.77	32.75	38.88	10.17	5.84	5.84	5.84	15.74	20.14
Professional specialty and technical occupations	28.48	15.80	17.42	31.05	36.80	40.75	-	-	-	-	-	-
Professional specialty occupations	29.64	16.11	18.48	32.75	37.10	40.88	-	-	-	-	-	-
Engineers, architects, and surveyors	-	-	-	-	-	-	-	-	-	-	-	-
Mathematical and computer scientists	-	-	-	-	-	-	-	-	-	-	-	-
Natural scientists	-	-	-	-	-	-	-	-	-	-	-	-
Health related occupations	-	-	-	-	-	-	-	-	-	-	-	-
Teachers, college and university	-	-	-	-	-	-	-	-	-	-	-	-
Teachers, except college and university	-	-	-	-	-	-	-	-	-	-	-	-
Social scientists and urban planners	-	-	-	-	-	-	-	-	-	-	-	-
Social, recreation, and religious workers	-	-	-	-	-	-	-	-	-	-	-	-
Technical occupations	-	-	-	-	-	-	-	-	-	-	-	-
Executive, administrative, and managerial occupations	21.37	15.20	17.53	17.53	26.67	32.08	-	-	-	-	-	-
Executives, administrators, and managers	23.28	15.20	17.39	19.00	31.69	32.08	-	-	-	-	-	-
Management related occupations	-	-	-	-	-	-	-	-	-	-	-	-
Sales occupations	-	-	-	-	-	-	-	-	-	-	-	-
Administrative support occupations, including clerical	13.18	9.00	9.20	12.08	17.57	18.96	-	-	-	-	-	-
Blue-collar occupations	14.62	8.70	11.80	13.00	18.07	20.92	-	-	-	-	-	-
Precision production, craft, and repair occupations	-	-	-	-	-	-	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	-	-	-	-	-	-	-	-	-	-	-	-
Transportation and material moving occupations	13.20	9.13	12.02	12.32	14.86	16.70	-	-	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	-	-	-	-	-	-	-	-	-	-	-	-
Service occupations	11.37	7.24	8.01	9.22	14.15	16.73	7.42	5.40	5.84	7.25	8.58	10.26
Protective service occupations	-	-	-	-	-	-	-	-	-	-	-	-
Food service occupations	-	-	-	-	-	-	-	-	-	-	-	-
Health service occupations	-	-	-	-	-	-	-	-	-	-	-	-
Cleaning and building service occupations	11.29	8.76	9.22	11.17	12.88	14.15	-	-	-	-	-	-
Janitors and cleaners	11.29	8.76	9.22	11.17	12.88	14.15	-	-	-	-	-	-
Personal service occupations	-	-	-	-	-	-	-	-	-	-	-	-

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.

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Table A-4. Weekly and annual earnings¹ and hours for selected occupations, full-time workers only², all industries, Delta County, MI, March 1998

Occupation ³	All industries					
	Mean weekly hours ⁴	Weekly earnings		Mean annual hours	Annual earnings	
		Mean	Median		Mean	Median
All occupations	37.4	\$650	\$600	1,882	\$32,681	\$31,128
All occupations excluding sales	37.7	664	615	1,896	33,353	31,741
White-collar occupations	37.0	811	703	1,796	39,377	36,462
White-collar occupations excluding sales	37.7	856	738	1,821	41,370	36,546
Professional specialty and technical occupations	37.8	1,075	1,193	1,743	49,625	48,880
Professional specialty occupations	37.6	1,113	1,234	1,718	50,910	50,519
Engineers, architects, and surveyors	-	-	-	-	-	-
Mathematical and computer scientists	-	-	-	-	-	-
Natural scientists	-	-	-	-	-	-
Health related occupations	-	-	-	-	-	-
Teachers, college and university	-	-	-	-	-	-
Teachers, except college and university	-	-	-	-	-	-
Social scientists and urban planners	-	-	-	-	-	-
Social, recreation, and religious workers	-	-	-	-	-	-
Technical occupations	-	-	-	-	-	-
Executive, administrative, and managerial occupations ...	39.7	849	757	2,065	44,124	39,374
Executives, administrators, and managers	39.6	921	760	2,058	47,906	39,520
Management related occupations	-	-	-	-	-	-
Sales occupations	-	-	-	-	-	-
Administrative support occupations, including clerical	36.7	484	430	1,871	24,659	20,509
Blue-collar occupations	38.5	563	520	1,992	29,119	27,040
Precision production, craft, and repair occupations	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	-	-	-	-	-	-
Transportation and material moving occupations	40.0	528	493	1,997	26,354	25,626
Handlers, equipment cleaners, helpers, and laborers	-	-	-	-	-	-
Service occupations	35.8	407	350	1,852	21,054	18,928
Protective service occupations	-	-	-	-	-	-
Health service occupations	-	-	-	-	-	-
Cleaning and building service occupations	40.0	452	447	2,044	23,079	23,234
Janitors and cleaners	40.0	452	447	2,044	23,079	23,234
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.

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⁴ Mean weekly hours are the hours an employee is scheduled to work in a week, exclusive of overtime.

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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, Delta County, MI, March 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	\$16.03	\$14.88	\$19.73	\$17.36	\$8.08
All occupations excluding sales	16.56	15.50	19.73	17.59	8.80
White-collar occupations	19.40	17.31	24.82	21.92	—
Level 5	12.30	—	—	—	—
Level 7	17.30	—	—	—	—
Level 9	34.13	—	34.13	35.07	—
White-collar occupations excluding sales	21.05	19.33	24.82	22.72	10.17
Level 5	12.30	—	—	—	—
Level 7	17.30	—	—	—	—
Level 9	34.13	—	34.13	35.07	—
Professional specialty and technical occupations	27.41	25.33	31.34	28.48	—
Professional specialty occupations	28.68	26.67	32.52	29.64	—
Level 9	34.13	—	34.13	35.07	—
Engineers, architects, and surveyors	—	—	—	—	—
Mathematical and computer scientists	—	—	—	—	—
Natural scientists	—	—	—	—	—
Health related occupations	—	—	—	—	—
Teachers, college and university	—	—	—	—	—
Teachers, except college and university	—	—	—	—	—
Social scientists and urban planners	—	—	—	—	—
Social, religious, and recreation workers	—	—	—	—	—
Technical occupations	—	—	—	—	—
Executive, administrative, and managerial occupations ...	20.79	—	—	21.37	—
Executives, administrators, and managers	22.32	—	—	23.28	—
Management related occupations	—	—	—	—	—
Sales occupations	—	—	—	—	—
Administrative support occupations, including clerical	11.60	10.97	13.74	13.18	—
Blue-collar occupations	14.28	14.44	13.08	14.62	—
Level 5	12.90	—	12.92	—	—
Precision production, craft, and repair occupations	—	—	—	—	—
Machine operators, assemblers, and inspectors	—	—	—	—	—
Transportation and material moving occupations	12.72	—	13.05	13.20	—
Level 5	13.31	—	—	—	—
Handlers, equipment cleaners, helpers, and laborers	9.85	9.85	—	—	—
Service occupations	10.40	7.82	14.20	11.37	7.42
Level 3	8.23	—	—	—	—
Protective service occupations	15.45	—	15.45	—	—
Food service occupations	—	—	—	—	—
Health service occupations	—	—	—	—	—
Cleaning and building service occupations	11.29	—	—	11.29	—
Personal service occupations	—	—	—	—	—

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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Appendix: Technical Note

Survey scope

This survey of Delta County, MI, covered establishments employing 50 or more workers 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 are 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 list of establishments from which the survey sample was selected (sampling frame) was developed from the State unemployment insurance reports for Delta County, MI. The reference month for the public sector is June 1994; for the private sector, it is September 1996.

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-proportional-to-size sample of establishments. Use of this technique means that the larger an establishment's employment, the greater its chance of selection. The second stage of sample selection was a probability sample of occupations within a sampled establishment.

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 only for those workers who met all the criteria identified in the last

three steps. 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. The greater the number of people working in a job in the establishment, the greater its chance of selection.

The second step of the process entailed classifying the selected jobs into occupations based on their duties. The National Compensation Survey's 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, first 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 available from BLS.

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 and also identified as being in a union or a nonunion job.

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 depart-

ture 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 were excluded) were recorded and totaled. The total determines the overall level of the occupation.

Tabulations of levels of work for occupations in the survey follow the Federal Government's white-collar General Schedule. Point ranges for each of the 15 levels and a guide to help data users evaluate jobs in their firm are available from BLS.

Collection period

The survey was collected from January 1998 through April 1998. The average payroll reference month was March 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
- On-call pay

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)

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.

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, 15.0 percent (representing 1,431 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 (none in this survey) had their weights changed to zero.

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. In Tattall County, GA, the workers studied in all occupations were weighted to represent 3,623 workers.

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.

Data reliability

The data in this summary 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 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. The RSE for all occupations, all industries, all workers, in Delta County, MI, is 12.5 percent. RSE data for all series in this summary 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 the relative standard error was 3.6 percent for this estimate. At the 90-percent level, the confidence interval for the 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 were not specifically measured, the nonsampling errors were expected to be minimal due to the extensive training of the field economists who gathered the survey data by personal visit, computer edits 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, Delta County, MI, March 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	40	17	4	13	11	2
Private industry	28	10	3	7	5	2
Goods-producing industries	7	3	1	2	1	1
Construction	2	1	1	-	-	-
Manufacturing	5	2	-	2	1	1
Service-producing industries	21	7	2	5	4	1
Transportation and public utilities	1	1	1	-	-	-
Wholesale and retail trade	14	2	-	2	2	-
Services	6	4	1	3	2	1
State and local government	13	7	1	6	6	-

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