

COMP2000 Pilot Survey Salt Lake City-Ogden, UT Metropolitan Statistical Area July–August 1996

U.S. Department of Labor
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Preface

This survey of occupational pay was conducted in July/August 1996 in the Salt Lake City-Ogden, UT Metropolitan Statistical Area (MSA). The MSA includes the counties of Davis, Salt Lake, and Weber.

Salt Lake City is the fourth area selected for a series of tests using a new way of identifying and classifying occupations within establishments. The revised data collection procedure introduces a new method for determining the level of duties and responsibilities of surveyed occupations. This method, called “generic leveling,” will replace the job classification system now used in the Occupational Compensation Survey program (OCS). An entirely new statistical program will replace the existing OCS program, Employment Cost Index, and Employee Benefit Survey series. The working title of the program is COMP2000.

Hourly wage rates for various occupational classifications compose the bulk of the information contained in this bulletin. One table contains data on weekly wage rates. Tables showing the number of workers included in the wage data are also presented. The bulletin consists primarily of tables whose data are analyzed in the initial textual section. Also contained in this bulletin is information on the new COMP2000 program, a technical note describing survey procedures, and several appendixes with detailed information on occupational classifications and the generic leveling methodology.

Survey data were collected and reviewed by Bureau of Labor Statistics (BLS) field economists under the direction

of the Kansas City 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 was responsible for the survey design and data processing and analysis.

Where to find more information

For additional information regarding this survey, please contact the BLS Kansas City Regional Office at (816) 426-2481. You may also write to the Bureau of Labor Statistics at: Division of Compensation Data Analysis and Planning, 2 Massachusetts Avenue, NE, Washington, DC 20212-0001, or call (202) 606-6220.

The data contained in this bulletin are also available on the Internet’s World Wide Web through the BLS site: <http://stats.bls.gov/comhome.htm> Data are in ASCII files containing the exact published table format. Electronic files for future surveys will contain positional columns of data in an ASCII file for easy manipulation as a data base or spreadsheet. A third format will be Portable Document Format that will contain the entire bulletin.

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Contents

	<i>Page</i>
A New Compensation Survey	1
Wages in the Salt Lake City-Ogden, UT metropolitan area	2
 Appendixes:	
A. Technical note.....	36
B. Occupational classifications.....	43
C. Generic leveling criteria	51
D. Evaluating your firm’s jobs	58
 Tables:	
1. Hourly earnings for selected occupations	4
2. Hourly earnings for selected occupations, full-time workers only.....	7
3. Hourly earnings for selected occupations, part-time workers only.....	10
4. Weekly earnings for selected white-collar occupations, full-time workers only	11
5. Hourly earnings by occupational group and level.....	13
6. Hourly earnings by occupational group and selected characteristic, all industries	17
7. Hourly earnings by occupational group and selected characteristic, private industry	18
8. Hourly earnings by occupational group and selected characteristic, State and local government.....	19
9. Hourly earnings by occupational group and industry, private industry	20
10. Hourly earnings by occupational group and industry, private industry, full-time workers only ..	21
11. Hourly earnings by occupational group and industry, private industry, part-time workers only .	22
12. Hourly earnings by occupational group and establishment employment size, private industry ...	23
13. Hourly earnings by occupational group and establishment employment size, private industry, full-time workers only	24
14. Hourly earnings by occupational group and establishment employment size, private industry, part-time workers only	25
15. Number of workers by occupation	26
16. Number of workers by occupational group and level.....	29
17. Number of workers by occupational group and selected characteristic	33
18. Number of workers by occupational group and industry, private industry	34
19. Number of workers by occupational group and establishment employment size, private industry.....	35
 Appendix tables:	
A1. Number of establishments studied by industry and establishment employment size.....	40
A2. Relative standard errors of mean hourly earnings for selected occupations.....	41

A New Compensation Survey

This bulletin represents the fourth test results of a new Bureau of Labor Statistics program called COMP2000. COMP2000 integrates three existing programs: the Occupational Compensation Survey (OCS), the Employment Cost Index (ECI), and the Employee Benefits Survey (EBS), into one comprehensive compensation program. Data from the new survey will be jointly collected from one common sample of establishments. The survey has several major goals: To make the most efficient use of available resources—dollars, people, and technology; to minimize the burden of collection on respondents; and to provide a wide range of statistical outputs reflecting up-to-date economic and statistical concepts.

The streamlining of programs and the addition of data will be phased in over time. At first, testing will concentrate on wage level data (such as contained in this bulletin) and the collection of demographic characteristics of workers (e.g., length of service). In Fall 1996, a new area-based sample was put into place that will allow for the collection of wage data based on the methods refined in the early tests. The larger metropolitan area collections will yield bulletins, similar to this one, which will replace the current Occupational Compensation Survey bulletins.

Further testing of benefit data, wage trend data, and other compensation characteristics will begin within the next year. Based on test results, new collection procedures for these types of statistics will be developed. The new procedures will be implemented beginning in 1998. Eventually, wage data and benefit information collected from the sample will be used to produce compensation indexes and statistics on benefit provisions and incidence. These new series will supplant the current ECI and EBS programs.

COMP2000 versus OCS

The wage data in this bulletin differ from those in previous Occupational Compensation Survey bulletins by providing broader coverage of occupations and establishments within the survey area. The same holds for all future COMP2000 products.

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 job levels within occupational series, the 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 status, union versus nonunion status, and establishment employment size. Not all of these series were generated by the OCS program.

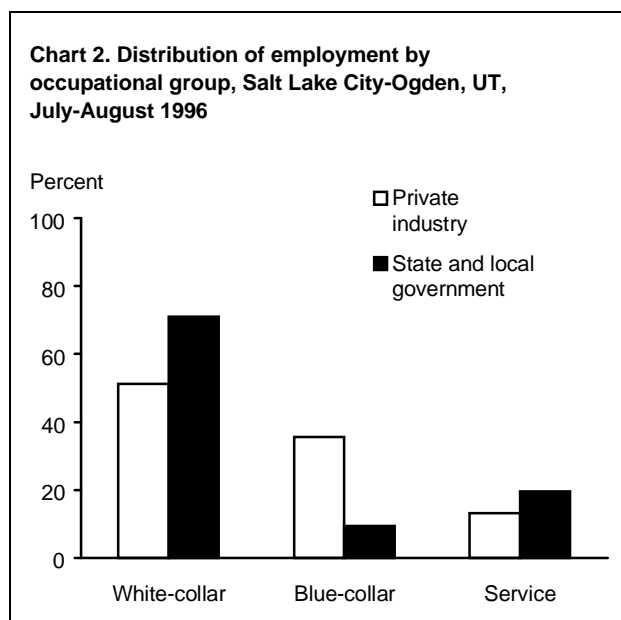
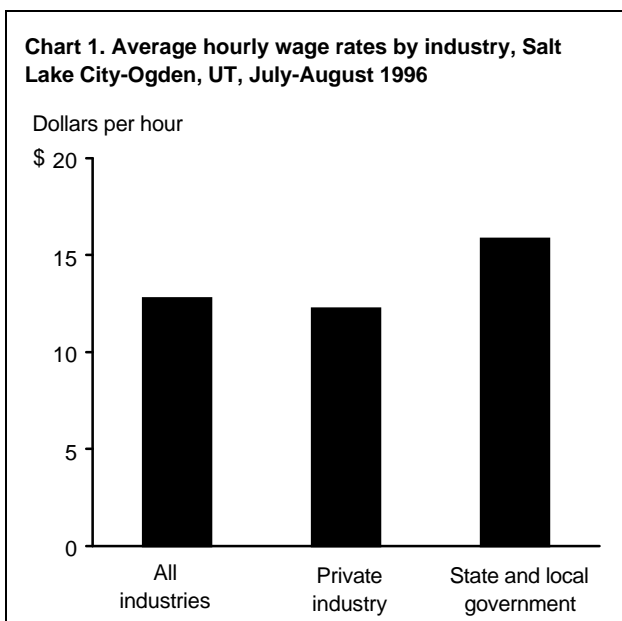
Finally, the establishments surveyed in this bulletin were selected from among all private and State and local government establishments. Previous OCS samples were limited to establishments with 50 or more employees. The wider scope of the COMP2000 program means that virtually all workers in the Salt Lake City-Ogden, UT metropolitan statistical area are covered, excluding only private household and farm workers and employees of the Federal Government.

Wages in the Salt Lake City-Ogden, UT metropolitan area

Straight-time wages in the Salt Lake City-Ogden metropolitan area averaged \$12.77 per hour during July/August, 1996 (table 1). White-collar workers had the highest average wage level, \$14.74 per hour. Blue-collar workers averaged \$11.16 per hour, while service workers had average earnings of \$8.18 per hour.

Within each of these occupational groups, average wages for individual occupations varied. For example, white-collar occupations included physicians at \$46.49 per hour, electrical and electronics technicians at \$15.82 per hour, and file clerks at \$6.83 per hour. Among occupations in the blue-collar category, electricians averaged \$17.46 per hour while hand packers and packagers averaged \$6.93 per hour. Finally, service workers included waiters and waitresses at \$2.45 per hour (not including tips) and police and detectives, public service at \$15.64 per hour. Table 1 presents earnings data for 101 detailed occupations; data for other detailed occupations could not be reported separately due to concerns about the confidentiality of survey respondents.

Private industry workers, about 85 percent of the Salt Lake City labor force studied, averaged \$12.22 per hour, while State and local government workers earned \$15.82 per hour (chart 1). (All comparisons in this analysis cover hourly rates for both full- and part-time workers, unless otherwise noted.) The difference in wages between the private and government sectors reflects several factors (chart 2). First, there was a greater proportion of higher paid, professional specialty and technical workers in State and local governments (38 percent of all employees) than in private industry (11 percent). Similarly, there was a greater proportion of government employees in service occupations (20 percent) than there were in the private sector (13 percent). Service workers in State and local governments, which included such jobs as police officers and firefighters, averaged \$12.90 per hour compared to an average of \$6.76 per hour for private sector service workers, which were more often food and cleaning-related occupations.



Average wages for full-time workers in Salt Lake City were \$13.67 per hour, compared with an average of \$7.23 per hour for part-time workers (tables 2-3).

Wages for higher levels of work within major occupational groups usually were greater than for lower-level work (table 5). This general pattern can vary somewhat depending on the mix of specific occupations (and industries) represented by the broad group. A given level within a group may not have data because no workers were identified at that level or because there were not enough data to guarantee confidentiality.

Work levels for all major groups span several levels, with professional specialty and executive, administrative, and managerial workers starting and ending at higher work levels than the other groups.

Hourly wage rates for union and nonunion workers in Salt Lake City are shown in tables 6-8. Approximately 9 percent of the employees in Salt Lake City were classified as union employees.

For workers in the private sector, wage data are also available by broad industry group (tables 9-11) and by establishment employment size (tables 12-14).

Chart 3. Average hourly wage rates for professional specialty occupations, by level of work, Salt Lake City-Ogden, UT, July-August 1996

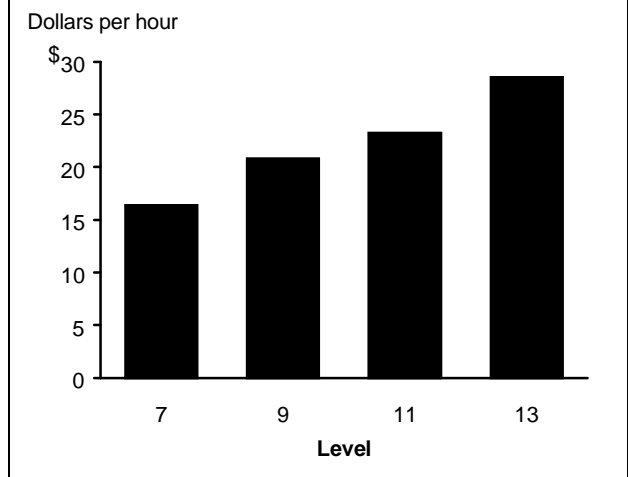


Table 1. Hourly earnings¹ for selected occupations, all workers ², Salt Lake City, UT, July - August 1996

Occupation ³	All industries			Private industry			State and local government		
	Mean	Median	Middle range	Mean	Median	Middle range	Mean	Median	Middle range
All workers	\$12.77	\$10.70	\$7.50 - \$15.62	\$12.22	\$10.00	\$7.23 - \$15.00	\$15.82	\$14.01	\$10.33 - \$20.73
All workers excluding sales	12.72	10.87	7.73 - 15.67	12.07	10.03	7.41 - 15.00	15.82	14.01	10.33 - 20.73
White-collar occupations	14.74	12.00	8.36 - 18.31	14.11	11.09	8.00 - 16.75	17.19	15.61	11.36 - 22.48
Professional specialty and technical occupations	19.15	17.62	13.36 - 23.50	18.86	16.88	12.25 - 23.24	19.61	19.07	14.56 - 24.19
Professional specialty occupations	21.33	20.30	15.51 - 25.79	22.92	21.56	16.71 - 27.23	19.91	19.39	14.86 - 24.30
Engineering occupations	25.59	24.49	20.63 - 30.41	25.74	24.49	21.09 - 30.48	-	-	-
Civil engineers	28.02	-	-	-	-	-	-	-	-
Industrial engineers	26.06	-	-	26.06	-	-	-	-	-
Engineers, N.E.C.	26.61	-	-	26.61	-	-	-	-	-
Computer systems analysts and scientists	24.37	25.00	20.19 - 26.64	24.37	25.00	20.19 - 26.64	-	-	-
Physicians	46.49	-	-	46.49	-	-	-	-	-
Registered nurses	18.60	18.00	15.50 - 20.18	18.62	18.00	15.64 - 20.13	-	-	-
Teachers	21.50	21.16	16.90 - 26.65	-	-	-	21.83	21.35	17.37 - 26.65
Teachers, except college and university	21.01	21.13	16.48 - 26.19	-	-	-	21.37	21.34	16.80 - 26.51
Elementary school teachers	20.65	19.89	16.19 - 25.48	-	-	-	20.65	19.89	16.19 - 25.48
Secondary school teachers	23.04	22.48	18.92 - 27.29	-	-	-	24.42	-	-
Teachers, N.E.C.	19.11	-	-	-	-	-	19.75	-	-
Librarians	21.30	-	-	-	-	-	-	-	-
Social workers	15.07	-	-	-	-	-	-	-	-
Designers	9.30	-	-	-	-	-	-	-	-
Technical occupations	13.61	12.50	10.50 - 15.56	13.72	12.50	10.50 - 15.71	11.72	-	-
Clinical laboratory technologists and technicians	12.93	13.49	8.36 - 16.01	12.93	13.49	8.36 - 16.01	-	-	-
Licensed practical nurses	10.42	-	-	10.42	-	-	-	-	-
Health technologists and technicians, N.E.C.	10.75	-	-	-	-	-	-	-	-
Electrical and electronic technicians	15.82	-	-	15.82	-	-	-	-	-
Engineering technicians, N.E.C.	14.37	-	-	14.37	-	-	-	-	-
Drafters	12.06	-	-	12.06	-	-	-	-	-
Computer programmers	16.99	-	-	16.99	-	-	-	-	-
Technical and related occupations, N.E.C.	12.01	-	-	12.10	-	-	-	-	-
Executive, administrative, and managerial occupations	20.78	18.36	14.65 - 24.75	21.06	17.79	14.98 - 24.50	20.07	20.52	13.27 - 24.75
Administrators and officials, public administration	24.68	-	-	-	-	-	24.68	-	-
Financial managers	31.99	20.19	20.00 - 29.08	32.20	20.09	20.00 - 29.72	-	-	-
Administrators, education and related fields	28.40	-	-	-	-	-	28.81	-	-
Managers, medicine and health	21.47	-	-	-	-	-	-	-	-
Managers and administrators, N.E.C.	26.14	25.78	16.25 - 30.91	26.02	25.78	15.58 - 30.91	-	-	-
Accountants and auditors	16.48	-	-	16.48	-	-	-	-	-
Other financial officers	18.11	-	-	17.94	-	-	-	-	-
Personnel, training, and labor relations specialists	11.55	-	-	11.50	-	-	-	-	-
Purchasing agents and buyers, N.E.C.	16.33	-	-	-	-	-	-	-	-
Management related occupations, N.E.C.	17.98	17.31	12.98 - 21.64	16.23	15.72	12.93 - 20.19	21.90	-	-
Sales occupations	13.18	9.89	6.25 - 14.76	13.18	9.89	6.25 - 14.76	-	-	-
Supervisors, sales occupations	16.08	13.96	10.48 - 19.25	16.08	13.96	10.48 - 19.25	-	-	-
Securities and financial services sales occupations	32.95	-	-	32.95	-	-	-	-	-
Sales occupations, other business services	12.82	-	-	12.82	-	-	-	-	-
Sales representatives, mining, manufacturing, and wholesale	15.43	-	-	15.43	-	-	-	-	-
Sales workers, apparel	5.44	5.37	4.90 - 5.85	5.44	5.37	4.90 - 5.85	-	-	-

See footnotes at end of table.

Table 1. Hourly earnings¹ for selected occupations, all workers ², Salt Lake City, UT, July - August 1996 — Continued

Occupation ³	All industries			Private industry			State and local government		
	Mean	Median	Middle range	Mean	Median	Middle range	Mean	Median	Middle range
Sales workers, other commodities	\$6.90	\$6.56	\$5.66 - \$8.05	\$6.90	\$6.56	\$5.66 - \$8.05	-	-	- -
Sales counter clerks	6.98	-	-	6.98	-	-	-	-	- -
Cashiers	5.84	5.75	5.50 - 6.25	5.84	5.75	5.50 - 6.25	-	-	- -
Sales support occupations, N.E.C.	14.93	-	-	14.93	-	-	-	-	- -
Administrative support including clerical occupations	9.64	9.00	7.50 - 11.21	9.63	8.95	7.42 - 11.21	\$9.71	\$9.13	\$8.21 - \$11.02
Supervisors, general office	15.32	-	-	-	-	-	-	-	- -
Supervisors, financial records processing	13.17	-	-	-	-	-	-	-	- -
Computer operators	9.23	-	-	-	-	-	-	-	- -
Secretaries	8.81	8.50	7.50 - 9.27	8.64	8.50	7.50 - 9.10	9.30	-	- -
Receptionists	7.35	7.33	6.81 - 8.00	7.30	7.25	6.75 - 8.00	-	-	- -
Information clerks, N.E.C. ...	9.45	-	-	-	-	-	-	-	- -
Order clerks	11.11	-	-	11.11	-	-	-	-	- -
Library clerks	7.76	-	-	-	-	-	-	-	- -
File clerks	6.83	-	-	6.83	-	-	-	-	- -
Records clerks, N.E.C.	8.00	-	-	7.70	-	-	-	-	- -
Bookkeepers, accounting and auditing clerks	10.18	9.50	8.00 - 11.75	10.16	9.50	8.00 - 11.75	-	-	- -
Billing clerks	9.22	-	-	9.22	-	-	-	-	- -
Dispatchers	11.00	-	-	-	-	-	-	-	- -
Traffic, shipping and receiving clerks	10.06	-	-	10.04	-	-	-	-	- -
Stock and inventory clerks ..	10.38	-	-	10.38	-	-	-	-	- -
Insurance adjusters, examiners, & investigators	12.12	10.67	9.54 - 13.53	12.12	10.67	9.54 - 13.53	-	-	- -
Investigators and adjusters except insurance	10.62	9.35	8.07 - 13.13	10.62	9.35	8.07 - 13.13	-	-	- -
Bill and account collectors ..	8.65	-	-	8.19	-	-	-	-	- -
General office clerks	9.16	8.87	7.78 - 9.70	9.10	8.85	7.59 - 9.70	9.87	-	- -
Bank tellers	7.20	-	-	7.20	-	-	-	-	- -
Administrative support occupations, N.E.C.	9.67	9.50	8.36 - 10.70	9.76	9.52	8.27 - 10.95	-	-	- -
Professional occupations, N.E.C.	18.52	-	-	-	-	-	-	-	- -
White-collar occupations excluding sales	15.15	12.69	8.85 - 19.23	14.44	11.54	8.50 - 17.31	17.19	15.61	11.36 - 22.48
Blue-collar occupations	11.16	10.29	7.50 - 14.25	11.17	10.28	7.50 - 14.39	10.89	10.50	8.00 - 13.14
Precision production, craft, and repair occupations	13.28	13.00	9.25 - 16.80	13.24	13.00	9.25 - 16.80	15.59	14.73	12.96 - 16.30
Automobile mechanics	16.08	-	-	16.11	-	-	-	-	- -
Bus, truck, and stationary engine mechanics	15.41	-	-	-	-	-	-	-	- -
Electronic repairers, communications and industrial equipment	14.58	-	-	14.58	-	-	-	-	- -
Heating, air conditioning, and refrigeration mechanics	14.42	-	-	14.42	-	-	-	-	- -
Mechanics and repairers, N.E.C.	11.48	9.75	8.50 - 15.67	11.48	9.75	8.50 - 15.67	-	-	- -
Electricians	17.46	-	-	17.48	-	-	-	-	- -
Supervisors, production occupations	16.59	-	-	16.66	-	-	-	-	- -
Machinists	14.60	-	-	14.60	-	-	-	-	- -
Electrical and electronic equipment assemblers	6.79	-	-	6.79	-	-	-	-	- -
Machine operators, assemblers, and inspectors	9.44	8.45	6.65 - 10.80	9.45	8.48	6.65 - 10.80	-	-	- -
Laundering and dry cleaning machine operators	5.87	-	-	-	-	-	-	-	- -
Miscellaneous machine operators, N.E.C.	9.00	8.70	7.35 - 10.68	9.00	8.70	7.35 - 10.68	-	-	- -
Welders and cutters	14.73	-	-	14.73	-	-	-	-	- -
Assemblers	8.44	7.72	6.58 - 9.48	8.44	7.72	6.58 - 9.48	-	-	- -

See footnotes at end of table.

Table 1. Hourly earnings¹ for selected occupations, all workers ², Salt Lake City, UT, July - August 1996 — Continued

Occupation ³	All industries			Private industry			State and local government		
	Mean	Median	Middle range	Mean	Median	Middle range	Mean	Median	Middle range
Production inspectors, checkers and examiners	\$9.21	-	-	\$9.21	-	-	-	-	-
Transportation and material moving occupations	12.06	\$11.99	\$9.50 - \$13.77	12.19	\$12.00	\$9.69 - \$14.43	\$11.09	\$11.11	\$8.59 - \$12.91
Truck drivers	12.79	12.87	10.20 - 15.15	12.85	13.10	10.20 - 15.21	-	-	-
Bus drivers	12.36	-	-	-	-	-	12.36	-	-
Industrial truck and tractor equipment operators	10.89	-	-	10.89	-	-	-	-	-
Miscellaneous material moving equipment operators, N.E.C.	8.24	-	-	-	-	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	8.21	7.50	6.00 - 10.00	8.19	7.50	5.96 - 10.00	8.58	7.00	6.50 - 8.50
Groundskeepers and gardeners except farm ..	8.82	-	-	-	-	-	8.82	-	-
Construction laborers	10.46	-	-	10.46	-	-	-	-	-
Stock handlers and baggers	8.77	8.00	7.00 - 10.82	8.77	8.00	7.00 - 10.82	-	-	-
Freight, stock, and material handlers, N.E.C.	8.16	7.00	6.00 - 8.15	8.16	7.00	6.00 - 8.15	-	-	-
Hand packers and packagers	6.93	-	-	6.93	-	-	-	-	-
Laborers except construction, N.E.C.	6.71	5.00	5.00 - 8.85	-	-	-	-	-	-
Service occupations	8.18	7.00	5.50 - 9.90	6.76	6.16	5.25 - 7.75	12.90	12.44	9.73 - 15.53
Protective service occupations	12.80	12.16	8.77 - 16.39	8.09	7.50	6.00 - 10.00	15.13	14.02	11.90 - 18.27
Firefighting occupations	10.37	-	-	-	-	-	10.63	-	-
Police and detectives, public service	15.64	14.86	12.67 - 17.79	-	-	-	15.64	14.86	12.67 - 17.79
Guards and police except public service	8.06	7.00	6.00 - 9.64	8.06	7.00	6.00 - 9.64	-	-	-
Food service occupations	5.93	5.50	5.00 - 7.25	5.70	5.50	4.90 - 6.50	8.71	-	-
Supervisors, food preparation and service occupations	8.33	-	-	8.33	-	-	-	-	-
Waiters and waitresses	2.45	2.13	2.13 - 2.35	2.45	2.13	2.13 - 2.35	-	-	-
Cooks	7.43	6.50	5.25 - 9.00	7.37	6.36	5.25 - 9.00	-	-	-
Food counter, fountain, and related occupations	5.57	-	-	5.57	-	-	-	-	-
Kitchen workers, food preparation	7.64	6.50	5.63 - 9.73	6.95	-	-	-	-	-
Waiters'/Waitresses' assistants	4.31	-	-	4.31	-	-	-	-	-
Food preparation occupations, N.E.C.	6.31	5.95	5.30 - 7.00	6.17	5.75	5.25 - 6.01	-	-	-
Health service occupations	7.55	7.30	6.50 - 8.50	7.46	7.25	6.50 - 8.35	-	-	-
Health aides except nursing	7.93	-	-	7.76	-	-	-	-	-
Nursing aides, orderlies and attendants	7.12	7.00	6.25 - 7.50	7.09	7.00	6.25 - 7.50	-	-	-
Cleaning and building service occupations	8.71	7.25	6.00 - 10.25	7.92	7.00	6.00 - 8.47	12.33	-	-
Supervisors, cleaning & building service workers	14.32	-	-	-	-	-	-	-	-
Maids and housemen	6.03	-	-	6.03	-	-	-	-	-
Janitors and cleaners	8.54	7.25	6.00 - 11.01	7.34	6.50	6.00 - 8.00	11.78	-	-
Personal services occupations	7.10	6.25	4.75 - 8.42	6.59	-	-	-	-	-
Early childhood teachers' assistants	6.93	-	-	-	-	-	-	-	-

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay--one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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." Because of rounding, sums of individual items may not equal totals.

Table 2. Hourly earnings¹ for selected occupations, full-time workers only², Salt Lake City, UT, July - August 1996

Occupation ³	All industries			Private industry			State and local government		
	Mean	Median	Middle range	Mean	Median	Middle range	Mean	Median	Middle range
All workers	\$13.67	\$11.54	\$8.34 - \$16.50	\$13.14	\$11.00	\$8.00 - \$15.67	\$16.35	\$14.69	\$11.04 - \$21.16
All workers excluding sales	13.49	11.58	8.36 - 16.50	12.85	10.95	8.00 - 15.60	16.35	14.69	11.04 - 21.16
White-collar occupations	15.55	12.92	9.00 - 19.36	15.01	11.83	8.65 - 17.63	17.49	16.03	11.58 - 22.82
Professional specialty and technical occupations	19.55	17.99	13.65 - 24.19	19.32	17.25	12.50 - 23.85	19.89	19.24	14.79 - 24.30
Professional specialty occupations	21.86	20.80	16.03 - 26.25	23.82	22.26	17.40 - 28.38	20.22	19.87	14.95 - 25.07
Engineering occupations	25.59	24.49	20.63 - 30.41	25.74	24.49	21.09 - 30.48	-	-	-
Civil engineers	28.02	-	-	-	-	-	-	-	-
Industrial engineers	26.06	-	-	26.06	-	-	-	-	-
Engineers, N.E.C.	26.61	-	-	26.61	-	-	-	-	-
Computer systems analysts and scientists	24.34	25.00	20.19 - 26.50	24.34	25.00	20.19 - 26.50	-	-	-
Physicians	46.49	-	-	46.49	-	-	-	-	-
Registered nurses	18.76	18.00	15.48 - 20.24	18.84	18.00	15.67 - 20.21	-	-	-
Teachers	22.09	21.35	17.70 - 26.70	-	-	-	22.36	21.50	18.07 - 27.14
Teachers, except college and university	21.64	21.34	16.96 - 26.65	-	-	-	21.93	21.35	17.37 - 26.65
Elementary school teachers	20.60	19.89	15.96 - 25.48	-	-	-	20.60	19.89	15.96 - 25.48
Secondary school teachers	23.04	22.48	18.92 - 27.29	-	-	-	24.42	-	-
Social workers	15.10	-	-	-	-	-	-	-	-
Technical occupations	13.70	12.70	10.50 - 15.56	13.82	12.75	10.50 - 15.71	11.72	-	-
Clinical laboratory technologists and technicians	13.11	13.57	8.67 - 16.10	13.11	13.57	8.67 - 16.10	-	-	-
Licensed practical nurses ..	10.51	-	-	10.51	-	-	-	-	-
Health technologists and technicians, N.E.C.	10.91	-	-	-	-	-	-	-	-
Electrical and electronic technicians	15.82	-	-	15.82	-	-	-	-	-
Engineering technicians, N.E.C.	14.37	-	-	14.37	-	-	-	-	-
Drafters	12.14	-	-	12.12	-	-	-	-	-
Computer programmers	16.99	-	-	16.99	-	-	-	-	-
Technical and related occupations, N.E.C.	12.01	-	-	12.10	-	-	-	-	-
Executive, administrative, and managerial occupations	21.05	19.01	14.98 - 24.87	21.31	18.23	15.00 - 25.77	20.36	21.03	13.69 - 24.75
Administrators and officials, public administration	24.68	-	-	-	-	-	24.68	-	-
Financial managers	31.99	20.19	20.00 - 29.08	32.20	20.09	20.00 - 29.72	-	-	-
Administrators, education and related fields	28.40	-	-	-	-	-	28.81	-	-
Managers, medicine and health	21.57	-	-	-	-	-	-	-	-
Managers and administrators, N.E.C. ..	26.42	25.78	17.00 - 30.91	26.32	25.78	15.58 - 31.56	-	-	-
Accountants and auditors ..	16.48	-	-	16.48	-	-	-	-	-
Other financial officers	18.27	-	-	18.10	-	-	-	-	-
Personnel, training, and labor relations specialists	11.76	-	-	11.77	-	-	-	-	-
Purchasing agents and buyers, N.E.C.	16.33	-	-	-	-	-	-	-	-
Management related occupations, N.E.C.	18.33	17.31	13.20 - 21.64	16.66	16.00	12.98 - 20.19	21.90	-	-
Sales occupations	15.28	11.40	8.00 - 16.83	15.28	11.40	8.00 - 16.83	-	-	-
Supervisors, sales occupations	16.08	13.96	10.48 - 19.25	16.08	13.96	10.48 - 19.25	-	-	-
Securities and financial services sales occupations	32.95	-	-	32.95	-	-	-	-	-
Sales occupations, other business services	13.44	-	-	13.44	-	-	-	-	-
Sales representatives, mining, manufacturing, and wholesale	15.43	-	-	15.43	-	-	-	-	-
Sales workers, other commodities	7.67	-	-	7.67	-	-	-	-	-
Cashiers	5.75	-	-	5.75	-	-	-	-	-

See footnotes at end of table.

Table 2. Hourly earnings¹ for selected occupations, full-time workers only², Salt Lake City, UT, July - August 1996 — Continued

Occupation ³	All industries			Private industry			State and local government		
	Mean	Median	Middle range	Mean	Median	Middle range	Mean	Median	Middle range
Sales support occupations, N.E.C.	\$15.20	-	-	\$15.20	-	-	-	-	-
Administrative support including clerical occupations	9.87	\$9.10	\$7.83 - \$11.32	9.88	\$9.10	\$7.65 - \$11.37	\$9.81	\$9.27	\$8.22 - \$11.18
Supervisors, general office	15.32	-	-	-	-	-	-	-	-
Computer operators	12.80	-	-	-	-	-	-	-	-
Secretaries	8.89	8.50	7.50 - 9.27	8.71	8.50	7.50 - 9.10	9.49	-	-
Receptionists	7.40	7.45	6.75 - 8.00	7.36	7.45	6.50 - 8.00	-	-	-
Information clerks, N.E.C. ...	9.43	-	-	-	-	-	-	-	-
Order clerks	12.27	-	-	12.27	-	-	-	-	-
Records clerks, N.E.C.	8.00	-	-	7.70	-	-	-	-	-
Bookkeepers, accounting and auditing clerks	10.09	9.26	8.00 - 11.56	10.07	9.26	8.00 - 11.56	-	-	-
Billing clerks	9.07	-	-	9.07	-	-	-	-	-
Dispatchers	12.24	-	-	-	-	-	-	-	-
Traffic, shipping and receiving clerks	10.06	-	-	10.04	-	-	-	-	-
Stock and inventory clerks ..	11.43	-	-	11.43	-	-	-	-	-
Insurance adjusters, examiners, & investigators	12.12	10.67	9.54 - 13.53	12.12	10.67	9.54 - 13.53	-	-	-
Investigators and adjusters except insurance	10.59	9.35	8.00 - 13.08	10.59	9.35	8.00 - 13.08	-	-	-
Bill and account collectors ..	8.59	-	-	8.04	-	-	-	-	-
General office clerks	9.12	8.85	7.63 - 9.70	9.05	8.85	7.50 - 9.70	10.00	-	-
Data entry keyers	8.30	-	-	8.30	-	-	-	-	-
Administrative support occupations, N.E.C.	9.78	9.52	8.40 - 10.79	9.92	9.67	8.75 - 10.95	-	-	-
Professional occupations, N.E.C.	18.52	-	-	-	-	-	-	-	-
White-collar occupations excluding sales	15.61	13.27	9.15 - 19.73	14.93	12.06	8.75 - 17.80	17.49	16.03	11.58 - 22.82
Blue-collar occupations	11.69	10.89	8.00 - 14.71	11.70	10.88	8.00 - 14.98	11.37	11.49	8.59 - 13.59
Precision production, craft, and repair occupations	13.39	13.18	9.40 - 17.00	13.36	13.00	9.40 - 17.00	15.72	15.12	12.96 - 16.30
Automobile mechanics	16.08	-	-	16.11	-	-	-	-	-
Bus, truck, and stationary engine mechanics	15.41	-	-	-	-	-	-	-	-
Electronic repairers, communications and industrial equipment	14.58	-	-	14.58	-	-	-	-	-
Heating, air conditioning, and refrigeration mechanics	14.73	-	-	14.73	-	-	-	-	-
Mechanics and repairers, N.E.C.	11.55	9.75	8.50 - 15.67	11.55	9.75	8.50 - 15.67	-	-	-
Electricians	17.46	-	-	17.48	-	-	-	-	-
Supervisors, production occupations	16.59	-	-	16.66	-	-	-	-	-
Machinists	14.60	-	-	14.60	-	-	-	-	-
Electrical and electronic equipment assemblers	6.98	-	-	6.98	-	-	-	-	-
Machine operators, assemblers, and inspectors	9.71	8.70	6.80 - 11.15	9.72	8.70	6.78 - 11.20	-	-	-
Laundry and dry cleaning machine operators	5.87	-	-	-	-	-	-	-	-
Miscellaneous machine operators, N.E.C.	9.33	9.12	7.75 - 10.80	9.33	9.12	7.75 - 10.80	-	-	-
Welders and cutters	14.73	-	-	14.73	-	-	-	-	-
Assemblers	8.82	-	-	8.82	-	-	-	-	-
Production inspectors, checkers and examiners	9.21	-	-	9.21	-	-	-	-	-
Transportation and material moving occupations	12.29	12.00	9.90 - 14.06	12.47	12.17	10.00 - 14.92	11.02	11.00	8.59 - 12.91
Truck drivers	12.90	13.10	10.20 - 15.21	12.96	13.10	10.20 - 15.21	-	-	-
Bus drivers	12.32	-	-	-	-	-	12.32	-	-
Handlers, equipment cleaners, helpers, and laborers	8.92	8.00	7.00 - 10.50	8.89	8.00	7.00 - 10.50	9.75	-	-

See footnotes at end of table.

Table 2. Hourly earnings¹ for selected occupations, full-time workers only², Salt Lake City, UT, July - August 1996 — Continued

Occupation ³	All industries				Private industry			State and local government				
	Mean	Median	Middle range		Mean	Median	Middle range		Mean	Median	Middle range	
Groundskeepers and gardeners except farm ..	\$9.36	-	-	-	-	-	-	-	\$9.36	-	-	-
Construction laborers	10.48	-	-	-	\$10.48	-	-	-	-	-	-	-
Stock handlers and baggers	8.88	-	-	-	8.88	-	-	-	-	-	-	-
Freight, stock, and material handlers, N.E.C.	8.73	\$7.43	\$6.70 -	\$8.70	8.73	\$7.43	\$6.70 -	\$8.70	-	-	-	-
Hand packers and packagers	7.35	-	-	-	7.35	-	-	-	-	-	-	-
Laborers except construction, N.E.C.	8.60	8.85	6.58 -	10.20	8.59	8.85	6.50 -	10.23	-	-	-	-
Service occupations	9.43	8.00	6.25 -	11.67	7.61	7.00	5.63 -	8.75	13.82	\$13.13	\$10.33 -	\$16.39
Protective service occupations	13.69	12.83	10.33 -	17.27	8.62	-	-	-	15.45	14.31	12.23 -	18.36
Firefighting occupations	11.01	-	-	-	-	-	-	-	11.47	-	-	-
Police and detectives, public service	15.64	14.86	12.67 -	17.79	-	-	-	-	15.64	14.86	12.67 -	17.79
Guards and police except public service	8.97	-	-	-	8.97	-	-	-	-	-	-	-
Food service occupations	6.94	6.25	5.25 -	8.38	6.76	6.00	5.25 -	7.50	-	-	-	-
Supervisors, food preparation and service occupations	8.33	-	-	-	8.33	-	-	-	-	-	-	-
Waiters and waitresses	3.12	-	-	-	3.12	-	-	-	-	-	-	-
Cooks	8.82	-	-	-	8.83	-	-	-	-	-	-	-
Kitchen workers, food preparation	7.65	-	-	-	-	-	-	-	-	-	-	-
Health service occupations	7.70	7.50	7.00 -	8.55	7.60	7.35	6.89 -	8.53	-	-	-	-
Health aides except nursing	7.95	-	-	-	-	-	-	-	-	-	-	-
Nursing aides, orderlies and attendants	7.31	-	-	-	7.28	-	-	-	-	-	-	-
Cleaning and building service occupations	9.38	7.75	6.50 -	12.44	8.41	7.25	6.08 -	8.52	13.34	-	-	-
Supervisors, cleaning & building service workers	14.32	-	-	-	-	-	-	-	-	-	-	-
Maids and housemen	6.03	-	-	-	6.03	-	-	-	-	-	-	-
Janitors and cleaners	10.25	10.51	7.25 -	13.54	8.27	-	-	-	-	-	-	-
Personal services occupations	8.39	-	-	-	8.27	-	-	-	-	-	-	-

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay--one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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." Because of rounding, sums of individual items may not equal totals.

Table 3. Hourly earnings¹ for selected occupations, part-time workers only², Salt Lake City, UT, July - August 1996

Occupation ³	All industries				Private industry			State and local government				
	Mean	Median	Middle range		Mean	Median	Middle range	Mean	Median	Middle range		
All workers	\$7.23	\$6.00	\$5.20 -	\$8.00	\$7.01	\$6.00	\$5.00 -	\$7.64	\$9.55	\$8.29	\$7.00 -	\$10.44
All workers excluding sales	7.44	6.25	5.15 -	8.50	7.19	6.00	5.00 -	8.00	9.55	8.29	7.00 -	10.44
White-collar occupations	8.25	6.65	5.50 -	9.23	7.97	6.50	5.50 -	9.02	11.22	9.14	8.13 -	10.97
Professional specialty and technical occupations	13.56	13.50	8.33 -	17.70	13.86	14.04	9.77 -	17.72	-	-	-	-
Professional specialty occupations	14.02	15.00	8.33 -	17.95	14.69	15.00	9.01 -	18.80	-	-	-	-
Registered nurses	18.00	-	-	-	18.00	-	-	-	-	-	-	-
Teachers	12.04	-	-	-	-	-	-	-	-	-	-	-
Teachers, except college and university	11.92	-	-	-	-	-	-	-	-	-	-	-
Teachers, N.E.C.	8.96	-	-	-	-	-	-	-	-	-	-	-
Technical occupations	12.31	-	-	-	12.31	-	-	-	-	-	-	-
Executive, administrative, and managerial occupations	11.96	-	-	-	-	-	-	-	-	-	-	-
Sales occupations	6.32	5.75	5.25 -	6.25	6.32	5.75	5.25 -	6.25	-	-	-	-
Sales workers, apparel	5.39	5.30	4.75 -	5.85	5.39	5.30	4.75 -	5.85	-	-	-	-
Sales workers, other commodities	5.75	-	-	-	5.75	-	-	-	-	-	-	-
Cashiers	5.91	5.85	5.45 -	6.25	5.91	5.85	5.45 -	6.25	-	-	-	-
Administrative support including clerical occupations	7.76	7.00	6.25 -	8.72	7.69	7.00	6.08 -	8.42	8.38	-	-	-
Secretaries	8.05	-	-	-	-	-	-	-	-	-	-	-
Receptionists	7.08	-	-	-	7.08	-	-	-	-	-	-	-
White-collar occupations excluding sales	9.75	8.00	6.58 -	10.80	9.48	7.50	6.50 -	10.79	11.22	9.14	8.13 -	10.97
Blue-collar occupations	7.13	6.00	5.00 -	8.04	7.06	6.00	5.00 -	8.04	8.25	-	-	-
Precision production, craft, and repair occupations	7.54	-	-	-	7.49	-	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	6.50	-	-	-	6.50	-	-	-	-	-	-	-
Transportation and material moving occupations	9.55	9.25	7.00 -	12.24	9.30	-	-	-	-	-	-	-
Truck drivers	10.74	-	-	-	10.74	-	-	-	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	6.61	5.25	5.00 -	7.00	6.59	5.25	5.00 -	7.00	6.93	-	-	-
Stock handlers and baggers	8.64	-	-	-	8.64	-	-	-	-	-	-	-
Freight, stock, and material handlers, N.E.C.	6.62	-	-	-	6.62	-	-	-	-	-	-	-
Service occupations	5.75	5.75	4.90 -	6.50	5.45	5.50	4.75 -	6.08	8.20	7.30	7.16 -	9.71
Protective service occupations	7.18	6.50	5.70 -	7.50	7.00	-	-	-	7.85	-	-	-
Guards and police except public service	6.60	-	-	-	6.60	-	-	-	-	-	-	-
Food service occupations	4.80	5.00	2.35 -	5.75	4.52	5.00	2.35 -	5.50	8.22	-	-	-
Waiters and waitresses	2.24	-	-	-	2.24	-	-	-	-	-	-	-
Cooks	5.45	-	-	-	-	-	-	-	-	-	-	-
Kitchen workers, food preparation	7.64	-	-	-	7.09	-	-	-	-	-	-	-
Waiters'/Waitresses' assistants	3.80	-	-	-	-	-	-	-	-	-	-	-
Food preparation occupations, N.E.C.	5.87	-	-	-	5.61	-	-	-	-	-	-	-
Health service occupations	7.03	-	-	-	7.04	-	-	-	-	-	-	-
Health aides except nursing	7.89	-	-	-	7.97	-	-	-	-	-	-	-
Nursing aides, orderlies and attendants	6.46	-	-	-	6.46	-	-	-	-	-	-	-
Cleaning and building service occupations	7.13	6.05	6.00 -	8.75	6.83	6.05	6.00 -	7.50	8.96	-	-	-
Janitors and cleaners	7.10	6.05	6.00 -	8.33	6.83	6.05	6.00 -	7.50	-	-	-	-
Personal services occupations	5.91	-	-	-	5.40	-	-	-	-	-	-	-

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay—one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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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 4. Mean weekly earnings¹ and hours for selected white-collar occupations, full-time workers only², Salt Lake City, UT, July - August 1996

Occupation ³	All industries			Private industry			State and local government		
	Mean weekly hours ⁴	Weekly earnings		Mean weekly hours ⁴	Weekly earnings		Mean weekly hours ⁴	Weekly earnings	
		Mean	Median		Mean	Median		Mean	Median
White-collar occupations	39.9	\$620	\$517	40.0	\$601	\$471	39.4	\$688	\$641
Professional specialty and technical occupations	39.4	770	712	39.5	762	680	39.2	780	765
Professional specialty occupations	39.6	865	821	40.2	956	899	39.1	791	770
Engineering occupations	40.7	1042	980	40.7	1049	980	-	-	-
Civil engineers	40.0	1121	-	-	-	-	-	-	-
Industrial engineers	42.9	1119	-	42.9	1119	-	-	-	-
Engineers, N.E.C.	40.0	1064	-	40.0	1064	-	-	-	-
Computer systems analysts and scientists	40.4	983	1000	40.4	983	1000	-	-	-
Physicians	42.2	1964	-	42.2	1964	-	-	-	-
Registered nurses	38.2	716	689	38.8	731	700	-	-	-
Teachers	38.9	860	854	-	-	-	38.9	869	860
Teachers, except college and university	38.8	839	846	-	-	-	38.7	849	854
Elementary school teachers	38.6	795	770	-	-	-	38.6	795	770
Secondary school teachers	38.7	892	906	-	-	-	38.5	940	-
Social workers	39.8	601	-	-	-	-	-	-	-
Technical occupations	38.9	532	506	38.7	534	508	42.4	496	-
Clinical laboratory technologists and technicians	39.6	519	539	39.6	519	539	-	-	-
Licensed practical nurses	39.4	414	-	39.4	414	-	-	-	-
Health technologists and technicians, N.E.C.	44.1	480	-	-	-	-	-	-	-
Electrical and electronic technicians	40.0	633	-	40.0	633	-	-	-	-
Engineering technicians, N.E.C. ...	40.0	575	-	40.0	575	-	-	-	-
Drafters	40.0	485	-	40.0	485	-	-	-	-
Computer programmers	40.0	680	-	40.0	680	-	-	-	-
Technical and related occupations, N.E.C.	40.0	480	-	40.0	484	-	-	-	-
Executive, administrative, and managerial occupations	40.9	860	742	41.1	876	742	40.2	818	838
Administrators and officials, public administration	40.1	988	-	-	-	-	40.1	988	-
Financial managers	42.5	1360	922	42.1	1354	922	-	-	-
Administrators, education and related fields	40.0	1136	-	-	-	-	40.0	1152	-
Managers, medicine and health ...	44.5	960	-	-	-	-	-	-	-
Managers and administrators, N.E.C.	41.1	1087	1031	41.2	1086	1031	-	-	-
Accountants and auditors	40.1	661	-	40.1	661	-	-	-	-
Other financial officers	40.2	734	-	40.2	727	-	-	-	-
Personnel, training, and labor relations specialists	40.0	470	-	40.0	471	-	-	-	-
Purchasing agents and buyers, N.E.C.	40.0	653	-	-	-	-	-	-	-
Management related occupations, N.E.C.	40.1	735	692	40.1	668	615	40.0	876	-
Sales occupations	40.2	614	457	40.2	614	457	-	-	-
Supervisors, sales occupations	41.1	661	631	41.1	661	631	-	-	-
Securities and financial services sales occupations	40.0	1318	-	40.0	1318	-	-	-	-
Sales occupations, other business services	38.1	512	-	38.1	512	-	-	-	-
Sales representatives, mining, manufacturing, and wholesale	40.0	617	-	40.0	617	-	-	-	-
Sales workers, other commodities	39.2	301	-	39.2	301	-	-	-	-
Cashiers	39.6	228	-	39.6	228	-	-	-	-
Sales support occupations, N.E.C.	41.0	624	-	41.0	624	-	-	-	-
Administrative support including clerical occupations	39.7	392	364	39.8	394	364	39.0	383	363
Supervisors, general office	41.6	637	-	-	-	-	-	-	-
Computer operators	40.0	512	-	-	-	-	-	-	-
Secretaries	39.6	352	340	39.5	344	340	40.0	380	-
Receptionists	39.9	296	298	39.9	294	298	-	-	-
Information clerks, N.E.C.	39.6	373	-	-	-	-	-	-	-

See footnotes at end of table.

Table 4. Mean weekly earnings¹ and hours for selected white-collar occupations, full-time workers only², Salt Lake City, UT, July - August 1996 — Continued

Occupation ³	All industries			Private industry			State and local government		
	Mean weekly hours ⁴	Weekly earnings		Mean weekly hours ⁴	Weekly earnings		Mean weekly hours ⁴	Weekly earnings	
		Mean	Median		Mean	Median		Mean	Median
Order clerks	40.1	\$492	-	40.1	\$492	-	-	-	-
Records clerks, N.E.C.	39.7	318	-	39.7	305	-	-	-	-
Bookkeepers, accounting and auditing clerks	39.6	399	\$370	39.6	398	\$370	-	-	-
Billing clerks	39.0	354	-	39.0	354	-	-	-	-
Dispatchers	40.0	490	-	-	-	-	-	-	-
Traffic, shipping and receiving clerks	41.3	416	-	41.4	416	-	-	-	-
Stock and inventory clerks	40.0	457	-	40.0	457	-	-	-	-
Insurance adjusters, examiners, & investigators	39.6	480	424	39.6	480	424	-	-	-
Investigators and adjusters except insurance	40.1	424	375	40.1	424	375	-	-	-
Bill and account collectors	39.1	336	-	39.0	313	-	-	-	-
General office clerks	40.0	364	354	40.0	362	354	39.4	\$394	-
Data entry keyers	38.6	320	-	38.6	320	-	-	-	-
Administrative support occupations, N.E.C.	39.7	388	381	39.7	393	386	-	-	-
Professional occupations, N.E.C.	40.0	741	-	-	-	-	-	-	-
White-collar occupations excluding sales	39.8	622	528	40.0	597	480	39.4	688	\$641

¹ Earnings are the straight-time weekly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay—one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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.

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." Because of rounding, sums of individual items may not equal totals.

Table 5. Mean hourly earnings¹ by occupational group and level², Salt Lake City, UT, July - August 1996

Occupational group ³ and level	Full-time and part-time workers ⁴			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
White-collar occupations	\$14.74	\$14.11	\$17.19	\$15.55	\$15.01	\$17.49	\$8.25	\$7.97	\$11.22
Professional specialty and technical occupations	19.15	18.86	19.61	19.55	19.32	19.89	13.56	13.86	-
Professional specialty occupations	21.33	22.92	19.91	21.86	23.82	20.22	14.02	14.69	-
Level 6	15.17	-	-	-	-	-	-	-	-
Level 7	16.36	16.33	-	16.50	16.70	-	-	-	-
Level 8	17.82	17.01	18.08	17.84	-	18.08	-	-	-
Level 9	20.83	20.54	20.93	20.89	20.60	20.99	19.62	-	-
Level 10	22.87	23.08	-	22.87	23.08	-	-	-	-
Level 11	23.23	23.55	22.95	23.30	23.73	22.95	-	-	-
Level 12	27.98	27.98	-	28.31	28.31	-	-	-	-
Level 13	28.50	28.50	-	28.50	28.50	-	-	-	-
Engineering occupations	25.59	25.74	-	25.59	25.74	-	-	-	-
Level 9	22.30	22.47	-	22.30	22.47	-	-	-	-
Level 12	31.02	31.02	-	31.02	31.02	-	-	-	-
Registered nurses	18.60	18.62	-	18.76	18.84	-	18.00	18.00	-
Level 7	15.82	-	-	-	-	-	-	-	-
Level 8	18.25	17.30	-	-	-	-	-	-	-
Level 9	19.37	19.37	-	-	-	-	-	-	-
Natural scientists	23.20	24.78	-	23.16	24.76	-	-	-	-
Level 11	21.58	24.60	-	21.58	24.60	-	-	-	-
Level 12	28.37	28.37	-	-	-	-	-	-	-
Teachers	21.50	-	21.83	22.09	-	22.36	12.04	-	-
Level 7	16.46	-	-	16.46	-	-	-	-	-
Level 8	17.99	-	17.99	17.99	-	17.99	-	-	-
Level 9	24.60	-	24.60	24.90	-	24.90	-	-	-
Teachers, except college and university	21.01	-	21.37	21.64	-	21.93	11.92	-	-
Level 7	16.46	-	-	16.46	-	-	-	-	-
Level 8	17.99	-	17.99	17.99	-	17.99	-	-	-
Level 9	24.60	-	24.60	24.90	-	24.90	-	-	-
Technical occupations	13.61	13.72	11.72	13.70	13.82	11.72	12.31	12.31	-
Level 2	8.49	8.49	-	-	-	-	-	-	-
Level 3	9.41	9.41	-	-	-	-	-	-	-
Level 4	10.25	10.31	-	10.25	10.31	-	-	-	-
Level 5	10.88	10.88	-	10.93	10.93	-	-	-	-
Level 6	12.69	12.69	-	12.69	12.69	-	-	-	-
Level 7	14.00	14.31	-	14.00	14.31	-	-	-	-
Level 8	15.12	15.21	-	15.06	15.16	-	-	-	-
Level 9	18.30	18.30	-	18.30	18.30	-	-	-	-
Executive, administrative, and managerial occupations	20.78	21.06	20.07	21.05	21.31	20.36	11.96	-	-
Level 5	10.21	10.42	-	10.90	-	-	-	-	-
Level 6	12.43	12.80	-	13.05	13.05	-	-	-	-
Level 7	14.76	15.44	-	14.76	15.44	-	-	-	-
Level 8	15.93	16.70	-	15.99	16.82	-	-	-	-
Level 9	16.00	16.12	-	16.02	16.11	-	-	-	-
Level 10	21.33	20.83	-	21.33	20.83	-	-	-	-
Level 11	18.86	18.83	-	18.86	18.83	-	-	-	-
Level 12	25.72	25.67	25.91	25.72	25.67	25.91	-	-	-
Level 13	28.17	-	26.97	28.17	-	26.97	-	-	-
Level 14	56.57	-	30.21	56.57	-	30.21	-	-	-
Level 15	32.94	38.86	-	32.94	38.86	-	-	-	-
Executives, managers and administrators	25.30	25.44	24.82	25.71	25.58	26.16	13.76	-	-
Level 9	14.38	14.43	-	14.22	14.22	-	-	-	-
Level 10	18.97	19.10	-	18.97	19.10	-	-	-	-
Level 11	18.64	18.59	-	18.64	18.59	-	-	-	-
Level 12	25.93	25.85	-	25.93	25.85	-	-	-	-
Level 13	28.17	-	26.97	28.17	-	26.97	-	-	-
Level 14	56.57	-	30.21	56.57	-	30.21	-	-	-
Level 15	32.94	38.86	-	32.94	38.86	-	-	-	-
Managers and administrators, N.E.C.	26.14	26.02	-	26.42	26.32	-	-	-	-
Level 10	20.35	20.35	-	20.35	20.35	-	-	-	-

See footnotes at end of table.

Table 5. Mean hourly earnings¹ by occupational group and level², Salt Lake City, UT, July - August 1996 — Continued

Occupational group ³ and level	Full-time and part-time workers ⁴			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
Level 11	\$17.71	\$17.71	-	\$17.71	\$17.71	-	-	-	-
Level 12	26.32	26.32	-	26.32	26.32	-	-	-	-
Level 15	38.97	38.97	-	38.97	38.97	-	-	-	-
Sales occupations	13.18	13.18	-	15.28	15.28	-	\$6.32	\$6.32	-
Level 1	5.36	5.36	-	5.66	5.66	-	5.24	5.24	-
Level 2	6.71	6.71	-	7.45	7.45	-	6.00	6.00	-
Level 3	6.29	6.29	-	6.61	6.61	-	5.88	5.88	-
Level 4	9.39	9.39	-	9.86	9.86	-	-	-	-
Level 5	12.03	12.03	-	12.43	12.43	-	-	-	-
Level 6	11.11	11.11	-	10.71	10.71	-	-	-	-
Level 7	20.10	20.10	-	20.10	20.10	-	-	-	-
Level 8	30.87	30.87	-	30.87	30.87	-	-	-	-
Level 9	21.68	21.68	-	21.68	21.68	-	-	-	-
Level 11	20.18	20.18	-	20.18	20.18	-	-	-	-
Level 12	26.35	26.35	-	26.35	26.35	-	-	-	-
Cashiers	5.84	5.84	-	5.75	5.75	-	5.91	5.91	-
Level 1	5.70	5.70	-	-	-	-	-	-	-
Level 2	5.87	5.87	-	-	-	-	5.92	5.92	-
Administrative support including clerical occupations	9.64	9.63	\$9.71	9.87	9.88	\$9.81	7.76	7.69	\$8.38
Level 1	7.02	7.03	-	7.12	7.12	-	6.70	6.73	-
Level 2	6.94	6.90	-	7.19	7.18	-	6.47	6.39	-
Level 3	8.37	8.37	-	8.41	8.39	-	8.02	8.07	-
Level 4	9.49	9.66	8.93	9.56	9.78	-	8.88	8.91	-
Level 5	10.87	11.05	-	11.00	11.20	-	9.31	-	-
Level 6	11.26	11.27	-	11.30	11.31	-	-	-	-
Level 7	13.00	13.34	-	13.07	13.45	-	-	-	-
Level 8	12.87	-	-	12.87	-	-	-	-	-
Secretaries	8.81	8.64	9.30	8.89	8.71	9.49	8.05	-	-
Level 3	8.04	-	-	-	-	-	-	-	-
Level 4	9.36	9.56	-	9.43	-	-	-	-	-
Level 5	9.04	-	-	8.83	-	-	-	-	-
Bookkeepers, accounting and auditing clerks	10.18	10.16	-	10.09	10.07	-	-	-	-
Level 3	9.56	9.56	-	9.44	9.44	-	-	-	-
Level 4	9.54	9.52	-	9.11	9.08	-	-	-	-
Level 5	10.26	10.22	-	10.91	-	-	-	-	-
General office clerks	9.16	9.10	9.87	9.12	9.05	10.00	-	-	-
Level 3	8.21	7.94	-	8.21	7.94	-	-	-	-
Level 4	9.49	-	-	-	-	-	-	-	-
Level 5	9.15	-	-	9.15	-	-	-	-	-
White-collar occupations excluding sales	15.15	14.44	17.19	15.61	14.93	17.49	9.75	9.48	11.22
Level 1	7.02	7.03	-	7.12	7.12	-	6.70	6.73	-
Level 2	7.04	7.01	-	7.31	7.30	-	6.55	6.48	-
Level 3	8.43	8.43	8.44	8.46	8.45	8.58	8.03	8.08	-
Level 4	9.53	9.69	8.95	9.61	9.80	8.97	8.82	8.84	-
Level 5	10.72	10.98	9.15	10.98	11.16	-	9.06	9.42	-
Level 6	12.16	12.25	11.73	12.26	12.28	12.13	11.05	-	-
Level 7	14.47	14.56	14.31	14.49	14.60	14.30	-	-	-
Level 8	16.06	15.82	16.42	16.06	15.80	16.42	16.09	16.09	-
Level 9	19.55	18.09	20.73	19.58	18.03	20.80	19.02	-	-
Level 10	21.74	21.31	22.44	21.74	21.29	22.44	-	-	-
Level 11	22.27	22.02	22.79	22.30	22.06	22.79	-	-	-
Level 12	26.87	26.98	25.91	27.02	27.15	25.91	-	-	-
Level 13	28.27	28.88	26.97	28.27	28.88	26.97	-	-	-
Level 14	52.58	-	30.21	52.58	-	30.21	-	-	-
Level 15	36.32	42.36	-	36.32	42.36	-	-	-	-
Blue-collar occupations	11.16	11.17	10.89	11.69	11.70	11.37	7.13	7.06	8.25
Precision production, craft, and repair occupations	13.28	13.24	15.59	13.39	13.36	15.72	7.54	7.49	-
Level 2	7.36	7.36	-	7.47	7.47	-	-	-	-
Level 3	8.08	8.06	-	8.14	8.14	-	-	-	-
Level 4	10.12	10.11	-	10.15	10.15	-	-	-	-
Level 5	11.00	10.90	-	10.99	10.99	-	-	-	-
Level 6	12.99	12.99	-	12.99	12.99	-	-	-	-

See footnotes at end of table.

Table 5. Mean hourly earnings¹ by occupational group and level², Salt Lake City, UT, July - August 1996 — Continued

Occupational group ³ and level	Full-time and part-time workers ⁴			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
Level 7	\$16.30	\$16.36	\$13.57	\$16.40	\$16.46	\$13.57	-	-	-
Level 8	14.30	14.29	-	14.30	14.29	-	-	-	-
Level 9	18.40	18.42	-	18.40	18.42	-	-	-	-
Level 11	21.35	21.14	-	21.35	21.14	-	-	-	-
Machine operators, assemblers, and inspectors	9.44	9.45	-	9.71	9.72	-	\$6.50	\$6.50	-
Level 1	6.05	5.96	-	6.28	6.17	-	-	-	-
Level 2	6.65	6.65	-	6.63	6.63	-	-	-	-
Level 3	7.95	7.95	-	8.08	8.08	-	-	-	-
Level 4	9.07	9.07	-	9.07	9.07	-	-	-	-
Level 5	11.37	11.37	-	11.37	11.37	-	-	-	-
Level 6	11.63	11.63	-	11.63	11.63	-	-	-	-
Level 7	15.34	15.34	-	15.33	15.33	-	-	-	-
Transportation and material moving occupations	12.06	12.19	11.09	12.29	12.47	11.02	9.55	9.30	-
Level 1	8.38	8.42	-	9.11	-	-	6.42	6.42	-
Level 2	11.62	11.13	12.45	12.12	-	12.53	-	-	-
Level 3	9.55	9.19	11.44	9.48	9.22	-	-	-	-
Level 4	11.78	11.78	-	11.78	11.78	-	-	-	-
Level 5	14.31	15.11	-	14.46	15.36	-	-	-	-
Truck drivers	12.79	12.85	-	12.90	12.96	-	10.74	10.74	-
Level 1	10.23	10.23	-	-	-	-	-	-	-
Level 2	11.48	11.48	-	-	-	-	-	-	-
Level 3	9.35	-	-	9.35	-	-	-	-	-
Level 4	12.02	12.02	-	12.02	12.02	-	-	-	-
Level 5	15.11	15.11	-	15.36	15.36	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	8.21	8.19	8.58	8.92	8.89	9.75	6.61	6.59	\$6.93
Level 1	5.91	5.85	6.76	6.45	6.44	-	5.51	5.40	-
Level 2	8.59	8.61	-	8.46	8.46	-	9.06	9.15	-
Level 3	9.81	9.81	-	9.97	9.98	-	-	-	-
Level 4	10.12	10.12	-	10.18	10.18	-	-	-	-
Level 5	9.76	10.68	-	9.66	10.62	-	-	-	-
Service occupations	8.18	6.76	12.90	9.43	7.61	13.82	5.75	5.45	8.20
Level 1	5.82	5.48	-	6.41	5.93	-	5.16	5.00	-
Level 2	6.02	5.70	-	6.89	6.47	-	5.40	5.20	-
Level 3	6.70	6.43	-	7.07	7.07	-	5.97	4.94	-
Level 4	8.69	8.63	-	8.80	8.68	-	8.28	8.45	-
Level 5	9.84	8.95	10.89	10.07	-	11.11	8.26	-	-
Level 6	10.64	-	12.36	11.34	-	12.40	-	-	-
Level 7	12.64	-	13.56	12.90	-	13.56	-	-	-
Level 8	11.26	-	14.38	11.26	-	14.38	-	-	-
Level 9	15.36	-	15.06	15.38	-	15.10	-	-	-
Level 10	17.25	-	18.67	17.51	-	19.10	-	-	-
Protective service occupations	12.80	8.09	15.13	13.69	8.62	15.45	7.18	7.00	7.85
Level 2	6.76	6.76	-	-	-	-	-	-	-
Level 5	11.88	-	-	12.35	-	-	-	-	-
Level 7	12.04	-	13.97	12.39	-	13.97	-	-	-
Level 8	13.62	-	13.62	13.62	-	13.62	-	-	-
Level 9	15.00	-	15.00	15.03	-	15.03	-	-	-
Level 10	17.38	-	20.04	17.77	-	-	-	-	-
Guards and police except public service	8.06	8.06	-	8.97	8.97	-	6.60	6.60	-
Level 2	6.76	6.76	-	-	-	-	-	-	-
Food service occupations	5.93	5.70	8.71	6.94	6.76	-	4.80	4.52	8.22
Level 1	5.12	5.03	-	5.79	5.79	-	4.54	4.32	-
Level 2	5.71	5.13	-	6.48	5.62	-	5.19	4.85	-
Level 3	5.17	4.98	-	5.97	5.97	-	4.63	4.25	-
Health service occupations	7.55	7.46	-	7.70	7.60	-	7.03	7.04	-
Level 1	6.38	6.33	-	-	-	-	-	-	-
Level 2	7.34	7.34	-	-	-	-	-	-	-
Level 4	6.84	6.84	-	6.84	6.84	-	-	-	-
Level 5	8.44	-	-	-	-	-	-	-	-

See footnotes at end of table.

Table 5. Mean hourly earnings¹ by occupational group and level², Salt Lake City, UT, July - August 1996 — Continued

Occupational group ³ and level	Full-time and part-time workers ⁴			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
Nursing aides, orderlies and attendants	\$7.12	\$7.09	—	\$7.31	\$7.28	—	\$6.46	\$6.46	—
Level 4	6.60	6.60	—	—	—	—	—	—	—
Cleaning and building service occupations	8.71	7.92	\$12.33	9.38	8.41	\$13.34	7.13	6.83	\$8.96
Level 1	6.75	6.12	—	7.07	6.10	—	6.15	6.16	—
Level 3	9.02	—	—	—	—	—	—	—	—
Janitors and cleaners ...	8.54	7.34	11.78	10.25	8.27	—	7.10	6.83	—
Level 1	7.28	6.25	—	—	—	—	6.15	6.16	—
Level 3	9.02	—	—	—	—	—	—	—	—
Personal services occupations	7.10	6.59	—	8.39	8.27	—	5.91	5.40	—
Level 1	6.11	—	—	—	—	—	6.02	—	—

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay—one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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 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. Because of rounding, sums of individual items may not equal totals.

Table 6. Mean hourly earnings¹ by occupational group and selected characteristic, all industries, Salt Lake City, UT, July - August 1996

Occupational group ²	Union ³	Nonunion ³	Full-time workers ⁴	Part-time workers ⁴	Time ⁵	Incentive ⁵
All workers	\$16.24	\$12.40	\$13.67	\$7.23	\$12.52	\$15.34
All workers excluding sales	16.49	12.27	13.49	7.44	12.70	13.12
White-collar occupations	18.70	14.53	15.55	8.25	14.37	17.80
Professional specialty and technical occupations	24.52	18.54	19.55	13.56	19.05	-
Professional specialty occupations	24.74	20.77	21.86	14.02	21.20	-
Technical occupations	-	13.63	13.70	12.31	13.61	-
Executive, administrative, and managerial occupations	-	20.78	21.05	11.96	20.46	23.66
Sales occupations	-	13.31	15.28	6.32	10.54	18.21
Administrative support including clerical occupations	11.84	9.54	9.87	7.76	9.65	9.44
White-collar excluding sales	20.01	14.86	15.61	9.75	15.06	16.98
Blue-collar occupations	15.61	10.13	11.69	7.13	11.13	11.48
Precision production, craft, and repair occupations	17.64	12.08	13.39	7.54	13.29	13.08
Machine operators, assemblers, and inspectors	13.36	9.05	9.71	6.50	9.46	-
Transportation and material moving occupations	14.65	10.97	12.29	9.55	11.94	12.80
Handlers, equipment cleaners, helpers, and laborers	12.91	7.66	8.92	6.61	8.19	8.44
Service occupations	12.36	7.91	9.43	5.75	8.20	7.71

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay--one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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 Union workers are those whose wages are determined through

collective bargaining.

⁴ 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.

⁵ Time workers wages are based solely on hourly or weekly rates; incentive workers are those whose wages are at least partially based on productivity payments such as piece rates, commissions, and production bonuses.

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. Because of rounding, sums of individual items may not equal totals.

Table 7. Mean hourly earnings¹ by occupational group and selected characteristic, private industry, Salt Lake City, UT, July - August 1996

Occupational group ²	Union ³	Nonunion ³	Full-time workers ⁴	Part-time workers ⁴	Time ⁵	Incentive ⁵
All workers	\$14.86	\$11.97	\$13.14	\$7.01	\$11.85	\$15.34
All workers excluding sales	15.14	11.75	12.85	7.19	11.99	13.12
White-collar occupations	11.32	14.18	15.01	7.97	13.54	17.80
Professional specialty and technical occupations	-	18.88	19.32	13.86	18.69	-
Professional specialty occupations	-	22.92	23.82	14.69	22.66	-
Technical occupations	-	13.74	13.82	12.31	13.72	-
Executive, administrative, and managerial occupations	-	21.06	21.31	-	20.63	23.66
Sales occupations	-	13.31	15.28	6.32	10.54	18.21
Administrative support including clerical occupations	12.48	9.51	9.88	7.69	9.64	9.44
White-collar excluding sales	12.39	14.48	14.93	9.48	14.28	16.98
Blue-collar occupations	15.75	10.14	11.70	7.06	11.14	11.48
Precision production, craft, and repair occupations	17.70	12.02	13.36	7.49	13.25	13.08
Machine operators, assemblers, and inspectors	13.36	9.05	9.72	6.50	9.47	-
Transportation and material moving occupations	14.90	11.09	12.47	9.30	12.07	12.80
Handlers, equipment cleaners, helpers, and laborers	12.76	7.65	8.89	6.59	8.17	8.44
Service occupations	7.86	6.73	7.61	5.45	6.69	7.71

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay--one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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.

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⁵ Time workers wages are based solely on hourly or weekly rates; 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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Table 8. Hourly earnings¹ by occupational group by selected characteristics, State and local government, Salt Lake City, UT, July - August 1996

Occupational group ²	Union ³	Nonunion ³	Full-time workers ⁴	Part-time workers ⁴	Time ⁵
All workers	\$20.16	\$14.97	\$16.35	\$9.55	\$15.82
White-collar occupations	23.21	16.13	17.49	11.22	17.19
Professional specialty and technical occupations ..	24.74	17.84	19.89	—	19.61
Professional specialty occupations	24.74	18.17	20.22	—	19.91
Technical occupations	—	11.72	11.72	—	11.72
Executive, administrative, and managerial occupations	—	20.07	20.36	—	20.07
Administrative support including clerical occupations	—	9.74	9.81	8.38	9.71
White-collar excluding sales	23.21	16.13	17.49	11.22	17.19
Blue-collar occupations	13.46	10.01	11.37	8.25	10.89
Precision production, craft, and repair occupations	—	16.09	15.72	—	15.59
Transportation and material moving occupations ...	13.10	10.02	11.02	—	11.09
Handlers, equipment cleaners, helpers, and laborers	—	7.81	9.75	6.93	8.58
Service occupations	14.64	12.54	13.82	8.20	12.90

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay—one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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⁴ 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.

⁵ Time workers wages are based solely on hourly or weekly rates; incentive workers are those whose wages are at least partially based on productivity payments such as piece rates, commissions, and production bonuses.

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. Because of rounding, sums of individual items may not equal totals.

Table 9. Mean hourly earnings¹ by occupational group, private industry, all workers², Salt Lake City, UT, July - August 1996

Occupational group ³	All private industries	Goods-producing industries ⁴			Service-producing industries ⁵				
		Total	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services
All workers	\$12.22	\$13.05	\$13.32	\$12.86	\$11.91	\$14.13	\$10.11	\$15.69	\$11.54
All workers excluding sales	12.07	13.02	13.21	12.88	11.66	14.06	10.02	12.90	11.48
White-collar occupations	14.11	17.67	15.99	17.91	13.57	13.48	11.49	16.03	14.05
Professional specialty and technical occupations	18.86	19.97	-	20.04	18.52	21.47	14.82	23.07	18.47
Professional specialty occupations	22.92	25.75	-	25.75	22.10	-	16.26	-	22.36
Technical occupations	13.72	13.32	-	13.29	13.85	-	-	-	12.88
Executive, administrative, and managerial occupations	21.06	22.52	16.75	25.49	20.62	18.08	21.86	25.38	18.40
Sales occupations	13.18	13.92	-	12.62	13.13	-	10.30	28.37	12.16
Administrative support including clerical occupations	9.63	11.38	-	11.32	9.46	10.53	10.09	9.67	8.47
White-collar excluding sales	14.44	18.21	14.90	18.72	13.74	13.25	13.10	13.18	14.36
Blue-collar occupations	11.17	11.48	13.05	10.29	10.82	14.52	10.08	-	7.66
Precision production, craft, and repair occupations	13.24	12.95	14.15	10.74	13.87	17.77	12.49	-	12.03
Machine operators, assemblers, and inspectors	9.45	9.95	-	9.96	7.46	-	-	-	6.50
Transportation and material moving occupations	12.19	12.53	-	12.13	12.10	13.60	9.81	-	7.28
Handlers, equipment cleaners, helpers, and laborers	8.19	8.92	9.03	8.81	7.74	13.00	8.63	-	5.76
Service occupations	6.76	13.45	-	13.45	6.59	-	5.98	-	6.90

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay--one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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.

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. Because of rounding, sums of individual items may not equal totals.

Table 10. Mean hourly earnings¹ by occupational group, private industry, full-time workers only², Salt Lake City, UT, July - August 1996

Occupational group ³	All private industries	Goods-producing industries ⁴			Service-producing industries ⁵				
		Total	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services
All workers	\$13.14	\$13.12	\$13.41	\$12.93	\$13.15	\$14.37	\$11.46	\$16.63	\$12.85
All workers excluding sales	12.85	13.07	13.29	12.91	12.73	14.30	11.19	13.53	12.77
White-collar occupations	15.01	17.86	16.54	18.05	14.51	13.66	12.84	16.74	14.81
Professional specialty and technical occupations	19.32	19.93	-	20.00	19.11	21.47	15.54	23.07	19.11
Professional specialty occupations	23.82	25.74	-	25.74	23.18	-	17.61	-	23.46
Technical occupations	13.82	13.32	-	13.29	14.00	-	-	-	12.96
Executive, administrative, and managerial occupations	21.31	22.52	16.75	25.49	20.93	18.08	21.86	25.83	18.81
Sales occupations	15.28	14.68	-	13.36	15.33	-	12.05	30.64	13.68
Administrative support including clerical occupations	9.88	11.52	-	11.34	9.71	10.61	10.44	9.84	8.71
White-collar excluding sales	14.93	18.29	15.43	18.71	14.24	13.42	13.69	13.62	14.97
Blue-collar occupations	11.70	11.52	13.11	10.32	11.96	14.81	10.38	-	9.40
Precision production, craft, and repair occupations	13.36	13.01	14.21	10.80	14.11	17.77	12.61	-	12.44
Machine operators, assemblers, and inspectors	9.72	9.94	-	9.94	8.35	-	-	-	6.89
Transportation and material moving occupations	12.47	12.61	-	12.22	12.43	13.89	9.89	-	7.46
Handlers, equipment cleaners, helpers, and laborers	8.89	8.93	8.99	8.85	8.84	13.33	8.66	-	6.56
Service occupations	7.61	-	-	-	7.36	-	7.16	-	7.24

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay--one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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 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 11. Mean hourly earnings¹ by occupational group, private industry, part-time workers only², Salt Lake City, UT, July - August 1996

Occupational group ³	All private industries	Goods-producing industries ⁴		Service-producing industries ⁵				
		Total	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services
All workers	\$7.01	\$8.21	\$8.03	\$6.98	\$10.36	\$6.02	\$8.85	\$7.27
All workers excluding sales	7.19	8.94	9.38	7.14	10.38	6.19	8.45	7.27
White-collar occupations	7.97	-	-	7.96	-	6.06	9.33	9.54
Professional specialty and technical occupations	13.86	-	-	13.63	-	-	-	14.31
Professional specialty occupations	14.69	-	-	14.36	-	-	-	15.55
Technical occupations	12.31	-	-	12.31	-	-	-	12.31
Sales occupations	6.32	-	-	6.36	-	5.73	-	7.27
Administrative support including clerical occupations	7.69	-	-	7.71	-	7.61	8.32	7.21
White-collar excluding sales	9.48	-	-	9.44	-	7.35	8.89	10.22
Blue-collar occupations	7.06	8.20	-	6.99	-	8.58	-	5.72
Precision production, craft, and repair occupations	7.49	-	-	7.90	-	-	-	-
Machine operators, assemblers, and inspectors	6.50	-	-	6.00	-	-	-	6.00
Transportation and material moving occupations	9.30	-	-	9.38	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	6.59	-	-	6.53	-	8.57	-	-
Service occupations	5.45	-	-	5.44	-	4.81	-	6.09

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay--one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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 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 12. Mean hourly earnings¹ by occupational group, private industry by establishment employment size, all workers², Salt Lake City, UT, July - August 1996

Occupational group ³	All workers	1 - 99 workers	100 workers or more		
			Total	100 - 499 workers	500 workers or more
All workers	\$12.22	\$12.07	\$12.39	\$12.03	\$12.83
All workers excluding sales	12.07	11.58	12.57	12.30	12.86
White-collar occupations	14.11	13.90	14.33	13.72	14.97
Professional specialty and technical occupations	18.86	16.92	19.84	21.57	19.03
Professional specialty occupations	22.92	20.84	23.95	25.30	23.06
Technical occupations	13.72	12.14	14.54	12.69	15.05
Executive, administrative, and managerial occupations	21.06	19.40	23.29	23.58	22.96
Sales occupations	13.18	14.62	10.88	10.56	12.20
Administrative support including clerical occupations	9.63	9.85	9.41	9.39	9.43
White-collar excluding sales	14.44	13.56	15.21	15.19	15.22
Blue-collar occupations	11.17	11.61	10.73	11.10	10.19
Precision production, craft, and repair occupations	13.24	13.52	12.66	13.51	12.12
Machine operators, assemblers, and inspectors	9.45	9.30	9.53	9.19	9.92
Transportation and material moving occupations	12.19	10.92	13.19	13.68	10.76
Handlers, equipment cleaners, helpers, and laborers	8.19	8.25	8.15	8.35	-
Service occupations	6.76	6.38	7.47	7.37	7.70

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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.

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Table 13. Mean hourly earnings¹ by occupational group, private industry by establishment employment size, full-time workers² only, Salt Lake City, UT, July - August 1996

Occupational group ³	All workers	1 - 99 workers	100 workers or more		
			Total	100 - 499 workers	500 workers or more
All workers	\$13.14	\$12.84	\$13.48	\$13.27	\$13.72
All workers excluding sales	12.85	12.22	13.51	13.31	13.73
White-collar occupations	15.01	14.73	15.29	15.07	15.50
Professional specialty and technical occupations	19.32	17.58	20.11	22.04	19.21
Professional specialty occupations	23.82	22.36	24.46	26.19	23.33
Technical occupations	13.82	11.97	14.68	12.76	15.23
Executive, administrative, and managerial occupations	21.31	19.75	23.36	23.71	22.96
Sales occupations	15.28	16.41	13.15	13.01	13.61
Administrative support including clerical occupations	9.88	10.13	9.64	9.63	9.64
White-collar excluding sales	14.93	14.03	15.70	15.76	15.65
Blue-collar occupations	11.70	11.74	11.66	11.82	11.43
Precision production, craft, and repair occupations	13.36	13.59	12.85	13.80	12.26
Machine operators, assemblers, and inspectors	9.72	9.33	9.94	9.68	10.21
Transportation and material moving occupations	12.47	11.12	13.61	14.08	11.34
Handlers, equipment cleaners, helpers, and laborers	8.89	8.15	9.57	8.84	11.20
Service occupations	7.61	7.28	8.20	8.41	7.92

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay--one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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 occupation and occupational levels may include data for categories not shown separately. Because of rounding, sums of individual items may not equal totals.

Table 14. Mean hourly earnings¹ by occupational group, private industry by establishment employment size, part-time workers² only, Salt Lake City, UT, July - August 1996

Occupational group ³	All workers	1 - 99 workers	100 workers or more		
			Total	100 - 499 workers	500 workers or more
All workers	\$7.01	\$6.99	\$7.03	\$7.15	\$6.79
All workers excluding sales	7.19	7.03	7.33	7.65	6.82
White-collar occupations	7.97	8.29	7.62	6.78	9.32
Professional specialty and technical occupations	13.86	13.21	14.82	-	-
Professional specialty occupations	14.69	13.21	16.58	-	18.71
Technical occupations	12.31	-	-	-	-
Sales occupations	6.32	6.85	5.81	5.72	6.41
Administrative support including clerical occupations	7.69	7.66	7.72	7.55	7.88
White-collar excluding sales	9.48	9.51	9.44	8.80	9.99
Blue-collar occupations	7.06	8.35	6.80	8.05	-
Precision production, craft, and repair occupations	7.49	-	7.71	-	-
Machine operators, assemblers, and inspectors	6.50	-	-	-	-
Transportation and material moving occupations	9.30	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	6.59	9.16	6.24	7.43	-
Service occupations	5.45	5.07	6.23	6.21	6.39

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call 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. The middle range is defined by two rates of pay—one-fourth of the workers earn the same as or less than the lower of these rates, and one-fourth earn the same as or more than the higher rate.

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 occupation and occupational levels may include data for categories not shown separately. Because of rounding, sums of individual items may not equal totals.

Table 15. Number of workers¹ studied by occupation, Salt Lake City, UT, July - August 1996

Occupation ²	Full-time and part-time workers			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
All workers	519,582	441,656	77,926	395,239	329,427	65,812	124,344	112,229	12,114
All workers excluding sales	454,892	376,965	77,926	355,423	289,611	65,812	99,469	87,355	12,114
White-collar occupations	282,032	226,646	55,386	224,514	174,773	49,741	57,517	51,873	5,644
Professional specialty and technical occupations	76,967	47,111	29,856	65,115	38,531	26,584	11,852	8,580	-
Professional specialty occupations	55,965	27,073	28,892	46,460	20,839	25,620	9,505	6,233	-
Engineering occupations	5,630	5,480	-	5,630	5,480	-	-	-	-
Civil engineers	864	-	-	864	-	-	-	-	-
Industrial engineers	1,079	1,079	-	1,079	1,079	-	-	-	-
Engineers, N.E.C.	1,745	1,745	-	1,745	1,745	-	-	-	-
Computer systems analysts and scientists	3,897	3,897	-	3,786	3,786	-	-	-	-
Physicians	798	798	-	798	798	-	-	-	-
Registered nurses	5,505	4,569	-	3,514	2,577	-	1,992	1,992	-
Teachers	22,268	-	20,549	18,059	-	17,414	4,209	-	-
Teachers, except college and university	20,080	-	18,361	15,909	-	15,264	4,171	-	-
Elementary school teachers	8,450	-	8,450	8,102	-	8,102	-	-	-
Secondary school teachers	4,467	-	3,822	4,467	-	3,822	-	-	-
Teachers, N.E.C.	4,448	-	3,374	-	-	-	2,333	-	-
Librarians	680	-	-	-	-	-	-	-	-
Social workers	1,751	-	-	1,654	-	-	-	-	-
Designers	1,591	-	-	-	-	-	-	-	-
Technical occupations	21,002	20,038	964	18,655	17,691	964	2,347	2,347	-
Clinical laboratory technologists and technicians	3,014	3,014	-	2,550	2,550	-	-	-	-
Licensed practical nurses	2,065	2,065	-	1,092	1,092	-	-	-	-
Health technologists and technicians, N.E.C.	741	-	-	671	-	-	-	-	-
Electrical and electronic technicians	2,158	2,158	-	2,158	2,158	-	-	-	-
Engineering technicians, N.E.C.	830	830	-	830	830	-	-	-	-
Drafters	2,619	2,529	-	2,443	2,353	-	-	-	-
Computer programmers	1,557	1,557	-	1,557	1,557	-	-	-	-
Technical and related occupations, N.E.C.	2,580	2,504	-	2,580	2,504	-	-	-	-
Executive, administrative, and managerial occupations	40,004	28,584	11,420	38,068	27,391	10,676	1,937	-	-
Administrators and officials, public administration	2,004	-	2,004	2,004	-	2,004	-	-	-
Financial managers	3,072	2,898	-	3,072	2,898	-	-	-	-
Administrators, education and related fields	1,149	-	934	1,149	-	934	-	-	-
Managers, medicine and health ..	1,793	-	-	1,757	-	-	-	-	-
Managers and administrators, N.E.C.	7,858	7,256	-	7,616	7,014	-	-	-	-
Accountants and auditors	2,653	2,653	-	2,653	2,653	-	-	-	-
Other financial officers	2,460	2,364	-	2,276	2,179	-	-	-	-
Personnel, training, and labor relations specialists	1,961	1,609	-	1,732	1,380	-	-	-	-
Purchasing agents and buyers, N.E.C.	1,070	-	-	1,070	-	-	-	-	-
Management related occupations, N.E.C.	7,166	5,051	2,115	6,629	4,514	2,115	-	-	-
Sales occupations	64,691	64,691	-	39,816	39,816	-	24,875	24,875	-
Supervisors, sales occupations	8,370	8,370	-	8,370	8,370	-	-	-	-
Securities and financial services sales occupations	4,355	4,355	-	4,355	4,355	-	-	-	-
Sales occupations, other business services	6,357	6,357	-	5,504	5,504	-	-	-	-
Sales representatives, mining, manufacturing, and wholesale	4,767	4,767	-	4,767	4,767	-	-	-	-
Sales workers, apparel	5,926	5,926	-	-	-	-	5,378	5,378	-
Sales workers, other commodities	9,279	9,279	-	3,715	3,715	-	5,564	5,564	-
Sales counter clerks	3,457	3,457	-	-	-	-	-	-	-

See footnotes at end of table.

Table 15. Number of workers¹ studied by occupation, Salt Lake City, UT, July - August 1996 — Continued

Occupation ²	Full-time and part-time workers			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
Cashiers	11,431	11,431	-	3,407	3,407	-	8,024	8,024	-
Sales support occupations, N.E.C.	4,167	4,167	-	3,332	3,332	-	-	-	-
Administrative support including clerical occupations	100,370	86,260	14,110	81,516	69,035	12,481	18,854	17,225	1,629
Supervisors, general office	1,283	-	-	1,283	-	-	-	-	-
Supervisors, financial records processing	728	-	-	-	-	-	-	-	-
Computer operators	1,911	-	-	870	-	-	-	-	-
Secretaries	7,136	5,149	1,988	6,042	4,638	1,404	1,095	-	-
Receptionists	7,178	6,146	-	5,380	4,348	-	1,797	1,797	-
Information clerks, N.E.C.	1,566	-	-	1,527	-	-	-	-	-
Order clerks	3,716	3,716	-	2,293	2,293	-	-	-	-
Library clerks	755	-	-	-	-	-	-	-	-
File clerks	2,820	2,820	-	-	-	-	-	-	-
Records clerks, N.E.C.	1,544	1,189	-	1,242	1,073	-	-	-	-
Bookkeepers, accounting and auditing clerks	10,781	10,663	-	9,136	9,017	-	-	-	-
Billing clerks	2,485	2,485	-	1,757	1,757	-	-	-	-
Dispatchers	1,321	-	-	864	-	-	-	-	-
Traffic, shipping and receiving clerks	3,260	3,202	-	3,260	3,202	-	-	-	-
Stock and inventory clerks	3,212	3,212	-	2,228	2,228	-	-	-	-
Insurance adjusters, examiners, & investigators	6,165	6,165	-	6,165	6,165	-	-	-	-
Investigators and adjusters except insurance	5,432	5,432	-	4,709	4,709	-	-	-	-
Bill and account collectors	2,566	2,050	-	2,092	1,576	-	-	-	-
General office clerks	7,400	6,853	546	6,860	6,350	510	-	-	-
Bank tellers	2,298	2,298	-	-	-	-	-	-	-
Data entry keyers	-	-	-	1,093	1,093	-	-	-	-
Administrative support occupations, N.E.C.	7,888	5,629	-	7,080	4,820	-	-	-	-
Professional occupations, N.E.C.	3,626	-	-	3,626	-	-	-	-	-
White-collar occupations excluding sales	217,341	161,955	55,386	184,699	134,957	49,741	32,642	26,998	5,644
Blue-collar occupations	164,309	156,994	7,315	134,944	128,916	6,027	29,366	28,078	1,288
Precision production, craft, and repair occupations	58,723	57,864	859	56,785	55,964	821	1,938	1,900	-
Automobile mechanics	2,765	2,726	-	2,765	2,726	-	-	-	-
Bus, truck, and stationary engine mechanics	515	-	-	515	-	-	-	-	-
Electronic repairers, communications and industrial equipment	1,418	1,418	-	1,418	1,418	-	-	-	-
Heating, air conditioning, and refrigeration mechanics	5,234	5,234	-	4,800	4,800	-	-	-	-
Mechanics and repairers, N.E.C. ...	5,576	5,576	-	5,411	5,411	-	-	-	-
Electricians	2,678	2,618	-	2,678	2,618	-	-	-	-
Supervisors, production occupations	1,123	1,035	-	1,123	1,035	-	-	-	-
Machinists	1,451	1,451	-	1,451	1,451	-	-	-	-
Electrical and electronic equipment assemblers	3,710	3,710	-	3,085	3,085	-	-	-	-
Machine operators, assemblers, and inspectors	24,494	24,365	-	21,300	21,172	-	3,193	3,193	-
Laundering and dry cleaning machine operators	1,190	-	-	1,190	-	-	-	-	-
Miscellaneous machine operators, N.E.C.	4,686	4,686	-	3,705	3,705	-	-	-	-
Welders and cutters	1,972	1,972	-	1,972	1,972	-	-	-	-
Assemblers	4,896	4,896	-	3,792	3,792	-	-	-	-
Production inspectors, checkers and examiners	1,656	1,656	-	1,656	1,656	-	-	-	-
Transportation and material moving occupations	35,636	31,290	4,345	30,129	26,160	3,969	5,506	5,131	-
Truck drivers	23,173	22,536	-	20,807	20,170	-	2,366	2,366	-

See footnotes at end of table.

Table 15. Number of workers¹ studied by occupation, Salt Lake City, UT, July - August 1996 — Continued

Occupation ²	Full-time and part-time workers			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
Bus drivers	2,319	-	2,319	1,979	-	1,979	-	-	-
Industrial truck and tractor equipment operators	1,842	1,842	-	-	-	-	-	-	-
Miscellaneous material moving equipment operators, N.E.C. ...	1,578	-	-	-	-	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	45,457	43,475	1,982	26,729	25,621	1,108	18,728	17,854	874
Groundskeepers and gardeners except farm	1,136	-	1,136	913	-	913	-	-	-
Construction laborers	3,564	3,564	-	3,236	3,236	-	-	-	-
Stock handlers and baggers	7,574	7,574	-	2,713	2,713	-	4,861	4,861	-
Freight, stock, and material handlers, N.E.C.	6,734	6,734	-	4,028	4,028	-	2,706	2,706	-
Hand packers and packagers	5,356	5,356	-	3,207	3,207	-	-	-	-
Laborers except construction, N.E.C.	10,304	-	-	3,171	3,056	-	-	-	-
Service occupations	73,241	58,016	15,225	35,780	25,737	10,043	37,461	32,279	5,182
Protective service occupations	11,949	5,184	6,765	8,472	2,297	6,175	3,477	2,887	589
Firefighting occupations	1,277	-	1,103	836	-	661	-	-	-
Police and detectives, public service	1,965	-	1,965	1,965	-	1,965	-	-	-
Guards and police except public service	4,079	4,079	-	1,523	1,523	-	2,556	2,556	-
Food service occupations	31,006	27,840	3,167	11,290	10,296	-	19,716	17,544	2,172
Supervisors, food preparation and service occupations	1,352	1,352	-	1,352	1,352	-	-	-	-
Waiters and waitresses	6,575	6,575	-	845	845	-	5,730	5,730	-
Cooks	4,636	4,409	-	2,119	2,042	-	2,517	-	-
Food counter, fountain, and related occupations	4,658	4,658	-	-	-	-	-	-	-
Kitchen workers, food preparation	4,909	3,259	-	2,468	-	-	2,441	1,708	-
Waiters/Waitresses' assistants	2,844	2,200	-	-	-	-	2,042	-	-
Food preparation occupations, N.E.C.	4,890	4,246	-	-	-	-	4,411	3,766	-
Health service occupations	7,742	7,194	-	5,121	4,645	-	2,621	2,549	-
Health aides except nursing	2,420	1,912	-	1,245	-	-	1,175	1,102	-
Nursing aides, orderlies and attendants	4,556	4,515	-	3,110	3,069	-	1,446	1,446	-
Cleaning and building service occupations	17,161	14,237	2,924	8,743	7,059	1,683	8,418	7,177	1,241
Supervisors, cleaning & building service workers	1,039	-	-	1,039	-	-	-	-	-
Maids and housemen	2,871	2,871	-	2,871	2,871	-	-	-	-
Janitors and cleaners	11,485	8,968	2,517	3,114	1,791	-	8,371	7,177	-
Personal services occupations	5,383	3,561	-	2,154	1,440	-	3,228	2,121	-
Early childhood teachers' assistants	2,180	-	-	-	-	-	-	-	-

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 occupation and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." Because of rounding, sums of individual items may not equal totals.

Table 16. Numbers of workers¹ by occupational group and level², Salt Lake City, UT, July - August 1996

Occupational group ³ and level	Full-time and part-time workers			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
White-collar occupations	282,032	226,646	55,386	224,514	174,773	49,741	57,517	51,873	5,644
Professional specialty and technical occupations	76,967	47,111	29,856	65,115	38,531	26,584	11,852	8,580	-
Professional specialty occupations	55,965	27,073	28,892	46,460	20,839	25,620	9,505	6,233	-
Level 6	1,311	-	-	-	-	-	-	-	-
Level 7	7,513	3,617	-	6,219	2,361	-	-	-	-
Level 8	4,581	1,316	3,265	4,072	-	3,265	-	-	-
Level 9	17,132	4,753	12,379	15,280	3,721	11,559	1,852	-	-
Level 10	3,842	1,882	-	3,842	1,882	-	-	-	-
Level 11	8,314	3,873	4,441	8,075	3,634	4,441	-	-	-
Level 12	4,622	4,622	-	4,345	4,345	-	-	-	-
Level 13	1,216	1,216	-	1,216	1,216	-	-	-	-
Engineering occupations	5,630	5,480	-	5,630	5,480	-	-	-	-
Level 9	1,782	1,722	-	1,782	1,722	-	-	-	-
Level 12	1,691	1,691	-	1,691	1,691	-	-	-	-
Registered nurses	5,505	4,569	-	3,514	2,577	-	1,992	1,992	-
Level 7	588	-	-	-	-	-	-	-	-
Level 8	1,879	1,108	-	-	-	-	-	-	-
Level 9	1,868	1,868	-	-	-	-	-	-	-
Natural scientists	5,106	4,260	-	4,995	4,149	-	-	-	-
Level 11	2,624	1,778	-	2,624	1,778	-	-	-	-
Level 12	952	952	-	-	-	-	-	-	-
Teachers	22,268	-	20,549	18,059	-	17,414	4,209	-	-
Level 7	4,119	-	-	4,081	-	-	-	-	-
Level 8	2,307	-	2,307	2,307	-	2,307	-	-	-
Level 9	7,950	-	7,950	7,169	-	7,169	-	-	-
Teachers, except college and university	20,080	-	18,361	15,909	-	15,264	4,171	-	-
Level 7	4,081	-	-	4,081	-	-	-	-	-
Level 8	2,307	-	2,307	2,307	-	2,307	-	-	-
Level 9	7,950	-	7,950	7,169	-	7,169	-	-	-
Technical occupations	21,002	20,038	964	18,655	17,691	964	2,347	2,347	-
Level 2	989	989	-	-	-	-	-	-	-
Level 3	2,162	2,162	-	-	-	-	-	-	-
Level 4	2,316	2,111	-	2,316	2,111	-	-	-	-
Level 5	3,316	3,316	-	2,405	2,405	-	-	-	-
Level 6	976	976	-	976	976	-	-	-	-
Level 7	4,824	4,114	-	4,750	4,039	-	-	-	-
Level 8	3,056	3,007	-	2,911	2,862	-	-	-	-
Level 9	1,261	1,261	-	1,261	1,261	-	-	-	-
Executive, administrative, and managerial occupations	40,004	28,584	11,420	38,068	27,391	10,676	1,937	-	-
Level 5	1,348	1,219	-	810	-	-	-	-	-
Level 6	2,764	2,251	-	1,838	1,838	-	-	-	-
Level 7	4,835	3,261	-	4,835	3,261	-	-	-	-
Level 8	6,536	4,001	-	6,408	3,873	-	-	-	-
Level 9	3,916	3,576	-	3,765	3,462	-	-	-	-
Level 10	4,405	2,793	-	4,405	2,793	-	-	-	-
Level 11	4,340	4,121	-	4,340	4,121	-	-	-	-
Level 12	4,284	3,368	917	4,284	3,368	917	-	-	-
Level 13	2,476	-	1,219	2,476	-	1,219	-	-	-
Level 14	998	-	718	998	-	718	-	-	-
Level 15	3,513	2,061	-	3,513	2,061	-	-	-	-
Executives, managers and administrators	18,902	14,155	4,748	17,916	13,912	4,004	986	-	-
Level 9	1,183	1,146	-	1,032	1,032	-	-	-	-
Level 10	1,771	1,722	-	1,771	1,722	-	-	-	-
Level 11	3,485	3,416	-	3,485	3,416	-	-	-	-
Level 12	3,451	2,954	-	3,451	2,954	-	-	-	-
Level 13	2,476	-	1,219	2,476	-	1,219	-	-	-
Level 14	998	-	718	998	-	718	-	-	-
Level 15	3,513	2,061	-	3,513	2,061	-	-	-	-
Managers and administrators, N.E.C.	7,858	7,256	-	7,616	7,014	-	-	-	-
Level 10	1,350	1,350	-	1,350	1,350	-	-	-	-

See footnotes at end of table.

Table 16. Numbers of workers¹ by occupational group and level², Salt Lake City, UT, July - August 1996 — Continued

Occupational group ³ and level	Full-time and part-time workers			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
Level 11	1,838	1,806	—	1,838	1,806	—	—	—	—
Level 12	1,826	1,826	—	1,826	1,826	—	—	—	—
Level 15	1,641	1,641	—	1,641	1,641	—	—	—	—
Sales occupations	64,691	64,691	—	39,816	39,816	—	24,875	24,875	—
Level 1	7,423	7,423	—	1,228	1,228	—	6,195	6,195	—
Level 2	14,768	14,768	—	5,044	5,044	—	9,724	9,724	—
Level 3	9,534	9,534	—	3,487	3,487	—	6,047	6,047	—
Level 4	5,982	5,982	—	4,783	4,783	—	—	—	—
Level 5	4,691	4,691	—	3,865	3,865	—	—	—	—
Level 6	6,293	6,293	—	5,410	5,410	—	—	—	—
Level 7	2,182	2,182	—	2,182	2,182	—	—	—	—
Level 8	4,427	4,427	—	4,427	4,427	—	—	—	—
Level 9	2,896	2,896	—	2,896	2,896	—	—	—	—
Level 11	2,980	2,980	—	2,980	2,980	—	—	—	—
Level 12	1,935	1,935	—	1,935	1,935	—	—	—	—
Cashiers	11,431	11,431	—	3,407	3,407	—	8,024	8,024	—
Level 1	1,588	1,588	—	—	—	—	—	—	—
Level 2	7,822	7,822	—	—	—	—	6,619	6,619	—
Administrative support including clerical occupations	100,370	86,260	14,110	81,516	69,035	12,481	18,854	17,225	1,629
Level 1	7,026	6,912	—	4,206	4,206	—	2,820	2,706	—
Level 2	11,391	10,976	—	5,577	5,396	—	5,814	5,580	—
Level 3	27,273	24,497	—	23,142	21,263	—	4,131	3,234	—
Level 4	25,937	20,146	5,791	21,424	15,788	—	4,513	4,357	—
Level 5	11,799	10,216	—	10,617	9,264	—	1,181	—	—
Level 6	5,218	4,424	—	5,138	4,345	—	—	—	—
Level 7	8,405	5,974	—	8,089	5,659	—	—	—	—
Level 8	1,123	—	—	1,123	—	—	—	—	—
Secretaries	7,136	5,149	1,988	6,042	4,638	1,404	1,095	—	—
Level 3	3,489	—	—	—	—	—	—	—	—
Level 4	1,537	926	—	1,368	—	—	—	—	—
Level 5	1,309	—	—	1,118	—	—	—	—	—
Bookkeepers, accounting and auditing clerks	10,781	10,663	—	9,136	9,017	—	—	—	—
Level 3	4,420	4,420	—	3,734	3,734	—	—	—	—
Level 4	3,526	3,487	—	3,183	3,144	—	—	—	—
Level 5	1,458	1,409	—	901	—	—	—	—	—
General office clerks	7,400	6,853	546	6,860	6,350	510	—	—	—
Level 3	2,245	1,896	—	2,245	1,896	—	—	—	—
Level 4	1,192	—	—	—	—	—	—	—	—
Level 5	1,153	—	—	1,153	—	—	—	—	—
White-collar occupations excluding sales	217,341	161,955	55,386	184,699	134,957	49,741	32,642	26,998	5,644
Level 1	7,026	6,912	—	4,206	4,206	—	2,820	2,706	—
Level 2	12,836	12,421	—	6,208	6,027	—	6,628	6,394	—
Level 3	29,891	27,115	2,776	25,502	23,622	1,880	4,389	3,493	—
Level 4	29,841	23,845	5,996	24,254	18,413	5,841	5,587	5,432	—
Level 5	18,890	14,863	4,027	13,945	12,463	—	4,945	2,400	—
Level 6	10,268	8,417	1,852	9,070	7,780	1,290	1,199	—	—
Level 7	25,577	16,965	8,611	23,893	15,320	8,573	—	—	—
Level 8	15,295	9,276	6,019	14,513	8,494	6,019	782	782	—
Level 9	23,006	10,252	12,755	21,004	9,105	11,899	2,003	—	—
Level 10	9,576	6,004	3,572	8,975	5,403	3,572	—	—	—
Level 11	14,928	10,268	4,659	14,688	10,029	4,659	—	—	—
Level 12	8,907	7,990	917	8,629	7,713	917	—	—	—
Level 13	3,692	2,473	1,219	3,692	2,473	1,219	—	—	—
Level 14	1,398	—	718	1,398	—	718	—	—	—
Level 15	4,275	2,823	—	4,275	2,823	—	—	—	—
Blue-collar occupations	164,309	156,994	7,315	134,944	128,916	6,027	29,366	28,078	1,288
Precision production, craft, and repair occupations	58,723	57,864	859	56,785	55,964	821	1,938	1,900	—
Level 2	7,915	7,915	—	7,290	7,290	—	—	—	—
Level 3	3,532	3,494	—	3,320	3,320	—	—	—	—
Level 4	7,652	7,613	—	7,487	7,448	—	—	—	—
Level 5	3,283	3,225	—	2,712	2,654	—	—	—	—
Level 6	5,570	5,540	—	5,570	5,540	—	—	—	—

See footnotes at end of table.

Table 16. Numbers of workers¹ by occupational group and level², Salt Lake City, UT, July - August 1996 — Continued

Occupational group ³ and level	Full-time and part-time workers			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
Level 7	19,595	19,213	382	19,230	18,849	382	-	-	-
Level 8	5,257	5,196	-	5,257	5,196	-	-	-	-
Level 9	3,385	3,323	-	3,385	3,323	-	-	-	-
Level 11	1,503	1,374	-	1,503	1,374	-	-	-	-
Machine operators, assemblers, and inspectors	24,494	24,365	-	21,300	21,172	-	3,193	3,193	-
Level 1	3,160	3,031	-	2,152	2,023	-	-	-	-
Level 2	4,427	4,427	-	3,417	3,417	-	-	-	-
Level 3	6,979	6,979	-	5,998	5,998	-	-	-	-
Level 4	1,998	1,998	-	1,998	1,998	-	-	-	-
Level 5	3,540	3,540	-	3,540	3,540	-	-	-	-
Level 6	1,418	1,418	-	1,418	1,418	-	-	-	-
Level 7	1,409	1,409	-	1,215	1,215	-	-	-	-
Transportation and material moving occupations	35,636	31,290	4,345	30,129	26,160	3,969	5,506	5,131	-
Level 1	4,365	4,307	-	2,253	-	-	2,112	2,112	-
Level 2	3,891	2,473	1,418	3,250	-	1,382	-	-	-
Level 3	7,239	5,921	1,318	6,586	5,607	-	-	-	-
Level 4	4,616	4,616	-	4,616	4,616	-	-	-	-
Level 5	9,060	7,797	-	7,660	6,397	-	-	-	-
Truck drivers	23,173	22,536	-	20,807	20,170	-	2,366	2,366	-
Level 1	2,157	2,157	-	-	-	-	-	-	-
Level 2	2,189	2,189	-	-	-	-	-	-	-
Level 3	4,359	-	-	4,359	-	-	-	-	-
Level 4	3,229	3,229	-	3,229	3,229	-	-	-	-
Level 5	7,797	7,797	-	6,397	6,397	-	-	-	-
Handlers, equipment cleaners, helpers, and laborers	45,457	43,475	1,982	26,729	25,621	1,108	18,728	17,854	874
Level 1	18,998	18,023	975	6,240	6,001	-	12,757	12,021	-
Level 2	12,516	12,378	-	8,475	8,475	-	4,040	3,902	-
Level 3	7,999	7,960	-	6,809	6,771	-	-	-	-
Level 4	2,702	2,702	-	2,085	2,085	-	-	-	-
Level 5	1,867	1,388	-	1,744	1,265	-	-	-	-
Service occupations	73,241	58,016	15,225	35,780	25,737	10,043	37,461	32,279	5,182
Level 1	28,262	24,790	-	9,020	8,009	-	19,242	16,781	-
Level 2	14,317	12,859	-	4,399	3,702	-	9,918	9,157	-
Level 3	7,213	6,634	-	3,711	3,711	-	3,502	2,923	-
Level 4	9,232	7,500	-	6,134	5,423	-	3,097	2,077	-
Level 5	3,881	2,289	1,592	2,892	-	1,385	990	-	-
Level 6	2,743	-	1,700	2,368	-	1,653	-	-	-
Level 7	1,842	-	600	1,612	-	600	-	-	-
Level 8	1,603	-	780	1,603	-	780	-	-	-
Level 9	1,815	-	1,261	1,766	-	1,212	-	-	-
Level 10	999	-	717	941	-	659	-	-	-
Protective service occupations	11,949	5,184	6,765	8,472	2,297	6,175	3,477	2,887	589
Level 2	1,632	1,632	-	-	-	-	-	-	-
Level 5	1,538	-	-	1,229	-	-	-	-	-
Level 7	922	-	518	693	-	518	-	-	-
Level 8	387	-	387	387	-	387	-	-	-
Level 9	1,214	-	1,214	1,164	-	1,164	-	-	-
Level 10	672	-	497	614	-	-	-	-	-
Guards and police except public service	4,079	4,079	-	1,523	1,523	-	2,556	2,556	-
Level 2	1,632	1,632	-	-	-	-	-	-	-
Food service occupations	31,006	27,840	3,167	11,290	10,296	-	19,716	17,544	2,172
Level 1	15,663	14,337	-	4,356	4,356	-	11,308	9,982	-
Level 2	9,212	7,818	-	2,829	2,132	-	6,383	5,686	-
Level 3	2,815	2,666	-	790	790	-	2,025	1,876	-
Health service occupations	7,742	7,194	-	5,121	4,645	-	2,621	2,549	-
Level 1	637	565	-	-	-	-	-	-	-
Level 2	1,784	1,784	-	-	-	-	-	-	-
Level 4	2,828	2,828	-	1,857	1,857	-	-	-	-
Level 5	1,383	-	-	-	-	-	-	-	-

See footnotes at end of table.

Table 16. Numbers of workers¹ by occupational group and level², Salt Lake City, UT, July - August 1996 — Continued

Occupational group ³ and level	Full-time and part-time workers			Full-time workers			Part-time workers		
	All industries	Private industry	State and local government	All industries	Private industry	State and local government	All industries	Private industry	State and local government
Nursing aides, orderlies and attendants	4,556	4,515	—	3,110	3,069	—	1,446	1,446	—
Level 4	2,346	2,346	—	—	—	—	—	—	—
Cleaning and building service occupations	17,161	14,237	2,924	8,743	7,059	1,683	8,418	7,177	1,241
Level 1	10,271	8,863	—	4,156	3,512	—	6,115	5,351	—
Level 3	1,108	—	—	—	—	—	—	—	—
Janitors and cleaners ...	11,485	8,968	2,517	3,114	1,791	—	8,371	7,177	—
Level 1	7,570	6,161	—	—	—	—	6,115	5,351	—
Level 3	1,108	—	—	—	—	—	—	—	—
Personal services occupations	5,383	3,561	—	2,154	1,440	—	3,228	2,121	—
Level 1	1,564	—	—	—	—	—	1,283	—	—

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 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.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation and occupational levels may include data for categories not shown separately. Because of rounding, sums of individual items may not equal totals.

Table 17. Number of workers¹ by occupational group and selected characteristic, all industries, Salt Lake City, UT, July - August 1996

Occupational group ²	Union ³	Nonunion ³	Full-time workers	Part-time workers	Time ⁴	Incentive ⁴
All workers	47,530	472,053	395,239	124,344	475,018	44,564
All workers excluding sales	45,578	409,313	355,423	99,469	429,681	25,211
White-collar occupations	13,378	268,654	224,514	57,517	251,647	30,384
Professional specialty and technical occupations	7,543	69,424	65,115	11,852	76,788	—
Professional specialty occupations	7,435	48,530	46,460	9,505	55,786	—
Technical occupations	—	20,894	18,655	2,347	21,002	—
Executive, administrative, and managerial occupations	—	40,004	38,068	1,937	35,797	4,207
Sales occupations	—	62,739	39,816	24,875	45,337	19,354
Administrative support including clerical occupations	3,883	96,487	81,516	18,854	93,725	6,644
White-collar excluding sales	11,426	205,915	184,699	32,642	206,310	11,031
Blue-collar occupations	30,701	133,608	134,944	29,366	153,394	10,916
Precision production, craft, and repair occupations	12,796	45,927	56,785	1,938	55,832	2,891
Machine operators, assemblers, and inspectors	2,308	22,186	21,300	3,193	23,624	—
Transportation and material moving occupations	9,668	25,968	30,129	5,506	31,926	3,710
Handlers, equipment cleaners, helpers, and laborers	5,929	39,528	26,729	18,728	42,012	3,445
Service occupations	3,451	69,790	35,780	37,461	69,977	3,264

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.

³ Union workers are those whose wages are determined through

collective bargaining.

⁴ Time workers wages are based solely on hourly or weekly rates; incentive workers are those whose wages are at least partially based on productivity payments such as piece rates, commissions, and production bonuses.

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. Because of rounding, sums of individual items may not equal totals.

Table 18. Number of workers¹ by occupational group, private industry, Salt Lake City, UT, July - August 1996

Occupational group ²	All private industries	Goods-producing industries ³			Service-producing industries ⁴				
		Total	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services
All workers	441,656	106,697	35,914	69,556	334,960	39,716	121,766	37,622	135,856
All workers excluding sales	376,965	102,879	35,601	66,051	274,087	38,784	81,584	30,949	122,770
White-collar occupations	226,646	27,054	3,567	23,119	199,592	15,302	66,068	35,880	82,343
Professional specialty and technical occupations	47,111	9,729	—	9,606	37,383	3,199	3,904	1,542	28,737
Professional specialty occupations	27,073	5,178	—	5,178	21,895	—	2,566	—	17,782
Technical occupations	20,038	4,550	—	4,428	15,488	—	—	—	10,955
Executive, administrative, and managerial occupations	28,584	6,478	2,302	4,176	22,107	1,033	4,321	4,871	11,881
Sales occupations	64,691	3,818	—	3,505	60,873	—	40,181	6,673	13,087
Administrative support including clerical occupations	86,260	7,030	—	5,831	79,230	10,137	17,661	22,793	28,638
White-collar excluding sales	161,955	23,236	3,255	19,613	138,719	14,370	25,886	29,207	69,256
Blue-collar occupations	156,994	78,526	32,347	45,320	78,469	23,576	28,443	—	26,218
Precision production, craft, and repair occupations	57,864	39,311	24,343	14,478	18,553	5,293	7,400	—	5,860
Machine operators, assemblers, and inspectors	24,365	18,673	—	18,550	5,692	—	—	—	5,036
Transportation and material moving occupations	31,290	6,432	—	5,361	24,858	15,809	6,502	—	2,547
Handlers, equipment cleaners, helpers, and laborers	43,475	14,109	6,933	6,931	29,366	2,004	14,481	—	12,775
Service occupations	58,016	1,117	—	1,117	56,899	—	27,255	—	27,295

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.

³ Goods-producing industries include mining, construction, and manufacturing.

⁴ Service-producing industries include transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services.

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. Because of rounding, sums of individual items may not equal totals.

Table 19. Number of workers¹ by occupational group, private industry by establishment employment size, Salt Lake City, UT, July - August 1996

Occupational group ²	All workers	1 - 99 workers	100 workers or more		
			Total	100 - 499 workers	500 workers or more
All workers	441,656	228,842	212,814	121,462	91,351
All workers excluding sales	376,965	190,079	186,886	100,531	86,355
White-collar occupations	226,646	115,168	111,478	58,067	53,412
Professional specialty and technical occupations	47,111	17,027	30,084	9,812	20,272
Professional specialty occupations	27,073	9,936	17,137	7,186	9,951
Technical occupations	20,038	7,090	12,948	2,626	10,322
Executive, administrative, and managerial occupations	28,584	16,343	12,242	6,573	5,669
Sales occupations	64,691	38,763	25,927	20,931	4,996
Administrative support including clerical occupations	86,260	43,035	43,225	20,751	22,474
White-collar excluding sales	161,955	76,404	85,551	37,135	48,416
Blue-collar occupations	156,994	76,277	80,717	48,343	32,375
Precision production, craft, and repair occupations	57,864	38,650	19,214	7,704	11,510
Machine operators, assemblers, and inspectors	24,365	8,252	16,113	8,921	7,191
Transportation and material moving occupations	31,290	14,176	17,114	14,363	2,751
Handlers, equipment cleaners, helpers, and laborers	43,475	15,199	28,276	17,353	-
Service occupations	58,016	37,398	20,618	15,053	5,565

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 occupation and occupational levels may include data for categories not shown separately. Because of rounding, sums of individual items may not equal totals.

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, which was based on the type of data to be produced, had to be developed before data collection could begin.

Survey scope

This survey of the Salt Lake City-Ogden, UT Metropolitan Statistical Area covered establishments employing workers¹ 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 all industries in this survey and for State and local governments, the establishment was usually at a single physical location.

Sampling frame

The list of establishments from which the survey sample was selected (the sampling frame) was developed from the State unemployment insurance reports for the Rochester, NY Metropolitan Statistical Area (March 1995). The sampling frame was reviewed prior to the survey and, when necessary, missing establishments were added.

¹If an establishment had at least one employee at the time data were collected, it was in-scope for the survey. In theory, any sampled establishment in the universe could have one or more employees when the data are actually collected.

Sample design

The sample design for this survey area was a two stage probability sample of detailed occupations. 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. Weights were applied to each establishment when the data were tabulated so that it represents similar units (by industry and employment size) in the economy which were not selected for collection. 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

Numerous procedures were developed for the actual collection of data from survey respondents.

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 company 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 company 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 company 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>
0-49	4
50-99	8
100-249	10
250-499	12
500-999	16
1,000+	20

NOTE: If the number of employees in an establishment was less than four, then the number of company jobs selected would be equal to the number of employees.

The second step of the process entailed classifying the selected jobs into occupations based on their duties. The COMP2000 occupational classification system is based on the 1990 Census of Population. A selected company 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, classification was based on the primary duty.

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 workers, rather than solely on hours worked. Finally, the worker was identified as being in a union job if: 1) a labor organization was recognized as the bargaining agent for all work-

ers in the occupation; 2) wage and salary rates were determined through collective bargaining or negotiations; and 3) settlement terms, which must include earnings provisions and may include benefit provisions, were embodied in a signed, mutually binding collective bargaining agreement. If these conditions were not met, the worker's job was classified as nonunion.

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 the Salt Lake City 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, is an attempt to account for the effect of supervisory duties. It is considered experimental. The 10 factors were:

- Knowledge
- Supervisory controls
- 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 differs 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 the 10 factors were recorded and totaled. The total determines the overall level of the occupation. 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 General 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.

In prior test surveys, wage data collected 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 supervisory controls, 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.

Reference period

The survey was collected in July and August 1996. 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, and
- 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, and
- Payments made by third parties (e.g., tips, bonuses given by manufacturers to department store salespeople, referral incentives in real estate).

To calculate earnings per hour worked, data on work schedules were also collected. For hourly workers, scheduled hours worked per week were recorded. Because salaried workers 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, 13.9 percent 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. When a sampled occupation was considered a refusal and could not be classified into a major occupational group, nonresponse adjustments were made for that occupation in the service occupational group.

Establishments which were determined to be out of business or outside the scope of the survey (4.7 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

Weights, adjusted for nonresponse, were multiplied by the wage rate of each establishment/occupation, which itself was the average wage of all workers in the occupation. The resulting products were aggregated and then divided by the sum of the weighted occupational employments to obtain the data series contained in the tables in the bulletin.

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 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.

The standard error can be used to calculate a “confidence interval” around a sample estimate. For example, table 1 shows that mean hourly earnings for all workers was \$12.77 per hour. Appendix Table 2 shows a standard error of 2.6 percent for this estimate. Thus, at the 95-percent level, the confidence interval for this estimate is \$12.11 to \$13.43 (\$12.77 plus and minus 2 times 2.6 percent times \$12.77). If all possible samples were selected to estimate the population value, the interval from each sample would include the true population value approximately 95 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 tested in Rochester 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 high response rate, the extensive training of the field economists who gathered the survey data by personal visit, computer edits of the data, and detailed data review.

Table A1. Number of establishments studied by industry group and employment size, Salt Lake City, UT, July - August 1996

Industry	All workers	1 - 99 workers	100 workers or more		
			Total	100 - 499 workers	500 workers or more
All industries	294	157	137	76	61
Private industry	261	152	109	65	44
Goods-producing industries	68	39	29	14	15
Manufacturing	40	14	26	12	14
Mining	1	-	1	1	-
Construction	27	25	2	1	1
Service-producing industries	193	113	80	51	29
Transportation and public utilities	20	9	11	5	6
Wholesale and retail trade	69	44	25	22	3
Finance, insurance and real estate	22	10	12	7	5
Services	82	50	32	17	15
State and local government	33	5	28	11	17

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

Table A2. Relative standard errors of mean hourly earnings¹ for selected occupations, all workers², Salt Lake City, UT, July - August 1996

Occupation ³	All industries	Private industry	State and local government
All workers	2.6%	3.3%	3.6%
All workers excluding sales	2.4	2.9	3.6
White-collar occupations	3.3	4.2	4.3
Professional specialty and technical occupations	3.4	5.0	-
Professional specialty occupations	3.3	4.8	-
Engineering occupations	5.1	5.2	-
Registered nurses	4.1	4.3	-
Technical occupations	5.6	5.9	-
Executive, administrative, and managerial occupations	4.9	6.0	-
Financial managers	25.9	27.6	-
Managers and administrators, N.E.C.	7.1	7.7	-
Management related occupations, N.E.C.	7.4	7.1	-
Sales occupations	18.4	18.4	-
Supervisors, sales occupations	53.8	53.8	-
Sales occupations, other business services	16.0	16.0	-
Sales workers, other commodities	5.6	5.6	-
Cashiers	1.8	1.8	-
Sales support occupations, N.E.C.	13.1	13.1	-
Administrative support including clerical occupations	5.2	6.0	-
Secretaries	6.4	6.3	-
Receptionists	3.6	4.2	-
Order clerks	15.4	15.4	-
Bookkeepers, accounting and auditing clerks	32.5	33.2	-
Traffic, shipping and receiving clerks	5.3	5.4	-
Stock and inventory clerks	10.5	10.5	-
Investigators and adjusters except insurance	8.0	8.0	-
General office clerks	4.7	5.0	-
Administrative support occupations, N.E.C.	3.5	3.7	-
White-collar occupations excluding sales	4.2	5.1	4.3
Blue-collar occupations	4.7	4.8	-
Precision production, craft, and repair occupations	3.8	3.9	-
Mechanics and repairers, N.E.C. ...	10.2	10.2	-
Machine operators, assemblers, and inspectors	6.3	6.4	-
Miscellaneous machine operators, N.E.C.	6.7	6.7	-
Production inspectors, checkers and examiners	9.6	9.6	-
Transportation and material moving occupations	5.9	6.5	-
Truck drivers	6.9	7.0	-
Handlers, equipment cleaners, helpers, and laborers	40.8	43.1	-
Stock handlers and baggers	12.0	12.0	-
Freight, stock, and material handlers, N.E.C.	11.5	11.5	-
Hand packers and packagers	7.4	7.4	-
Laborers except construction, N.E.C.	11.4	-	-
Service occupations	4.7	4.0	5.5
Protective service occupations	8.7	7.8	-
Food service occupations	5.2	5.4	-
Waiters and waitresses	4.0	4.0	-
Cooks	10.5	11.1	-
Kitchen workers, food preparation	7.8	-	-

See footnotes at end of table.

Table A2. Relative standard errors of mean hourly earnings¹ for selected occupations, all workers², Salt Lake City, UT, July - August 1996 — Continued

Occupation ³	All industries	Private industry	State and local government
Food preparation occupations, N.E.C.	6.8%	7.7%	—
Health service occupations	3.3	3.6	—
Nursing aides, orderlies and attendants	3.6	3.7	—
Cleaning and building service occupations	6.5	6.8	—
Janitors and cleaners	7.7	4.3	—
Personal services occupations	13.3	—	—

¹ The relative standard error is the standard error expressed as a percent of the estimate.

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. See the technical note for a complete listing of occupations.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupation and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." Because of rounding, sums of individual items may not equal totals.

Appendix B. Occupational Classifications

NOTE: The four-digit code before each occupation title is used to classify it into one of three major groups. **White-collar** workers include those classified in Major groups A through D. **Blue-collar** workers include those classified in Major groups E through H. **Service** workers are classified in Major group K.

Major group A:

PROFESSIONAL AND TECHNICAL OCCUPATIONS

PROFESSIONAL OCCUPATIONS

ENGINEERS, ARCHITECTS, AND SURVEYORS

- A043 Architects
- A044-A059 Engineers
- A044 Aerospace Engineers
- A045 Metallurgical and Materials Engineers
- A046 Mining Engineers
- A047 Petroleum Engineers
- A048 Chemical Engineers
- A049 Nuclear Engineers
- A053 Civil Engineers
- A054 Agricultural Engineers
- A055 Electrical and Electronic Engineers
- A056 Industrial Engineers
- A057 Mechanical Engineers
- A058 Marine Engineers and Naval Architects
- A059 Engineers, n.e.c.¹
- A063 Surveyors and Mapping Scientists

MATHEMATICAL AND COMPUTER SCIENTISTS

- A064 Computer Systems Analysts and Scientists
- A065 Operations and Systems Researchers and Analysts
- A066 Actuaries
- A067 Statisticians
- A068 Mathematical Scientists, n.e.c.

NATURAL SCIENTISTS

- A069 Physicists and Astronomers
- A073 Chemists, Except Biochemists
- A074 Atmospheric and Space Scientists
- A075 Geologists and Geodesists
- A076 Physical Scientists, n.e.c.
- A077 Agricultural and Food Scientists
- A078 Biological and Life Scientists
- A079 Forestry and Conservation Scientists
- A083 Medical Scientists

HEALTH DIAGNOSING OCCUPATIONS

- A084 Physicians
- A085 Dentists
- A086 Veterinarians
- A087 Optometrists
- A088 Podiatrists
- A089 Health Diagnosing Practitioners, n.e.c.

HEALTH ASSESSMENT AND TREATING OCCUPATIONS

- A095 Registered Nurses
- A096 Pharmacists
- A097 Dietitians
- A098 Respiratory Therapists
- A099 Occupational Therapists
- A103 Physical Therapists
- A104 Speech Therapists
- A105 Therapists, n.e.c.
- A106 Physicians' Assistants

TEACHERS

¹ n.e.c. in an occupation title means not elsewhere classified.

A113-154 Teachers, College and University
A113 Earth, Environmental and Marine Science

Teachers

A114 Biological Science Teachers
A115 Chemistry Teachers
A116 Physics Teachers
A117 Natural Science Teachers, n.e.c.
A118 Psychology Teachers
A119 Economics Teachers
A123 History Teachers
A124 Political Science Teachers
A125 Sociology Teachers
A126 Social Science Teachers, n.e.c.
A127 Engineering Teachers
A128 Mathematical Science Teachers
A129 Computer Science Teachers
A133 Medical Science Teachers
A134 Health Specialties Teachers
A135 Business, Commerce and Marketing Teachers
A136 Agriculture and Forestry Teachers
A137 Art, Drama, and Music Teachers
A138 Physical Education Teachers
A139 Education Teachers
A143 English Teachers
A144 Foreign Language Teachers
A145 Law Teachers
A146 Social Work Teachers
A147 Theology Teachers
A148 Trade and Industrial Teachers
A149 Home Economics Teachers
A153 Teachers, Post Secondary, n.e.c.
A154 Post Secondary Teachers, Subject not specified
A155-163 Teachers, except College and University
A155 Prekindergarten and Kindergarten Teachers
A156 Elementary School Teachers
A157 Secondary School Teachers
A158 Teachers, Special Education
A159 Teachers, n.e.c.
A160 Substitute Teachers
A163 Vocational and Educational Counselors

LIBRARIANS, ARCHIVISTS AND CURATORS

A164 Librarians
A165 Archivists and Curators

SOCIAL SCIENTISTS AND URBAN PLANNERS

A166 Economists
A167 Psychologists
A168 Sociologists
A169 Social Scientists, n.e.c.
A173 Urban Planners

SOCIAL, RECREATION, AND RELIGIOUS WORKERS

A174 Social Workers
A175 Recreation Workers
A176 Clergy
A177 Religious Workers, n.e.c.

LAWYERS AND JUDGES

A178 Lawyers
A179 Judges

WRITERS, AUTHORS, ENTERTAINERS AND ATHLETES

A183 Authors
A184 Technical Writers
A185 Designers
A186 Musicians and Composers
A187 Actors and Directors
A188 Painters, Sculptors, Craft-Artists, and Artist Print-Makers
A189 Photographers
A193 Dancers
A194 Artists, Performers, and Related Workers, n.e.c.
A195 Editors and Reporters
A197 Public Relations Specialists
A198 Announcers
A199 Athletes
A999 Professional Occupations, n.e.c.

TECHNICAL AND RELATED OCCUPATIONS

HEALTH TECHNOLOGISTS AND TECHNICIANS

A203 Clinical Laboratory Technologists and Technicians
A204 Dental Hygienists
A205 Health Record Technologists and Technicians
A206 Radiologic Technicians
A207 Licensed Practical Nurses
A208 Health Technologists and Technicians, n.e.c.

ENGINEERING AND RELATED TECHNOLOGISTS AND TECHNICIANS

A213 Electrical and Electronic Technicians
A214 Industrial Engineering Technicians
A215 Mechanical Engineering Technicians
A216 Engineering Technicians, n.e.c.
A217 Drafters
A218 Surveying and Mapping Technicians

SCIENCE TECHNICIANS

A223 Biological Technicians
A224 Chemical Technicians
A225 Science Technicians, n.e.c.

MISCELLANEOUS TECHNICIANS

A226 Airplane Pilots and Navigators
A227 Air Traffic Controllers
A228 Broadcast Equipment Operators
A229 Computer Programmers
A233 Tool Programmers, Numerical Control
A234 Legal Assistants
A235 Technical and Related Occupations, n.e.c.

Major group B:

**EXECUTIVE, ADMINISTRATIVE, AND
MANAGERIAL OCCUPATIONS**

B003 Legislators
B004 Chief Executives and General Administrators,
Public Administration
B005 Administrators and Officials, Public Admini-
stration
B007 Financial Managers
B008 Personnel and Labor Relations Managers
B009 Purchasing Managers
B013 Managers; Marketing, Advertising and Public
Relations
B014 Administrators, Education and Related Fields
B015 Managers, Medicine and Health
B016 Postmasters and Mail Superintendents
B017 Managers, Food Serving and Lodging Estab-
lishments
B018 Managers, Properties and Real Estate
B019 Funeral Directors
B021 Managers, Service Organizations, n.e.c.
B022 Managers and Administrators, n.e.c.

MANAGEMENT RELATED OCCUPATIONS

B023 Accountants and Auditors
B024 Underwriters
B025 Other Financial Officers
B026 Management Analysts
B027 Personnel, Training, and Labor Relations
Specialists
B028 Purchasing Agents and Buyers, Farm Products
B029 Buyers, Wholesale and Retail Trade, Except
Farm Products
B033 Purchasing Agents and Buyers, n.e.c.
B034 Business and Promotion Agents

B035 Construction Inspectors
B036 Inspectors and Compliance Officers, Except
Construction

B037 Management Related Occupations, n.e.c.

Major group C:

SALES OCCUPATIONS

C243 Supervisors: Sales Occupations

**FINANCE AND BUSINESS SERVICES, SALES
REPRESENTATIVES**

C253 Insurance Sales Occupations
C254 Real Estate Sales Occupations
C255 Securities and Financial Services Sales Occu-
pations
C256 Advertising and Related Sales Occupations
C257 Sales Occupations, Other Business Services

**SALES REPRESENTATIVES, COMMODITIES
EXCEPT RETAIL**

C258 Sales Engineers
C259 Sales Representatives; Mining, Manufactur-
ing, and Wholesale

**RETAIL AND PERSONAL SERVICES SALES
WORKERS**

C263 Sales Workers, Motor Vehicles and
Boats
C264 Sales Workers, Apparel
C265 Sales Workers, Shoes
C266 Sales Workers, Furniture and Home Furnish-
ings
C267 Sales Workers, Radio, TV, Hi-Fi, and Appli-
ances
C268 Sales Workers, Hardware and Building Sup-
plies
C269 Sales Workers, Parts
C274 Sales Workers, Other Commodities
C275 Sales Counter Clerks
C276 Cashiers
C277 Street and Door-To-Door Sales Workers
C278 News Vendors

SALES RELATED OCCUPATIONS

C283 Demonstrators, Promoters, and Models, Sales
C284 Auctioneers
C285 Sales Support Occupations, n.e.c.

Major group D:

**ADMINISTRATIVE SUPPORT OCCUPATIONS,
INCLUDING CLERICAL**

**SUPERVISORS, CLERICAL AND
ADMINISTRATIVE SUPPORT**

- D303 Supervisors: General Office
- D304 Supervisors: Computer Equipment Operators
- D305 Supervisors: Financial Records Processing
- D306 Chief Communications Operators
- D307 Supervisors: Distribution, Scheduling, and Adjusting Clerks

COMPUTER EQUIPMENT OPERATORS

- D308 Computer Operators
- D309 Peripheral Equipment Operators

SECRETARIES, STENOGRAPHERS, AND TYPISTS

- D313 Secretaries
- D314 Stenographers
- D315 Typists

INFORMATION CLERKS

- D316 Interviewers
- D317 Hotel Clerks
- D318 Transportation Ticket and Reservation Agents
- D319 Receptionists
- D323 Information Clerks, n.e.c.

**RECORDS PROCESSING CLERKS, EXCEPT
FINANCIAL**

- D325 Classified-Ad Clerks
- D326 Correspondence Clerks
- D327 Order Clerks
- D328 Personnel Clerks, Except Payroll and Time-keeping
- D329 Library Clerks
- D335 File Clerks
- D336 Records Clerks, n.e.c.

FINANCIAL RECORDS PROCESSING CLERKS

- D337 Bookkeepers, Accounting and Auditing Clerks
- D338 Payroll and Timekeeping Clerks
- D339 Billing Clerks
- D343 Cost and Rate Clerks
- D344 Billing, Posting, and Calculating Machine Operators

**DUPLICATING, MAIL, AND OTHER OFFICE
MACHINE OPERATORS**

- D345 Duplicating Machine Operators
- D346 Mail Preparing and Paper Handling Machine Operators
- D347 Office Machine Operators, n.e.c.

COMMUNICATIONS EQUIPMENT OPERATORS

- D348 Telephone Operators
- D353 Communications Equipment Operators, n.e.c.

**MAIL AND MESSAGE DISTRIBUTING
OCCUPATIONS**

- D354 Postal Clerks, Except Mail Carriers
- D355 Mail Carriers, Postal Service
- D356 Mail Clerks, Except Postal Service
- D357 Messengers

**MATERIAL RECORDING, SCHEDULING, AND
DISTRIBUTING CLERKS**

- D359 Dispatchers
- D363 Production Coordinators
- D364 Traffic, Shipping, and Receiving Clerks
- D365 Stock and Inventory Clerks
- D366 Meter Readers
- D368 Weighers, Measurers, Checkers, and Samplers
- D373 Expeditors
- D374 Material Recording, Scheduling, and Distributing Clerks, n.e.c.

ADJUSTERS AND INVESTIGATORS

- D375 Insurance Adjusters, Examiners, and Investigators
- D376 Investigators and Adjusters, Except Insurance
- D377 Eligibility Clerks, Social Welfare
- D378 Bill and Account Collectors

**MISCELLANEOUS ADMINISTRATIVE SUPPORT
OCCUPATIONS**

- D379 General Office Clerks
- D383 Bank Tellers
- D384 Proofreaders
- D385 Data Entry Keyers
- D386 Statistical Clerks
- D387 Teachers' Aides
- D389 Administrative Support Occupations, n.e.c.

Major group E:

PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS

MECHANICS AND REPAIRERS

- E503 Supervisors: Mechanics and Repairers
- E505 Automobile Mechanics
- E506 Automobile Mechanic Apprentices
- E507 Bus, Truck, and Stationary Engine Mechanics
- E508 Aircraft Engine Mechanics
- E509 Small Engine Repairers
- E514 Automobile Body and Related Repairers
- E515 Aircraft Mechanics, Except Engine
- E516 Heavy Equipment Mechanic
- E517 Farm Equipment Mechanics
- E518 Industrial Machinery Repairers
- E519 Machinery Maintenance Occupations
- E523 Electronic Repairers, Communications and Industrial Equipment
- E525 Data Processing Equipment Repairers
- E526 Household Appliance and Power Tool Repairers
- E527 Telephone Line Installers and Repairers
- E529 Telephone Installers and Repairers
- E534 Heating, Air Conditioning, and Refrigeration Mechanics
- E535 Camera, Watch, and Musical Instrument Repairers
- E536 Locksmiths and Safe Repairers
- E538 Office Machine Repairers
- E539 Mechanical Controls and Valve Repairers
- E543 Elevator Installers and Repairers
- E544 Millwrights
- E547 Mechanics and Repairers, n.e.c.

SUPERVISORS, CONSTRUCTION TRADES

- E553 Supervisors: Brickmasons, Stonemasons, and Tilesetters
- E554 Supervisors: Carpenters and Related Workers
- E555 Supervisors: Electricians and Power Transmission Installers
- E556 Supervisors: Painters, Paperhangers, and Plasterers
- E557 Supervisors: Plumbers, Pipefitters, and Steamfitters
- E558 Supervisors: Construction Trades, n.e.c.

CONSTRUCTION TRADES OCCUPATIONS

- E563 Brickmasons and Stonemasons
- E564 Brickmason and Stonemason Apprentices
- E565 Tile Setters, Hard and Soft
- E566 Carpet Installers
- E567 Carpenters
- E569 Carpenter Apprentices

- E573 Drywall Installers
- E575 Electricians
- E576 Electrician Apprentices
- E577 Electrical Power Installers and Repairers
- E579 Painters, Construction and Maintenance
- E583 Paperhangers
- E584 Plasterers
- E585 Plumbers, Pipefitters, and Steamfitters
- E587 Plumber, Pipefitter, and Steamfitter Apprentices
- E588 Concrete and Terrazzo Finishers
- E589 Glaziers
- E593 Insulation Workers
- E594 Paving, Surfacing, and Tamping Equipment Operators
- E595 Roofers
- E596 Sheetmetal Duct Installers
- E597 Structural Metal Workers
- E598 Drillers, Earth
- E599 Construction Trades, n.e.c.

EXTRACTIVE OCCUPATIONS

- E613 Supervisors: Extractive Occupations
- E614 Drillers, Oil Well
- E615 Explosives Workers
- E616 Mining Machine Operators
- E617 Mining Occupations, n.e.c.

PRECISION PRODUCTION OCCUPATIONS

- E628 Supervisors: Production Occupations

PRECISION METAL WORKING OCCUPATIONS

- E634 Tool and Die Makers
- E635 Tool and Die Maker Apprentices
- E636 Precision Assemblers, Metal
- E637 Machinists
- E639 Machinist Apprentices
- E643 Boilermakers
- E644 Precision Grinders, Filers, and Tool Sharpeners
- E645 Patternmakers and Modelmakers, Metal
- E646 Layout Workers
- E647 Precious Stones and Metals Workers
- E649 Engravers, Metal
- E653 Sheet Metal Workers
- E654 Sheet Metal Worker Apprentices

PRECISION WOODWORKING OCCUPATIONS

- E656 Patternmakers and Modelmakers, Wood
- E657 Cabinet Makers and Bench Carpenters
- E658 Furniture and Wood Finishers

PRECISION TEXTILE, APPAREL, AND

FURNISHINGS MACHINE WORKERS

- E666 Dressmakers
- E667 Tailors
- E668 Upholsterers
- E669 Shoe Repairers

PRECISION WORKERS, ASSORTED MATERIALS

- E675 Hand Molders and Shapers, Except Jewelers
- E676 Patternmakers, Layout Workers, and Cutters
- E677 Optical Goods Workers
- E678 Dental Laboratory and Medical Appliance Technicians
- E679 Bookbinders
- E683 Electrical and Electronic Equipment Assemblers
- E684 Miscellaneous Precision Workers, n.e.c.

PRECISION FOOD PRODUCTION OCCUPATIONS

- E685 Precision Food Production Occupations, n.e.c.
- E686 Butchers and Meat Cutters
- E687 Bakers
- E688 Food Batchmakers

PRECISION INSPECTORS, TESTERS, AND RELATED WORKERS

- E689 Inspectors, Testers, and Graders
- E690 Precision Inspectors, Testers, and Related Workers, n.e.c.
- E693 Adjusters and Calibrators

PLANT AND SYSTEM OPERATORS

- E694 Water and Sewage Treatment Plant Operators
- E695 Power Plant Operators
- E696 Stationary Engineers
- E699 Miscellaneous Plant and System Operators, n.e.c.

Major group F:

MACHINE OPERATORS, ASSEMBLERS, AND INSPECTORS

METALWORKING AND PLASTIC WORKING MACHINE OPERATORS

- F703 Lathe and Turning-Machine Set-Up Operators
- F704 Lathe and Turning-Machine Operators
- F705 Milling and Planing Machine Operators
- F706 Punching and Stamping Press Operators
- F707 Rolling Machine Operators
- F708 Drilling and Boring Machine Operators

F709 Grinding, Abrading, Buffing, and Polishing Machine Operators

F713 Forging Machine Operators

F714 Numerical Control Machine Operators

F717 Fabricating Machine Operators, n.e.c.

F719 Molding and Casting Machine Operators

F723 Metal Plating Machine Operators

F724 Heat Treating Equipment Operators

WOODWORKING MACHINE OPERATORS

F726 Wood Lathe, Routing, and Planing Machine Operators

F727 Sawing Machine Operators

F728 Shaping and Joining Machine Operators

F729 Nailing and Tacking Machine Operators

PRINTING MACHINE OPERATORS

F734 Printing Press Operators

F735 Photoengravers and Lithographers

F736 Typesetters and Compositors

TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS

F738 Winding and Twisting Machine Operators

F739 Knitting, Looping, Taping, and Weaving Machine Operators

F743 Textile Cutting Machine Operators

F744 Textile Sewing Machine Operators

F745 Shoe Machine Operators

F747 Pressing Machine Operators

F748 Laundering and Dry Cleaning Machine Operators

MACHINE OPERATORS, ASSORTED MATERIALS

F753 Cementing and Gluing Machine Operators

F754 Packaging and Filling Machine Operators

F755 Extruding and Forming Machine Operators

F756 Mixing and Blending Machine Operators

F757 Separating, Filtering, and Clarifying Machine Operators

F758 Compressing and Compacting Machine Operators

F759 Painting and Paint Spraying Machine Operators

F763 Roasting and Baking Machine Operators, Food

F764 Washing, Cleaning, and Pickling Machine Operators

F765 Folding Machine Operators

F766 Furnace, Kiln, and Oven Operators, Except Food

F768 Crushing and Grinding Machine Operators

F769 Slicing and Cutting Machine Operators
F773 Motion Picture Projectionists
F774 Photographic Process Machine Operators
F777 Miscellaneous Machine Operators, n.e.c.

FABRICATORS, ASSEMBLERS, AND HAND WORKING OCCUPATIONS

F783 Welders and Cutters
F784 Solderers and Braziers
F785 Assemblers
F786 Hand Cutting and Trimming Occupations
F787 Hand Molding, Casting, and Forming Occupations
F789 Hand Painting, Coating, and Decorating Occupations
F793 Hand Engraving and Printing Occupations
F795 Miscellaneous Hand Working Occupations, n.e.c.

PRODUCTION INSPECTORS, TESTERS, SAMPLERS, AND WEIGHERS

F796 Production Inspectors, Checkers, and Examiners
F797 Production Testers
F798 Production Samplers and Weighers
F799 Graders and Sorters, Except Agricultural
F800 Hand Inspectors, n.e.c.

Major group G:

TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS

MOTOR VEHICLE OPERATORS

G803 Supervisors: Motor Vehicle Operators
G804 Truck Drivers
G806 Driver-Sales Workers
G808 Bus Drivers
G809 Taxicab Drivers and Chauffeurs
G813 Parking Lot Attendants
G814 Motor Transportation Occupations, n.e.c.

RAILROAD TRANSPORTATION OCCUPATIONS

G823 Railroad Conductors and Yardmasters
G824 Locomotive Operating Occupations
G825 Railroad Brake, Signal, and Switch Operators
G826 Rail Vehicle Operators, n.e.c.

WATER TRANSPORTATION OCCUPATIONS

G828 Ship Captains and Mates, Except Fishing Boats
G829 Sailors and Deckhands

G833 Marine Engineers
G834 Bridge, Lock, and Lighthouse Tenders

MATERIAL MOVING EQUIPMENT OPERATORS

G843 Supervisors: Material Moving Equipment Operators
G844 Operating Engineers
G845 Longshore Equipment Operators
G848 Hoist and Winch Operators
G849 Crane and Tower Operators
G853 Excavating and Loading Machine Operators
G855 Grader, Dozer, and Scraper Operators
G856 Industrial Truck and Tractor Equipment Operators
G859 Miscellaneous Material Moving Equipment Operators, n.e.c.

Major group H:

HANDLERS, EQUIPMENT CLEANERS, HELPERS, AND LABORERS

FARM, FISHING AND FORESTRY OCCUPATIONS - NONFARM SECTOR

H483 Marine Life Cultivation Workers
H484 Nursery Workers
H485 Supervisors, Agriculture-Related Workers
H486 Groundskeepers and Gardeners, Except Farm
H487 Animal Caretakers, Except Farm
H489 Inspectors, Agricultural Products
H494 Supervisors, Forestry and Logging Workers
H495 Forestry Workers, Except Logging
H496 Timber Cutting and Logging Occupations
H497 Captains and Other Officers, Fishing Vessels
H498 Fishers, Hunters, and Trappers

HELPERS, HANDLERS, AND LABORERS

H864 Supervisors: Handlers, Equipment Cleaners, and Laborers, n.e.c.
H865 Helpers, Mechanics and Repairers
H866 Helpers, Construction Trades
H867 Helpers, Surveyor
H868 Helpers, Extractive Occupations
H869 Construction Laborers
H874 Production Helpers
H875 Garbage Collectors
H876 Stevedores
H877 Stock Handlers and Baggers
H878 Machine Feeders and Offbearers
H883 Freight, Stock, and Material Handlers, n.e.c.
H885 Garage and Service Station Related Occupations
H887 Vehicle Washers and Equipment Cleaners

H888 Hand Packers and Packers
H889 Laborers, Except Construction, n.e.c.

K443 Waiters'/Waitresses' Assistants
K444 Food Preparation Occupations, n.e.c.

Major group K:

**SERVICE OCCUPATIONS, EXCEPT PRIVATE
HOUSEHOLD**

PROTECTIVE SERVICE OCCUPATIONS

K413 Supervisors: Firefighting and Fire Prevention
Occupations
K414 Supervisors: Police and Detectives
K415 Supervisors: Guards
K416 Fire Inspection and Fire Prevention Occupa-
tions
K417 Firefighting Occupations
K418 Police and Detectives, Public Service
K423 Sheriffs, Bailiffs, and Other Law Enforcement
Officers
K424 Correctional Institution Officers
K425 Crossing Guards
K426 Guards and Police, Except Public Service
K427 Protective Service Occupations, n.e.c.

FOOD SERVICE OCCUPATIONS

K433 Supervisors: Food Preparation and Service
Occupations
K434 Bartenders
K435 Waiters and Waitresses
K436 Cooks
K438 Food Counter, Fountain, and Related Occu-
pations
K439 Kitchen Workers, Food Preparation

HEALTH SERVICE OCCUPATIONS

K445 Dental Assistants
K446 Health Aides, Except Nursing
K447 Nursing Aides, Orderlies, and Attendants

**CLEANING AND BUILDING SERVICE
OCCUPATIONS**

K448 Supervisors: Cleaning and Building Service
Workers
K449 Maids and Housemen
K453 Janitors and Cleaners
K454 Elevator Operators
K455 Pest Control Occupations

PERSONAL SERVICE OCCUPATIONS

K456 Supervisors: Personal Service Occupations
K457 Barbers
K458 Hairdressers and Cosmetologists
K459 Attendants, Amusement and Recreation Fa-
cilities
K461 Guides
K462 Ushers
K463 Public Transportation Attendants
K464 Baggage Porters and Bellhops
K465 Welfare Service Aides
K467 Early Childhood Teacher's Assistants
K468 Child Care Workers, n.e.c.
K469 Service Occupations, n.e.c.

Appendix C. Generic Leveling Criteria

Below are the 10 criteria for generic leveling occupations. The description of each level within a factor is included. An example using these criteria for leveling a job follows in appendix D.

Knowledge measures the nature and extent of information or facts which the workers must understand to do acceptable work (e.g., steps, procedures, practices, rules, policies, theories, principles, and concepts) and the nature and extent of the skills needed to apply those knowledges. To be used as a basis for selecting a level under this factor, a knowledge must be required and applied.

1. Knowledge of simple, routine, or repetitive tasks or operations which typically includes following step-by-step instructions and requires little or no previous training or experience;

OR

Skill to operate simple equipment or equipment which operates repetitively, requiring little or no previous training or experience;

OR

Equivalent knowledge and skill.

2. Knowledge of basic or commonly-used rules, procedures, or operations which typically requires some previous training or experience;

OR

Basic skill to operate equipment requiring some previous training or experience, such as keyboard equipment;

OR

Equivalent knowledge and skill.

3. Knowledge of a body of standardized rules, procedures, operations, good services, tools, or equipment requiring considerable training and experience to perform the full range of standard clerical assignments and resolve recurring problems;

OR

Skill, acquired through considerable training and experience, to operate and adjust varied equipment for purposes such as performing numerous standardized tests or operations;

OR

Equivalent knowledge and skill.

4. Knowledge of an extensive body of rules, procedures, operations, products or services requiring extended training and experience to perform a wide variety of interrelated or nonstandard procedural assignments and resolve a wide range of problems;

OR

Practical knowledge of standard procedures in a technical field, requiring extended training or experience, to perform such work as: adapting equipment when this requires considering the functioning characteristics of equipment; interpreting results of tests based on previous experience and observations (rather than directly reading instruments or other measures); or extracting information from various sources when this requires considering the applicability of information and the characteristics and quality of the sources;

OR

Comprehensive knowledge of a blue-collar skill, usually acquired through a formal apprenticeship.

OR

Equivalent knowledge and skill.

5. Knowledge (such as would be acquired through a pertinent baccalaureate educational program or its equivalent in experience, training, or independent study) of basic principles, concepts, and methodology of a professional or administrative occupation, and skill in applying this knowledge in carrying out elementary assignments, operations, or procedures;

OR

In addition to the practical knowledge of standard procedures in Level 1-4, practical knowledge of technical methods to perform assignments such as carrying out limited projects which involves use of specialized, complicated techniques;

OR

Advanced knowledge of a blue-collar skill to solve unusually complex problems;

OR

Equivalent knowledge and skill.

6. Knowledge of the principles, concepts, and methodology of a professional or administrative occupation as described at Level 1-5 which has been either: (a) supplemented by skill gained through job experience to permit independent performance of recurring assignments, or (b) supplemented by expanded professional or administrative knowledge gained through relevant graduate study or experience, which has provided skill in carrying out assignments, operations, and procedures in the occupation which are significantly more difficult and complex than those covered by Level 1-5;

OR

Practical knowledge of a wide range of technical methods, principles, and practices similar to a narrow area of a professional field, and skill in applying this knowledge to such assignments as the design and planning of difficult, but well-precedented projects;

OR

Equivalent knowledge and skill.

7. Knowledge of a wide range of concepts, principles, and practices in a professional or administrative occupation, such as would be gained through extended graduate study or experience, and skill in applying this knowledge to difficult and complex work assignments;

OR

A comprehensive, intensive, practical knowledge of a technical field and skill in applying this knowledge to the development of new methods, approaches, or procedures;

OR

Equivalent knowledge and skill.

8. Mastery of a professional or administrative field to:

Apply experimental theories and new developments to problems not susceptible to treatment by accepted methods;

OR

Make decisions or recommendations significantly changing, interpreting, or developing important public policies or programs;

OR

Equivalent knowledge or skill.

9. Mastery of a professional field to generate and develop new hypotheses and theories;

OR

Equivalent knowledge and skill.

Supervision Received covers the nature and extent of direct or indirect controls exercised by the supervisor, the employee's responsibility and the review of completed work. Controls are exercised by the supervisor in the way assignments are made, instructions are given to the employee, priorities and deadlines are set, and objectives and boundaries are defined. Responsibility of the employee depends upon the extent to which the employee is expected to develop the sequence and timing of various aspects of the work, to modify or recommend modification of instructions, and to participate in establishing priorities and defining objectives. The degree of review of completed work depends upon the nature and extent of the review, e.g., close and detailed review of each phase of the assignment; detailed review of the finished assignment; spot-check of finished work for accuracy; or review only for adherence to policy.

1. For both one-of-a-kind and repetitive tasks the supervisor makes specific assignments that are accompanied by clear, detailed, and specific instructions.

The employee works as instructed and consults with the supervisor as needed on all matters not specifically covered in the original instructions or guidelines.

For all positions the work is closely controlled. For some positions, the control is through the structured nature of the work itself; for others, it may be controlled by the circumstances in which it is performed. In some situations, the supervisor maintains control through review of the work which may include checking progress or reviewing completed work for accuracy, adequacy, and adherence to instructions and established procedures.

2. The supervisor provides continuing or individual assignments by indicating generally what is to be done, limitations, quality and quantity expected, deadlines, and priority of assignments. The supervisor provides additional, specific instructions for new, difficult, or unusual assignments including suggested work methods or advice on source material available.

The employee uses initiative in carrying out recurring assignments independently without specific instruction, but refers deviations, problems, and unfamiliar situations not covered by instructions to the supervisor for decision or help.

The supervisor assures that finished work and methods used are technically accurate and in compliance with instructions or established procedures. Review of the work increases with more difficult assignments if the employee has not previously performed similar assignments.

3. The supervisor makes assignments by defining objectives, priorities, and deadlines; and assists employee with unusual situations which do not have clear precedents.

The employee plans and carries out the successive steps and handles problems and deviations in the work assignment in accordance with instructions, policies, previous training, or accepted practices in the occupation.

Completed work is usually evaluated for technical soundness, appropriateness, and conformity to policy and requirements. The methods used in arriving at the end results are not usually reviewed in detail.

4. The supervisor sets the overall objectives and resources available. The employee and supervisor, in consultation, develop the deadlines, projects, and work to be done.

At this level, the employee, having developed expertise in the line of work, is responsible for planning and carrying out the assignment; resolving most of the conflicts which arise; coordinating the work with others as necessary; and interpreting policy on own initiative in terms of established objectives. In some assignments, the employee also determines the approach to be taken and the methodology to be used. The employee keeps the supervisor informed of progress, potentially controversial matters, or far-reaching implications.

Completed work is reviewed only from an overall standpoint in terms of feasibility, compatibility with other work, or effectiveness in meeting requirements or expected results.

5. The supervisor provides administrative direction with assignments in terms of broadly defined missions or functions.

The employee has responsibility for planning, designing, and carrying out programs, projects, studies, or other work independently.

Results of the work are considered as technically authoritative and are normally accepted without significant change. If the work should be reviewed, the review concerns such matters as fulfillment of program objectives, effect of advice and influence of the overall program, or the contribution to the advancement of technology. Recommendations for new projects and alteration of objectives are usually evaluated for such considerations as availability of funds and other resources, broad program goals or priorities.

Guidelines covers the nature of guidelines and the judgment needed to apply them. Guides used in General Schedule occupations include, for example: desk manuals, established procedures and policies, traditional practices, and reference materials such as dictionaries, style manuals, engineering handbooks, and the pharmacopoeia.

Individual jobs in different occupations vary in the specificity, applicability and availability of the guidelines for performance of assignments. Consequently, the constraints and judgmental demands placed upon employees also vary. For example, the existence of specific instructions, procedures, and policies may limit the opportunity of the employee to make or recommend decisions or actions. However, in the absence of procedures or under broadly stated objectives, employees in some occupations may use considerable judgment in researching literature and developing new methods.

Guidelines should not be confused with the knowledges described under Factor 1, Knowledge. Guidelines either provide reference data or impose certain constraints on the use of knowledges. For example, in the field of medical technology, for a particular diagnosis there may be three or four standardized tests set forth in a technical manual. A medical technologist is expected to know these diagnostic tests. However, in a given laboratory the policy may be to use only one of the tests; or the policy may state specifically under what conditions one or the other of these tests may be used.

1. Specific, detailed guidelines covering all important aspects of the assignment are provided to the employee.

The employee works in strict adherence to the guidelines; deviations must be authorized by the supervisor.

2. Procedures for doing the work have been established and a number of specific guidelines are available.

The number and similarity of guidelines and work situations requires the employee to use judgment in locating and selecting the most appropriate guidelines, references, and procedures for application, and in making minor deviations to adapt the guidelines in specific cases. At this level, the employee may also determine which of several

established alternatives to use. Situations to which the existing guidelines cannot be applied or significant proposed deviations from the guidelines are referred to the supervisor.

3. Guidelines are available, but are not completely applicable to the work or have gaps in specificity.

The employee uses judgment in interpreting and adapting guidelines such as agency policies, regulations, precedents, and work directions for application to specific cases or problems. The employee analyzes results and recommends changes.

4. Administrative policies and precedents are applicable but are stated in general terms. Guidelines for performing the work are scarce or of limited use.

The employee uses initiative and resourcefulness in deviating from traditional methods or researching trends and patterns to develop new methods, criteria, or proposed new policies.

5. Guidelines are broadly stated and nonspecific, e.g., broad policy statements and basic legislation which require extensive interpretation.

The employee must use judgment and ingenuity in interpreting the intent of the guides that do exist and in developing applications to specific areas of work. Frequently, the employee is recognized as a technical authority in the development and interpretation of guidelines.

Complexity covers the nature, number, variety, and intricacy of tasks, steps, processes, or methods in the work performed; the difficulty in identifying what needs to be done; and the difficulty and originality involved in performing the work.

1. The work consists of tasks that are clear-cut and directly related.

There is little or no choice to be made in deciding what needs to be done.

Actions to be taken or responses to be made are readily discernible. The work is quickly mastered.

2. The work consists of duties that involve related steps, processes, or methods.

The decision regarding what needs to be done involves various choices requiring the employee to recognize the existence of and differences among a few easily recognizable situations.

Actions to be taken or responses to be made differ in such things as the source of information, the kind of transactions or entries, or other differences of a factual nature.

3. The work includes various duties involving different and unrelated processes and methods.

The decision regarding what needs to be done depends upon the analysis of the subject, phase, or issues involved in each assignment, and the chosen course of action may have to be selected from many alternatives.

The work involves conditions and elements that must be identified and analyzed to discern interrelationships.

4. The work typically includes varied duties requiring many different and unrelated processes and methods such as those relating to well-established aspects of an administrative or professional field.

Decisions regarding what needs to be done include the assessment of unusual circumstances, variations in approach, and incomplete or conflicting data.

The work requires making many decisions concerning such things as the interpreting of considerable data, planning of the work, or refining the methods and techniques to be used.

5. The work includes varied duties requiring many different and unrelated processes and methods applied to a broad range of activities or substantial depth of analysis, typically for an administrative or professional field.

Decisions regarding what needs to be done include major areas of uncertainty in approach, methodology, or interpretation and evaluation processes resulting from such elements as continuing changes in program, technological developments, unknown phenomena, or conflicting requirements.

The work requires originating new techniques, establishing criteria, or developing new information.

6. The work consists of broad functions and processes of an administrative or professional field. Assignments are characterized by breadth and intensity of effort and involve several phases being pursued concurrently or sequentially with the support of others within or outside of the organization.

Decisions regarding what needs to be done include largely undefined issues and elements, requiring extensive probing and analysis to determine the nature and scope of the problems.

The work requires continuing efforts to establish concepts, theories, or programs, or to resolve unyielding problems.

Scope and Effect covers the relationship between the nature of the work, i.e., the purpose, breadth, and depth of the assignment, and the effect of work products or services both within and outside the organization.

Effect measures such things as whether the work output facilitates the work of others, provides timely services of a personal nature, or impacts on the adequacy of research conclusions. The concept of effect alone does not provide sufficient information to properly understand and evaluate the impact of the position. The scope of the work completes the picture, allowing consistent evaluations. Only the effect of properly performed work is to be considered.

1. The work involves the performance of specific, routine operations that include a few separate tasks or procedures.

The work product or service is required to facilitate the work of others; however, it has little impact beyond the immediate organizational unit or beyond the timely provision of limited services to others.

2. The work involves the execution of specific rules, regulations, or procedures and typically comprises a complete segment of an assignment or project of broader scope.

The work product or service affects the accuracy, reliability, or acceptability of further processes or services.

3. The work involves treating a variety of conventional problems, questions, or situations in conformance with established criteria.

The work product or service affects the design or operation of systems, programs, or equipment; the adequacy of such activities as field investigations, testing operations, or research conclusions; or the social, physical, and economic well being of persons.

4. The work involves establishing criteria; formulating projects; assessing program effectiveness; or investigating or analyzing variety of unusual conditions, problems, or questions.

The work product or service affects a wide range of establishment activities, major activities of industrial concerns, or the operation of other organizations.

5. The work involves isolating and defining unknown conditions, resolving critical problems, or developing new theories.

The work product or service affects the work of other experts, the development of major aspects of administrative or scientific programs or missions, or the well-being of substantial numbers of people.

6. The work involves planning, developing, and carrying out vital administrative or scientific programs.

The programs are essential to the missions of the overall organization or affect large numbers of people on a long-term or continuing basis.

Personal Contact includes face-to-face contacts and telephone and radio dialogue with persons not in the supervisory chain. (NOTE: Personal contacts with supervisors are covered under Factor 2, Supervision Received. Levels described under this factor are based on what is required to make the initial contact, the difficulty of communicating with those contacted, and the setting in which the contact takes place (e.g., the degree to which the employee and those contacted recognize their relative roles and authorities).

Above the lowest level, points should be credited under this factor only for contacts which are essential for successful performance of the work and which have a demonstrable impact on the difficulty and responsibility of the work performed.

The relationship of Factors 6 (Personal Contacts) and 7 (Purpose of Contacts) presumes that the same contacts will be evaluated for both factors. Therefore, use the personal contacts which serve as the basis for the level selected for Factor 7 as the basis for selecting a level for Factor 6.

1. The personal contacts are with employees within the immediate organization, office, project, or work unit, and in related or support units;

AND/OR

The contacts are with members of the general public in very highly structured situations (e.g., the purpose of the contact and the question of with whom to deal are relatively clear). Typical of contacts at this level are purchases of admission tickets at a ticket window.

2. The personal contacts are with employees in the same overall organization, but outside the immediate organization. People contacted generally are engaged in different functions, missions, and kinds of work, e.g., representatives from various levels within the overall organizations such as headquarters, district offices, or local offices, plants, stores, or other operating units in the immediate installation.

AND/OR

The contacts are with members of the general public, as individuals or groups, in a moderately structured setting (e.g., the contacts are generally established on a routine basis, usually at the employee's work place; the exact purpose of the contact may be unclear at first to one or more of the parties; and one or more of the parties may be uninformed concerning the role and authority of other participants). Typical of contacts at this level are those with persons seeking airline reservations or with job applicants at a job information center.

3. The personal contacts are with individuals or groups from outside the employing establishment in a moderately unstructured setting (e.g., the contacts are not established on a routine basis; the purpose and extent of each contact is different and the role and authority of each party is identified and developed during the course of the contact). Typical of contacts at this level are those with persons in their capacities as attorneys; contractors; or representatives of professional organizations, the news media, or public action groups.

4. The personal contacts are with high-ranking officials from outside the employing establishment at national or international levels in highly unstructured settings (e.g., contacts are characterized by problems such as: the officials may be relatively inaccessible; arrangements may have to be made for accompanying staff members; appointments may have to be made well in advance; each party may be very unclear as to the role and authority of the other; and each contact may be conducted under different ground rules). Typical of contacts at this level are those with presidents of large national or international firms, nationally recognized representatives of the news media, presidents of national unions, members of Congress, leading representatives of foreign governments, state governors, or mayors of large cities.

Purpose of Contacts ranges from factual exchanges of information to situations involving significant or controversial issues and differing viewpoints, goals, or objectives. The personal contacts which serve as the basis for the level selected for this factor must be the same as the contacts which are the basis for the level selected for Factor 6.

1. The purpose is to obtain, clarify, or give facts or information regardless of the nature of those facts, i.e., the facts or information may range from easily understood to highly technical.

2. The purpose is to plan, coordinate, or advise on work efforts or to resolve operating problems by influencing or motivating individuals or groups who are working toward mutual goals and who have basically cooperative attitudes.

3. The purpose is to influence, motivate, convince, or question persons or groups. Those contacted may be hesitant or skeptical, so the employee must be skillful in approaching the individual or group in order to obtain the desired response.

OR

The purpose is to interrogate or control persons or groups who may be fearful, uncooperative, or dangerous. Therefore, the employee must be skillful in approaching the individual or group in order to obtain the desired effect, such as, gaining compliance with established policies and regulations by persuasion or negotiation, or gaining information by establishing rapport with a suspicious informant.

4. The purpose is to justify, defend, negotiate, or settle matters involving significant or controversial issues. Work at this level usually involves active participation in conferences, meetings, hearings, or presentations involving problems or issues of considerable consequence or importance. The persons contacted typically have diverse viewpoints, goals, or objectives requiring the employee to achieve a common understanding of the problem and a satisfactory solution by convincing them, arriving at a compromise, or developing suitable alternatives.

Physical Demands covers the requirements and physical demands placed on the employee by the work assignment. This includes physical characteristics and abilities (e.g., specific agility and dexterity requirements) and the physical exertion involved in the work (e.g., climbing, lifting, pushing, balancing, stooping, kneeling, crouching, crawling, or reaching). To some extent the frequency or intensity of physical exertion must also be considered, e.g., a job requiring prolonged standing involves more physical exertion than a job requiring intermittent standing.

1. The work is sedentary. Typically, the employee may sit comfortably to do the work. However, there may be some walking; standing; bending; carrying of light items such as papers, books, small parts; driving an automobile, etc. No special physical demands are required to perform the work.

2. The work requires some physical exertion such as long periods of standing; walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; recurring lifting of moderately heavy items such as typewriters and record boxes. The work may require specific, but common, physical characteristics and abilities such as above-average agility and dexterity.

3. The work requires considerable and strenuous physical exertion such as frequent climbing of tall ladders, lifting heavy objects over 50 pounds, crouching or crawling in restricted areas and defending oneself or others against physical attack.

Work Environment considers the risks and discomforts in the employee's physical surroundings or the nature of the work assignment and the safety regulations required. Although the use of safety precautions can practically eliminate a certain danger or discomfort, such situations typically place additional demands upon the employee in carrying out safety regulations and techniques.

1. The work environment involves everyday risks or discomforts which require normal safety precautions typical of such places as offices, meeting and training rooms, libraries, and residences or commercial vehicles, e.g., use of safe work practices with office equipment, avoidance of trips and falls, observance of fire regulations and traffic signals, etc. The work area is adequately lighted, heated, and ventilated.

2. The work involves moderate risks or discomforts which require special safety precautions, e.g., working around moving parts, carts, or machines; with contagious diseases or irritant chemicals; etc. Employees may be required to use protective clothing or gear such as masks, gowns, coats, boots, goggles, gloves, or shields.

3. The work environment involves high risks with exposure to potentially dangerous situations or unusual environmental stress which require a range of safety and other precautions, e.g., working at great heights under extreme outdoor weather conditions, subject to possible physical attack or mob conditions, or similar situations where conditions cannot be controlled.

Supervisory Duties describes the level of supervisory responsibility for a position.

1. No supervisory responsibility.

2. A nonsupervisory position. Incumbent sets the pace of work for the group and shows other workers in the group how to perform assigned tasks. Commonly performs the same work as the group, in addition to lead duties. Can also be called group leader, team leader, or lead worker.

3. Directs staff through face to face meetings. Organizational structure is not complex and internal and administrative procedures are simple. Performing the same work as subordinates is not the principal duty. Typically, this is the first supervisory level.

4. Directs staff through intermediate supervisors. Internal procedures and administrative controls are formal. Organizational structure is complex and is divided into subordinate groups that may differ from each other as to subject matter and function.

5. Directs staff through two or more subordinate supervisory levels with several subdivisions at each level. Programs are usually inter-locked on a direct and continuing basis with other organizational segments, requiring constant attention to extensive formal coordination, clearances, and procedural controls.

Appendix D. Evaluating Your Firm's Jobs

To compare data on their firm's jobs with statistics contained in this bulletin, data users need to be able to determine their jobs' work levels. Using the example of a dental hygienist, this appendix will go through the procedure for determining the work level of a particular job.

To determine the work level of a job, it must be evaluated using the generic leveling factors. With the information available, such as a written position description and other knowledge of the job, each factor must be reviewed. Comparing that information to the descriptions of each level within a factor as shown in Appendix C, the level best matching the job should be chosen and recorded. (Note that the number of levels varies by factor.)

Generic leveling: an example

Knowledge

Hygienist must have a dental hygienist license which requires 2 years of schooling and passage of a technical exam. This is a mid-level hygienist job, which means a worker must have at least 3 years of experience. The procedures are essentially the same every day, such as cleaning teeth, checking gums, and taking x-rays.

Level 4.

Supervision received

Most of the tasks are performed without supervision. For more complicated procedures, such as tooth filling, the dental hygienist assists the dentist.

Level 2.

Guidelines

A hygienist knows which procedure to use for different dental problems. Unusual situations are handled after checking with the supervisor.

Level 2.

Complexity

Each procedure performed leads to the next, for example, examining gums, scraping plaque, then cleaning teeth.

Level 2.

Scope and effect

In terms of process, the dentist's work follows the hygienist's. In terms of effect, the hygienist could give a harmful x-ray or miss plaque on the teeth.

Level 2.

Personal contacts

Patients come to the clinic or occasionally the hygienist will travel to perform work or give a talk at a school.

Level 2.

Purpose of contacts

Most of hygienist's interaction is with patients; no planning or coordination work is involved.

Level 1.

Physical demands

The work is sedentary.

Level 1.

Work environment

Hygienist must take precautions not to be exposed to x-rays, punctures, etc.

Level 2.

Supervisory duties

A dental hygienist at this level does not supervise anyone.

Level 1.

Assigning points

Once the correct level has been identified within each factor, the points associated with each level are recorded. Summing the points for all factors gives the total points for the job. Using the factors above and the table at the end of this section showing the points associated with each

level within a factor, a sample worksheet was filled out for the dental hygienist position.

identified by a point range. The 1,020 total points for the dental hygienist job puts it in level 5.

Generic leveling worksheet

Company job title: Dental Hygienist

Factor	Level	Points
Knowledge	4	550
Supervision received	2	125
Guidelines	2	125
Complexity	2	75
Scope and effect	2	75
Personal contacts	2	25
Purpose of contacts	2	20
Physical demands	1	5
Work environment	2	20
Supervisory duties	1	0
Total	5	1020

Point ranges by work level

Range of Generic Level Points

Level	Low	High
1	190	254
2	255	454
3	455	654
4	655	854
5	855	1104
6	1105	1354
7	1355	1604
8	1605	1854
9	1855	2104
10	2105	2354
11	2355	2754
12	2755	3154
13	3155	3604
14	3605	4054
15	4055	
	and up	

Determining the work level

The following chart takes the point total determined using the worksheet and converts it to an overall work level for the job. There are 15 work levels, based on those used to rank Federal civil service white-collar jobs, each

Comparing wages

Once the work level has been identified for a job, wages for that job can be compared to wages for similar jobs at the same work level. BLS publishes hourly wage rates by work level within nine major occupational groups, which are combinations of similar individual occupations. The groups and work levels available vary by area. Employers can also use the data on work levels to compare different jobs in their establishment.

Points associated with each factor level

Factor	1	2	3	4	5	6	7	8	9
Knowledge	50	200	35	550	750	950	1250	1550	1850
Supervision required	25	125	275	450	650	X	X	X	X
Guidelines	25	125	275	450	650	X	X	X	X
Complexity	25	75	150	225	325	450	X	X	X
Scope and effect	25	75	150	225	325	450	X	X	X
Personal contacts	10	25	60	110	X	X	X	X	X
Purpose of contacts	20	50	120	220	X	X	X	X	X
Physical demands	5	20	50	X	X	X	X	X	X
Work environment	5	20	50	X	X	X	X	X	X
Supervisory duties	0	251	502	1003	1504	X	X	X	X

Note: X indicates that a level is not associated with a given factor. For example, for physical demands, point levels 1, 2, and 3 are the only choices.