

Change Comes to the National Compensation Survey Locality Wage Bulletins

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The National Compensation Survey publishes annual wage bulletins for 78 areas nationwide. The current releases reflect the new occupation and industry classification systems, include small establishments, and reflect a revised method of adjusting for non-response.

The [National Compensation Survey \(NCS\)](#) is an integrated survey program that provides comprehensive measures of occupational earnings, compensation cost trends, benefit incidence, and detailed plan provisions. Products include the [Employment Cost Index \(ECI\)](#), a major economic indicator providing an index of the change in employer costs for wages and benefits; the [Employer Costs for Employee Compensation \(ECEC\)](#), which shows employer costs per hour for wages and benefits; [NCS benefits publications](#), which show the incidence of specific benefits and give data on provisions of benefit plans; and the [wage releases](#), which detail occupational wages in specific localities as well as for the Nation and the 9 census divisions.

The locality pay portion of the National Compensation Survey program publishes occupational wage estimates for 78 metropolitan areas plus several nonmetropolitan areas each year. Between 1997 and August 2006, the locality wage publications classified occupations under the Occupational Classification System (OCS), based on the 1990 Census of Population, and identified establishments by the 1987 Standard Industrial Classification (SIC) system.

The locality wage publications have recently undergone a number of major changes.¹ Beginning with the bulletins published in September 2006, the new releases reflect the following:

1. The [2000 Standard Occupational Classification \(SOC\)](#) system
2. The [2002 North American Industry Classification System \(NAICS\)](#)
3. An expanded scope of establishments
4. Imputation for temporary nonresponse situations
5. Benchmarking of estimated employment
6. Redesigned tables

New Classification Systems

The U.S. Office of Management and Budget has mandated that all Federal statistical agencies adopt the 2000 Standard Occupational Classification (SOC) system² and the 2002 version of the North American Industry Classification System (NAICS).³

The 2000 SOC system defines more than 800 detailed occupations and is designed to reflect the current occupational structure in the United States better than previous occupational systems. Detailed occupations are combined into broad occupations, broad occupations are combined into minor groups, and minor groups are then combined into major groups. This design of several levels of aggregation is intended to meet the widely varying needs of data users.

Locality wage bulletins publish all detailed and broad occupational wage estimates that meet Bureau of Labor Statistics publication criteria, as well as the wage estimates for some minor groups and all of the major groups. In addition, some tables present wage data for high-level aggregations and intermediate aggregations, as defined in the 2000 SOC Manual.⁴

The NAICS was cooperatively developed by the United States, Mexico, and Canada so that the three countries could share data and measure economic activity on a standardized basis. Starting with the September 2006 publications, NAICS classifications are being used to apply establishment weights in the locality wage surveys, replacing the 1987 Standard Industrial Classification (SIC) system. Also, establishment sample selection is currently based on NAICS. Because only one-

fifth of the NCS sample is replaced each year, some older sample members had been selected under the SIC system.⁵ The locality wage bulletins include tables providing wage data for selected NAICS sectors or aggregations.

Expanded Scope

Previous locality wage bulletins included data collected only from private industry and local government establishments employing 50 or more workers and from State government establishments employing 1 or more workers. Starting with the September 2006 bulletins, the minimum establishment size for private industry has been 1 or more workers.⁶ This change was made to provide a better representation of the economy. As a result of including establishments with 1 to 49 workers, the number of civilian workers and the number of establishments represented in the survey are greatly increased. For example, for Pittsburgh, Pennsylvania, a comparison of the December 2004 survey to the December 2005 survey shows that the number of workers represented by the survey nearly doubled (increasing from 561,000 to 1,049,100) and the number of establishments represented by the survey increased by a factor of more than 14 (from 3,528 to 52,234).⁷

Caution should be used when comparing wage estimations between surveys with the old and new scope. Private industry establishments employing 1 to 49 workers often pay their workers less than establishments employing 50 or more workers, and including these small establishments may create lower wage estimations. For example, the December 2004 survey in Pittsburgh showed an average hourly rate for all workers of \$18.33, and the December 2005 survey showed an average hourly rate for all workers of \$17.81, after the scope of the survey was broadened to include establishments having 1 to 49 workers.

Imputation For Temporary Nonresponse Of Establishments

For the first time, the locality wage program is imputing data for temporary nonresponse situations.⁸ The National Compensation Survey is voluntary, and a company official may refuse to participate in the initial survey or may be unwilling or unable to update previously collected data during a subsequent contact. For those situations where previous wage data cannot be updated, an estimate for the missing data is imputed⁹ using information obtained from similar establishments and occupations. This is the same process used to update missing data for the Employment Cost Index (ECI).¹⁰

Benchmarking Of Estimated Employment

Post stratification, also known as benchmarking, has been introduced to adjust survey sample weights so that these weights reflect the current count of employment by industry. Initial weights are derived when the sample of establishments are selected, reflecting employment distribution by industry at that time. Those weights may be up to 7 years old for the oldest panel of five sample rotation panels at the time of publication. Benchmarking adjusts those weights to reflect the employment distribution by industry for the reference date of the data.

New Tables

In addition to presenting wage data classified according to the SOC, the former locality wage tables have been redesigned and reordered, as follows:

- The work level tables have been moved to the front of the bulletin. One unique aspect of the NCS locality wage program is that it publishes data for up to 15 work levels per occupation.¹¹
- New tables combine work levels into four bands, which combine levels 1 through 4, levels 5 through 8, levels 9 through 12, and levels 13 through 15. The publication of combined levels is intended to make the wage estimates more useful to compensation analysts.
- Hourly, weekly, and annual average wages for full-time workers are now presented in a single table.
- Tables present detailed occupational data by size of establishment--specifically, those with fewer than 100 workers and those with 100 or more workers.

Locality wage bulletins also publish hourly wage percentiles to describe the distribution of hourly earnings for individual workers within each published occupation. Data are provided for the 10th, 25th, 50th, 75th, and 90th percentiles. Another set of tables present wage data for union and nonunion workers and for time and incentive workers at high-level SOC aggregations.¹²

Future Changes

The National Compensation Survey program's annual national bulletin *Occupational Wages in the United States* is scheduled to switch to SOC and NAICS in summer 2007. In addition to publishing new tables similar to those published in the locality wage bulletins, the national bulletin will present wage estimates for metropolitan and nonmetropolitan areas, not-for-profit establishments, hospitals, and first-, second-, and third-line supervisors. The 2007 census division publications will also change accordingly.

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Notes

¹ The 2006 wage releases for the Nation and the 9 census divisions, scheduled for publication in 2007, will include all changes made for the locality wage publications. Since the 1999 surveys, the wage releases for the Nation and for the census divisions have used a private industry minimum establishment size of 1 or more workers.

² *Standard Occupational Classification Manual 2000* (Executive Office of the President, Office of Management and Budget, October 2000). Available on the Internet at <http://www.bls.gov/soc/home.htm>.

³ *North American Industry Classification System, United States 2002* (Executive Office of the President, Office of Management and Budget, 2002). Available on the Internet at <http://www.bls.gov/bls/naics.htm>.

⁴ *Standard Occupational Classification Manual 2000*, pp. xvi-xvii. The NCS uses only 5 of the 6 high-level aggregations, and 10 of the 11 intermediate aggregations, excluding 55-0000, Military Specific Occupations.

⁵ A new government sample using NAICS will be fully implemented in July 2007; this means that all government data collected will be from a sample based on NAICS. By July 2008, all private industry sample members will have been selected under NAICS.

⁶ The minimum employment for local government establishments will decrease to 1 or more workers in July 2007.

⁷ These percentages are based on NCS internal data provided by the Statistical Methods Group, Office of Compensation and Working Conditions, Bureau of Labor Statistics.

⁸ For more information on weighting and nonresponse adjustments and data estimation, see Appendix A in any of the locality wage publications from September 2006 or later; available on the Internet at <http://www.bls.gov/ncs/ocs/compub.htm>.

⁹ A rate of change is applied to the previously-collected wage data to calculate a new imputed wage rate.

¹⁰ For a description of the ECI imputation process, see Song Yi, "Accounting for missing data in the Employment Cost Index," *Monthly Labor Review*, April 2006, pp. 22-27; available on the Internet at <http://www.bls.gov/opub/mlr/mlrhome.htm>.

¹¹ For a complete description of point factor leveling, see "National Compensation Survey: Guide for Evaluating Your Firm's Jobs and Pay," available on the Internet at <http://www.bls.gov/ncs/ocs/sp/ncbr0004.pdf>.

¹² A detailed list of old and new locality wage tables is available [here](#).