

Data Users Advisory Committee Meeting

November 9, 2017

Publicizing revamped Modeled Wage Estimates

Presented by: Jen Coleman



Model Wage Estimates



This presentation will cover the following topics:

- **A brief explanation of the modeled wage estimate approach**
- **Estimates included in the first release**
- **Improvements for released 2017 estimates**
- **Improvements underway for 2018 estimates**
- **Vision for moving beyond 2018**

Introduction

- The Modeled Wage Estimates provide hourly wages within geographic areas by job characteristics and levels.
- These estimates were produced by harmonizing wages from the Occupational Employment Statistics (OES) and National Compensation Survey (NCS) programs.
- Estimates were first published in May 2016, with the second publication released in May 2017.
- Currently measures of reliability are not available.



Why estimates were created

From the OES

Atlanta-Sandy Springs-
Marietta

Protective Service Occupations

Mean Hourly Wage

May 2010

\$17.18

Source: Bureau of Labor Statistics

From the NCS

Atlanta-Sandy Springs-
Gainesville

Protective Service Occupations

Mean Hourly Earnings

February 2010

\$16.98

Source: Bureau of Labor Statistics



\$17.18 or \$16.98?

Separate estimates can be confusing

How does it work?

Exploit the relative strength of each survey

Strength of OES

OES has employment by occupation and wage interval for sample of **1.2 million** establishments.

Strength of NCS

NCS has **job characteristics and work levels**

- Work status (full- and part-time)
- Bargaining Status (union and nonunion)
- Time- and incentive-based pay
- Work levels



Create Harmonized Wage Estimates

	Employment			
Hourly Earnings	OES Total	NCS Total	NCS full-time	NCS part-time
\$10.00	1,000	100	75	25
\$20.00	1,500	100	95	5
Average wage	\$16.00	\$15.00	\$15.59	\$11.67



Harmonize Estimates Using Benchmark Factors

	Employment			
Hourly Earnings	OES Total	NCS Total	NCS full-time	NCS part-time
\$10.00	1,000	10×100	10×75	10×25
\$20.00	1,500	15×100	15×95	15×5
Average wage	\$16.00	\$16.00	\$16.55	\$12.31



Harmonize Estimates Using Characteristic Proportions

	Employment			
Hourly Earnings	OES Total	NCS full-time factor	NCS full-time	NCS part-time
\$10.00	1,000	0.75	750	250
\$20.00	1,500	0.95	1,425	75
Average	\$16.00	\$16.00	\$16.55	\$12.31



Matching NCS Proportions to OES Employment

NCS Characteristic Proportion
OES Wage Interval * Occupation * Area

OES

Employment by Wage
Interval
by

Occupation
[6-digit SOC]

Area
[National,
State,
MSA/BOS]

NCS

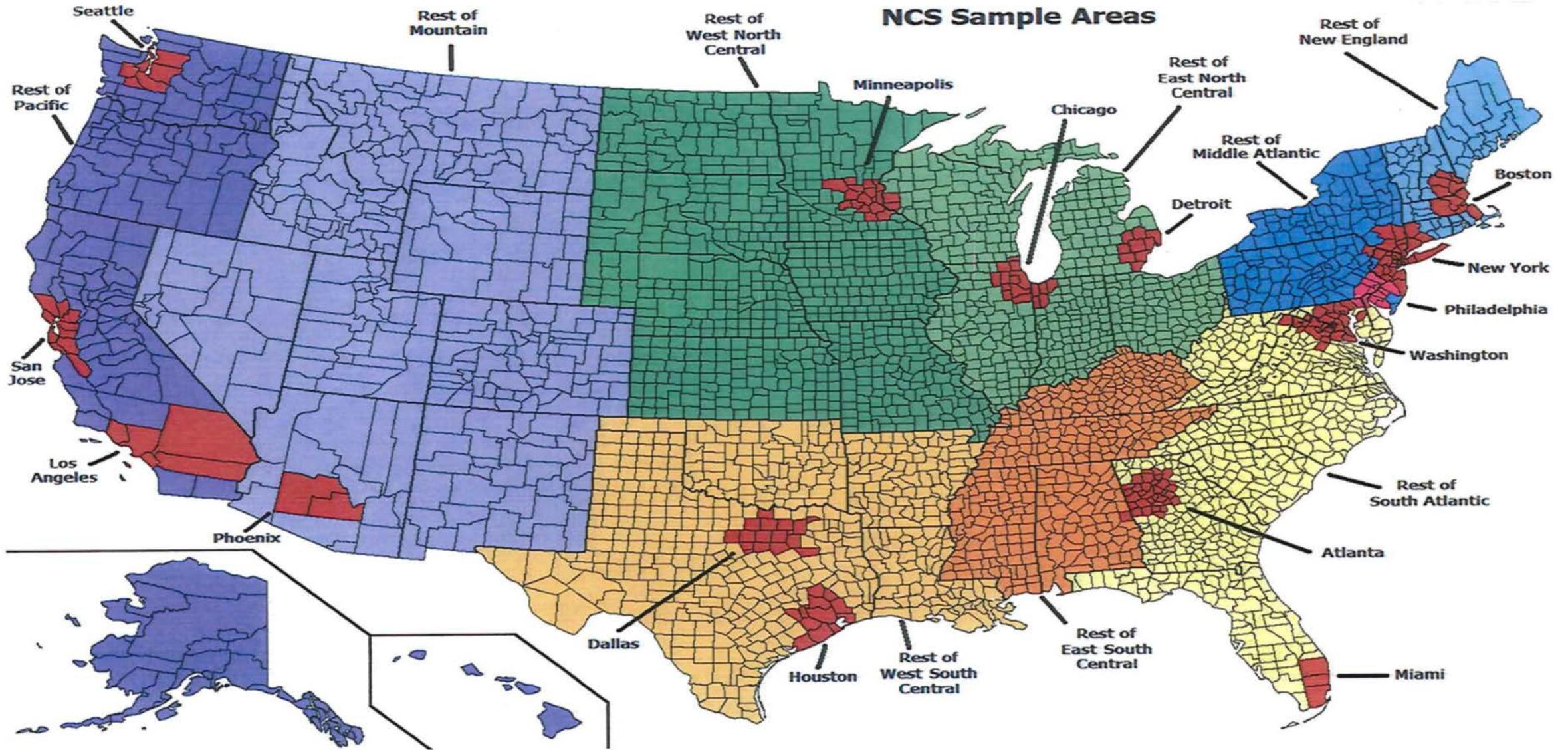
Employment and Wage Rate
for Characteristics
by

Occupation
[6-digit SOC]

Area
NCS Sample
Area



NCS Sample Areas



Publication Criteria

1. Sufficient OES data to support the estimate
2. Sufficient NCS data to support the estimate
3. Modeled wage estimate is broadly consistent with expectations



SO WHAT HAVE WE PUBLISHED

Characteristics	Reference year		
	2014	2015	2016
Total estimates	117,322	126,678	255,479
Bargaining Status	21,784	22,974	25,368
Time- and incentive- based pay	6,898	6,860	8,658
Full-time work status	57,498	63,076	74,120
Full-time work levels	45,417	50,072	59,304
Part-time work status	31,141	33,768	40,274
Part-time work levels	19,060	18,261	25,458
Areas	616	630	630
Occupations	281	284	399



Example

In 2016 there were 420 estimates published for the **Los Angeles-Long Beach-Glendale, CA** area:

- 167 all worker
- 58 bargaining status
- 10 time- and incentive-based pay
- 115 full-time work status
- 70 part-time work status



Accessing the estimates

MWE Database

Database

Database Name	Special Notice	Top Picks	Data Finder	One Screen	Multi-Screen	Tables	Text Files
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Pay

Modeled Wage Estimates

				
TOP PICKS	DATA FINDER	ONE-SCREEN DATA SEARCH	MULTI-SCREEN DATA SEARCH	TEXT FILES

BLS Data Finder 1.0

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SURVEY: Wage Modeling

- Hourly mean wage for architecture and engineering occupations, union, for all US +
- Hourly mean wage for architecture and engineering occupations, full-time, for all US +
- Hourly mean wage for architecture and engineering occupations, full-time, for all US, Level 13 +
- Hourly mean wage for architecture and engineering occupations, nonunion, for all US +
- Hourly mean wage for business and financial operations occupations, full-time, for all US +
- Hourly mean wage for computer and mathematical occupations, full-time, for all US +
- Hourly mean wage for architecture and engineering occupations, full-time, for all US, Level 04 +
- Hourly mean wage for architecture and engineering occupations, full-time, for all US, Level 05 +
- Hourly mean wage for architecture and engineering occupations, full-time, for all US, Level 12 +
- Hourly mean wage for architecture and engineering occupations, full-time, for all US, Level 06 +



Data query tools

MWE Tables

Selected occupational groups and areas:

- Job characteristics ([HTML](#)) ([PDF](#)) ([XLSX](#))
- Time- and incentive-based pay ([HTML](#)) ([PDF](#)) ([XLSX](#))
- Full-time workers by selected work levels ([HTML](#)) ([PDF](#)) ([XLSX](#))
- Part-time workers by selected work levels ([HTML](#)) ([PDF](#)) ([XLSX](#))

Complete datasets:

- 2016 ([XLSX](#))
- 2015 ([XLSX](#))
- 2014 ([XLSX](#))

Enhancements underway for 2018

- Produce and publish measures of reliability for metropolitan and balance of state areas
- Produce handbook of methods to explain methodology
- Evaluate whether “not able to be leveled” should be treated like any other level in the publication criteria and the presentation of the estimates.



Future enhancements

- Develop and implement methodology for producing measures of reliability for *states and national* estimates
- Replace Modeled Wage Estimates with more descriptive product name
- Implement more descriptive language for work levels
 - Ex. entry level, mid-level, senior level, journeyman, apprentice
- Evaluate options for increasing access to these estimates
- Market product to internal and external stakeholders
 - Ex. Human Resource groups (such as SHRM and PayScale)



Questions to consider:

- **How might the BLS present or better explain to the public the meaning of occupational wages by work levels?**
- **What user groups should be targeted as BLS seeks to brand and package this product?**
- **Are there examples of data products that the BLS should emulate or avoid as it moves forward?**



Contact Information

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