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Occupational Employment and Wages in Houston-The Woodlands-Sugar Land, May 2015

Workers in the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area had an average (mean) hourly wage of \$24.92 in May 2015, about 7 percent above the nationwide average of \$23.23, according to the U.S. Bureau of Labor Statistics. Regional Commissioner Stanley W. Suchman noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 12 of the 22 major occupational groups, including architecture and engineering; life, physical, and social science; and management. Six groups had wages that were measurably lower than their respective national averages; included in this grouping were building and grounds cleaning and maintenance; personal care and service; and construction and extraction.

When compared to the nationwide distribution, Houston employment was more highly concentrated in 6 of the 22 occupational groups including construction and extraction; architecture and engineering; and installation, maintenance, and repair. Conversely, 10 groups had employment shares significantly below their national representation, including healthcare practitioners and technical; healthcare support; and community and social service. (See [table A](#) and [box note](#) at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area, and measures of statistical significance, May 2015

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Houston-The Woodlands-Sugar Land		United States	Houston-The Woodlands-Sugar Land	Percent difference ⁽¹⁾	
Total, all occupations	100.0%	100.0%		\$23.23	\$24.92	*	7
Management	5.0	4.4	*	55.30	64.85	*	17
Business and financial operations	5.1	5.1		35.48	39.94	*	13
Computer and mathematical	2.9	2.9		41.43	43.46	*	5
Architecture and engineering	1.8	3.1	*	39.89	49.71	*	25
Life, physical, and social science	0.8	1.1	*	34.24	40.51	*	18
Community and social service	1.4	0.8	*	22.19	24.10	*	9
Legal	0.8	0.8		49.74	56.26	*	13
Education, training, and library	6.2	5.7	*	25.48	25.08		-2
Arts, design, entertainment, sports, and media	1.3	1.0	*	27.39	25.43	*	-7
Healthcare practitioners and technical	5.8	5.0	*	37.40	37.80		1
Healthcare support	2.9	2.1	*	14.19	13.62	*	-4
Protective service	2.4	2.4		21.45	20.00		-7
Food preparation and serving related	9.1	8.9	*	10.98	10.59	*	-4
Building and grounds cleaning and maintenance	3.2	2.9	*	13.02	11.15	*	-14
Personal care and service	3.1	2.8	*	12.33	10.90	*	-12

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area, and measures of statistical significance, May 2015 - Continued

Major occupational group	Percent of total employment			Mean hourly wage			Percent difference ⁽¹⁾
	United States	Houston-The Woodlands-Sugar Land		United States	Houston-The Woodlands-Sugar Land		
Sales and related	10.5	10.4		18.90	21.60	*	14
Office and administrative support.....	15.8	16.1		17.47	18.31	*	5
Farming, fishing, and forestry.....	0.3	0.1	*	12.67	12.94		2
Construction and extraction.....	4.0	6.2	*	22.88	21.62	*	-6
Installation, maintenance, and repair	3.9	4.4	*	22.11	22.64	*	2
Production	6.6	6.9	*	17.41	19.96	*	15
Transportation and material moving.....	6.9	7.2	*	16.90	19.06	*	13

(1) A positive percent difference measures how much the mean wage in Houston-The Woodlands-Sugar Land is above the national mean wage, while a negative difference reflects a lower wage.

Note: * The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group – architecture and engineering – was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Houston had 91,800 jobs in architecture and engineering, accounting for 3.1 percent of local area employment, significantly higher than the 1.8-percent national share. The local average hourly wage for this occupational group was \$49.71, about 25 percent above the national average of \$39.89.

Some of the larger detailed occupations within the architecture and engineering group included civil engineers (11,030), petroleum engineers (10,810), and mechanical engineers (8,760). Among the higher-paying jobs were petroleum engineers and chemical engineers, with mean hourly wages of \$83.31 and \$60.73, respectively. At the lower end of the wage scale were surveying and mapping technicians (\$23.20) and civil engineering technicians (\$25.10). (Detailed occupational data for the architecture and engineering group are presented in [table 1](#); for a complete listing of detailed occupations go to www.bls.gov/oes/current/oes_26420.htm.)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Houston metropolitan area, above-average concentrations of employment were found in many of the occupations within the architecture and engineering group. For instance, petroleum engineers were employed at 14.7 times the national rate in Houston, while marine engineers and naval architects were employed at 8.4 times the U.S. average. Both location quotients were among the highest in all metropolitan areas for these particular occupations. On the other hand, industrial engineers had a location quotient of 1.0 in Houston, meaning that the local employment share in this occupation matched the national average.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Texas Workforce Commission.

Notes on Occupational Employment Statistics Data

With the issuance of data for May 2015, the OES program has incorporated redefined metropolitan area definitions as designated by the Office of Management and Budget. OES data are available for 394 metropolitan areas, 38 metropolitan divisions, and 167 OES-defined nonmetropolitan areas. A listing of the areas and their definitions can be found at www.bls.gov/oes/current/msa_def.htm.

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES program produces employment and wage estimates for over 800 occupations for all industries combined in the nation; the 50 states and the District of Columbia; 432 metropolitan areas and divisions; 167 nonmetropolitan areas; and Guam, Puerto Rico, and the U.S. Virgin Islands. National estimates are also available by industry for NAICS sectors, 3-, 4-, and selected 5- and 6-digit industries, and by ownership across all industries and for schools and hospitals. OES data are available at www.bls.gov/oes/tables.htm.

OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. May 2015 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2015, November 2014, May 2014, November 2013, May 2013, and November 2012. The overall national response rate for the six panels is 73.5 percent based on establishments and 69.6 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 57.9 percent of total national employment. (Response rates are slightly lower for these estimates due to the federal shutdown in October 2013.) The sample in the Houston-The Woodlands-Sugar Land Metropolitan Statistical Area included 10,041 establishments with a response rate of 52 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The May 2015 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at www.bls.gov/soc and information about the 2012 NAICS is available at www.bls.gov/bls/naics.htm.

Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Houston-The Woodlands-Sugar Land Metropolitan Statistical Area** includes Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties in Texas.

Additional information

OES data are available on our regional web page at www.bls.gov/regions/southwest. Answers to frequently asked questions about the OES data are available at www.bls.gov/oes/oes_ques.htm. Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at www.bls.gov/oes/current/methods_statement.pdf.

Information in this release will be made available to sensory impaired individuals upon request. Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Houston-The Woodlands-Sugar Land Metropolitan Statistical Area, May 2015

Occupation ⁽¹⁾	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Architecture and engineering occupations	91,800	1.8	\$49.71	\$103,390
Architects, except landscape and naval	2,540	1.3	39.62	82,410
Landscape architects	(5)	(5)	35.62	74,080
Cartographers and photogrammetrists.....	440	1.8	36.49	75,890
Surveyors	1,890	2.1	29.88	62,140
Aerospace engineers	2,360	1.7	54.55	113,470
Biomedical engineers	270	0.6	39.08	81,300
Chemical engineers.....	4,360	6.4	60.73	126,310
Civil engineers.....	11,030	1.9	52.96	110,160
Electrical engineers	4,450	1.2	51.64	107,410
Electronics engineers, except computer	3,100	1.1	53.27	110,810
Environmental engineers.....	900	0.8	44.82	93,230
Health and safety engineers, except mining safety engineers & inspectors.....	1,550	2.9	53.99	112,300
Industrial engineers	5,100	1.0	52.87	109,970
Marine engineers and naval architects.....	1,360	8.4	56.67	117,870
Materials engineers	680	1.2	50.43	104,900
Mechanical engineers	8,760	1.5	52.27	108,720
Mining and geological engineers, including mining safety engineers	700	4.1	(5)	(5)
Nuclear engineers	(5)	(5)	40.93	85,120
Petroleum engineers	10,810	14.7	83.31	173,290
Engineers, all other	2,740	1.0	59.74	124,270
Architectural and civil drafters	4,800	2.4	33.14	68,930
Electrical and electronics drafters	1,520	2.5	40.24	83,690
Mechanical drafters	2,210	1.6	32.97	68,570
Drafters, all other.....	690	2.1	39.00	81,130
Aerospace engineering and operations technicians	(5)	(5)	32.02	66,590
Civil engineering technicians.....	2,700	1.8	25.10	52,200
Electrical and electronics engineering technicians.....	5,420	1.8	31.36	65,230
Electro-mechanical technicians.....	450	1.4	32.20	66,970
Environmental engineering technicians.....	140	0.4	33.06	68,760
Industrial engineering technicians	820	0.6	32.37	67,330
Mechanical engineering technicians	2,810	2.7	34.59	71,960
Engineering technicians, except drafters, all other	2,650	1.8	30.20	62,810
Surveying and mapping technicians.....	2,880	2.5	23.20	48,250

(1) For a complete listing of all detailed occupations in the Houston-The Woodlands-Sugar Land MSA, see www.bls.gov/oes/current/oes_26420.htm.

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimates not released.