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NOTE: This release was reissued on Friday, December 11, 2009, to correct the website address in the footnote in tables 6-10. This correction did not affect any data or analysis in the release.

EMPLOYMENT PROJECTIONS – 2008-18

Total employment is projected to increase by 15.3 million, or 10.1 percent, during the 2008-18 period, the U.S. Bureau of Labor Statistics reported today. The projections show an aging and more racially and ethnically diverse labor force, and employment growth in service-providing industries. More than half of the new jobs will be in professional and related occupations and service occupations. In addition, occupations where a postsecondary degree or award is usually required are expected to account for one-third of total job openings during the projection period. Job openings from replacement needs—those which occur when workers who retire or otherwise leave their occupations need to be replaced—are projected to be more than double the number of openings due to economic growth.

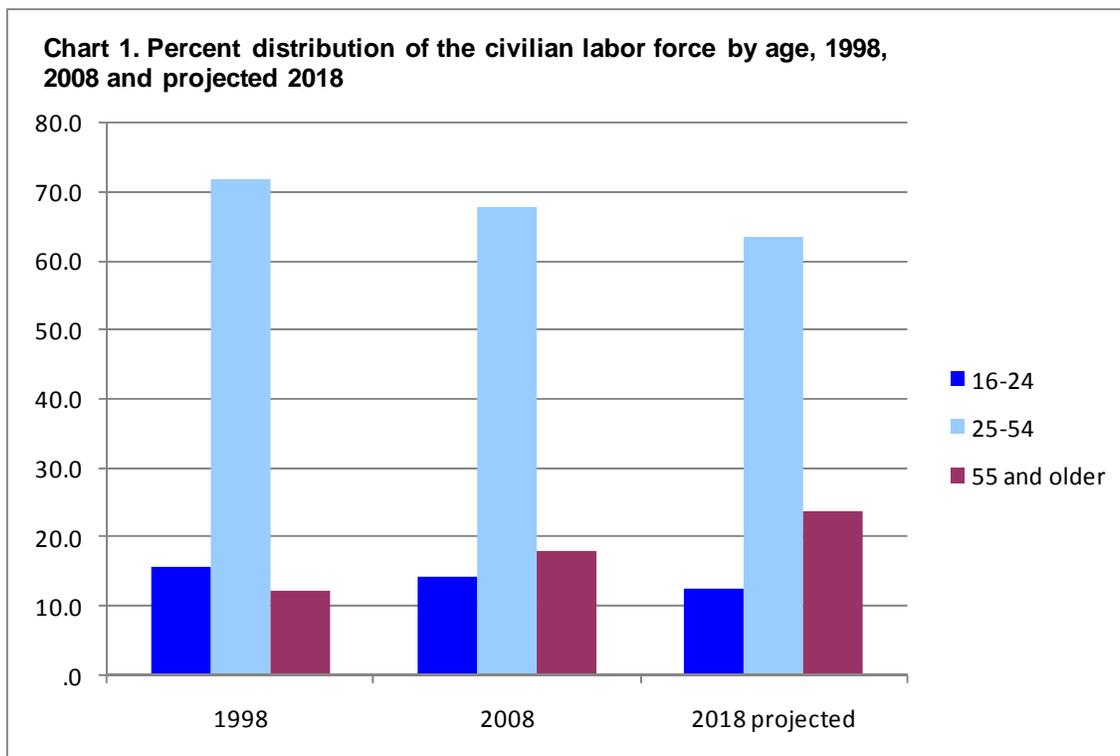
The projected growth for the 2008-18 period is larger than the increase of 10.4 million over the 1998-2008 period, or 7.4 percent. The relatively slow growth rate for the earlier 10-year period was affected by the recession which began in December 2007, and the projected growth rate is higher than would otherwise be expected because the 2008 starting point is a recession year.

This news release focuses on four areas for which BLS develops projections—labor force, industry employment, occupational employment, and education and training.

Labor Force

The civilian labor force is projected to grow by 12.6 million between 2008 and 2018, to 166.9 million persons. Slower population growth and a decreasing overall labor force participation rate are expected to contribute to a slowdown in labor force growth. The projected 8.2-percent increase for the 2008-18 period is less than the 12.1-percent growth that occurred between 1998 and 2008. (See table 1.)

As the members of the large baby boom generation grow older and continue their trend of increased labor force participation, the number of persons age 55 years and older in the labor force is expected to increase by 12.0 million, or 43.0 percent, during the 2008-18 period. Persons in the 55 years and older age group are projected to make up nearly one-quarter of the labor force in 2018. Young people (age



16-24) are expected to account for 12.7 percent of the labor force in 2018, and persons in the prime-age working group (age 25 to 54) to account for 63.5 percent of the 2018 labor force. (See chart 1.)

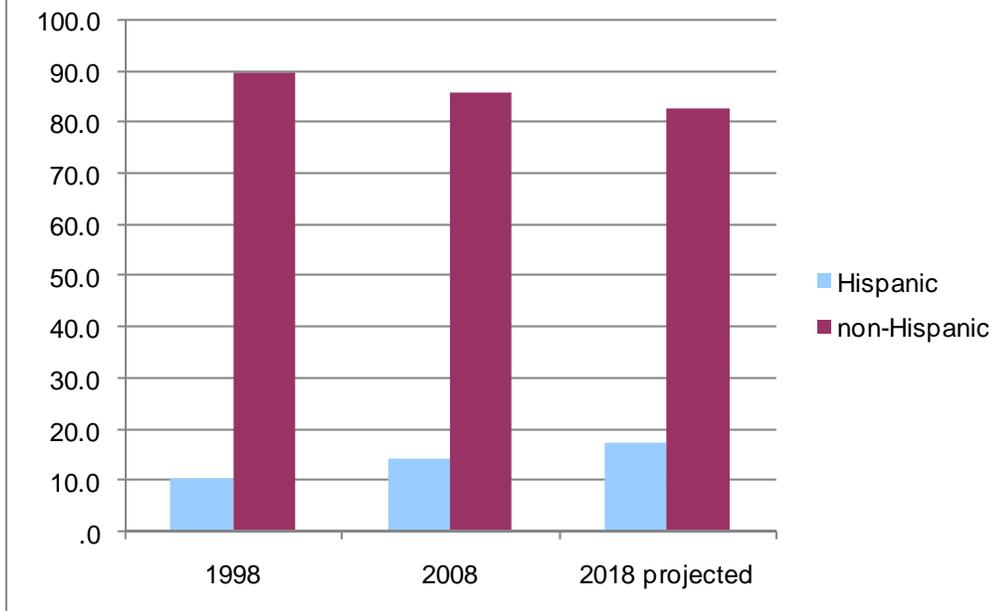
The labor force in 2018 will be more diverse. As a result of higher population growth among minorities—due to higher birth rates and increased immigration, along with higher labor force participation rates by Hispanics and Asians—the share of the labor force held by minorities is projected to increase significantly. Whites will remain the largest race group in the labor force in 2018 (79.4 percent) despite growing by just 5.5 percent between 2008 and 2018. The number of Asians in the labor force is projected to increase by 29.8 percent and the number of blacks by 14.1 percent. In 2018, Asians are projected to comprise 5.6 percent of the labor force and blacks to make up 12.1 percent.

Hispanics (who can be of any race) will join the labor force in greater numbers than non-Hispanics. The number of Hispanics in the labor force is projected to grow by 7.3 million or 33.1 percent. Their share of the labor force will expand from 14.3 percent in 2008 to 17.6 percent in 2018. In contrast, the number of persons in the labor force not of Hispanic origin is expected to grow by 4.0 percent, and their share of the labor force to decline to 82.4 percent. (See chart 2.)

Industry Employment

Projected employment growth is concentrated in the service-providing sector, continuing a long-term shift from the goods-producing sector of the economy. From 2008 to 2018, service-providing industries are projected to add 14.6 million jobs, or 96 percent of the increase in total employment. The 2 industry sectors expected to have the largest employment growth are professional and business services (4.2 million) and health care and social assistance (4.0 million). Goods-producing employment, as a whole, is expected to show virtually no growth. While employment in the construction industry is projected to

Chart 2. Percent distribution of the civilian labor force by ethnicity, 1998, 2008, and projected 2018



increase by 1.3 million, declines in manufacturing (-1.2 million) and mining (-104,000) will nearly offset this growth. By 2018, the goods-producing sector is expected to account for 12.9 percent of total jobs, down from 17.3 percent in 1998 and 14.2 percent in 2008. (See table 2 and chart 3.)

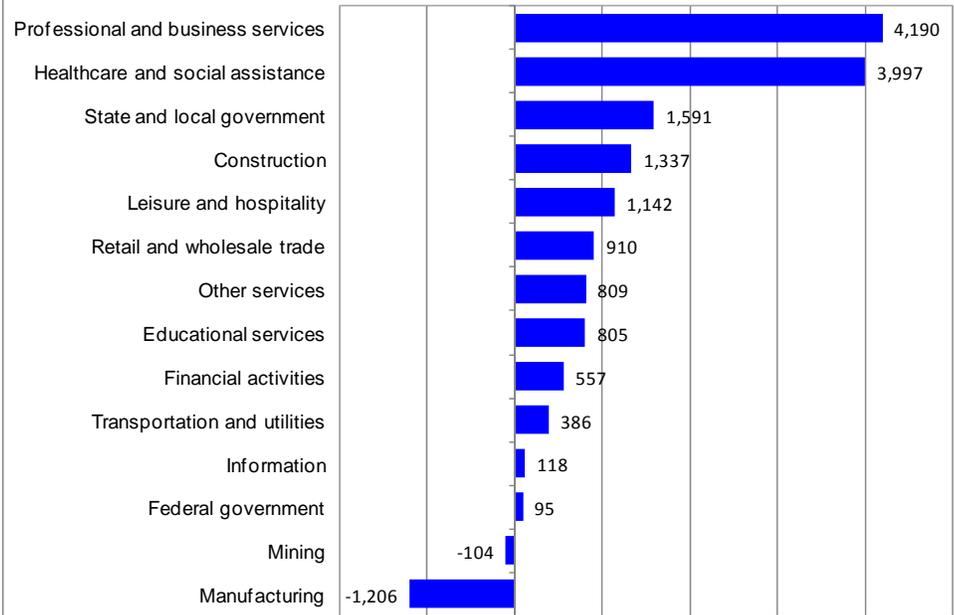
Three of the 10 detailed industries projected to have the most employment growth are in professional and business services: management, scientific, and technical consulting; computer systems design; and employment services. Altogether, these 3 industries are expected to add 2.1 million jobs. Four of the top 10 gainers are in health care and social assistance industries. Employment in offices of physicians, home health care, services for the elderly and persons with disabilities, and nursing care facilities is expected to grow by 2.0 million. (See table 3.)

Of the 10 detailed industries with the largest projected employment declines, 4 are in the manufacturing sector and 2 each are within retail trade and information. The largest decline among the detailed industries is expected to be in department stores, with a loss of 159,000 jobs, followed by manufacturers of semiconductors (-146,000) and motor vehicle parts (-101,000). (See table 4.)

Occupational Employment

Two major occupational groups—professional and related occupations and service occupations—are projected to provide more than half of the total employment growth during the 2008-18 period. Production occupations are projected to decline. The 30 detailed occupations with the largest gains in employment are expected to account for nearly half of all new jobs, and 17 of these occupations are professional and related occupations and service occupations. The detailed occupation projected to add the most jobs is registered nurses (582,000), followed by home health aides (461,000) and customer service representatives (400,000). All but 3 of the top 30 fastest-growing detailed occupations are found within professional and related occupations and service occupations. Seventeen of these rapidly growing occupations are related to healthcare or medical research. (See tables 5, 6, and 7 and chart 4.)

Chart 3. Employment growth by major industry, 2008-18



Of the 30 detailed occupations projected to have the largest employment declines, 12 are production occupations and 11 are office and administrative support occupations. (See table 8.)

Education and Training

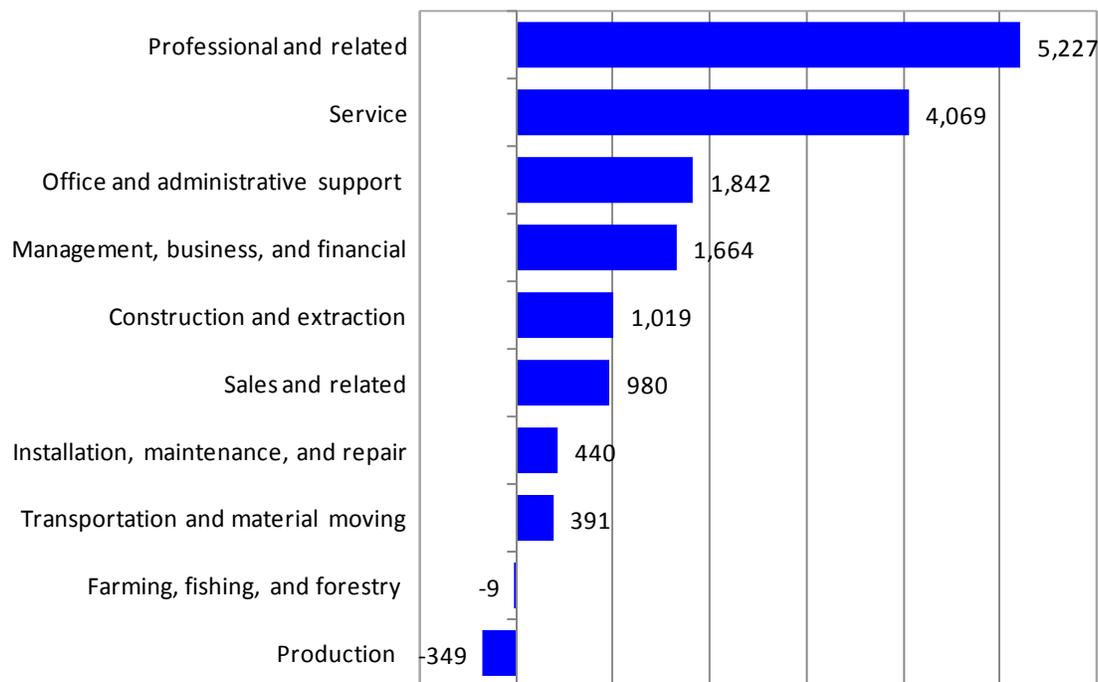
Occupations that usually require a postsecondary degree or award are expected to account for nearly half of all new jobs from 2008 to 2018 and one-third of total job openings. Among the education and training categories, the fastest growth will occur in occupations requiring an associate degree. (See table 9.)

Short- and moderate-term on-the-job training are the most significant sources of postsecondary education or training for 17 of the 30 detailed occupations projected to have the largest employment growth. However, in terms of percent growth, 14 of the 30 fastest growing detailed occupations have a bachelor's degree or higher as the most significant source of postsecondary education or training. (See tables 6 and 7.)

Of the 30 detailed occupations projected to have the largest employment declines, 17 are classified as having short-term on-the-job training as the most significant source of education and training, and 10 are in the moderate-term on-the-job training category. (See table 8.)

Total job openings during the 2008-18 period are projected to be 50.9 million, and 19.6 million of these jobs are expected to be in the short-term on-the-job training category. Sixteen of the 30 detailed occupations with the most job openings will have short-term on-the-job training as the most significant source of education and training. (See tables 9 and 10.)

Chart 4. Employment growth by major occupational group, 2008-18



A Note on Labor Shortages in the Context of Long-Term Economic Projections

Users of these data should not assume that the difference between the projected increase in the labor force and the projected increase in employment implies a labor shortage or surplus. Employment and labor force measures differ in concept. Employment is a count of jobs, and persons who hold more than one job would be counted for each job. Labor force is a count of individuals, and a person is counted only once regardless of how many jobs he or she holds. In addition, the BLS projections assume a labor market in equilibrium, that is, one where labor supply meets labor demand except for some degree of frictional unemployment. For a discussion of the basic projection methodology, see "Employment projections, 2008-18," Kristina Bartsch, November 2009 *Monthly Labor Review*.

More Information

The 10-year projections of industry and occupational employment, labor force, and economic growth are widely used in career guidance, in education and training program planning, and in studying long-range employment trends. The projections, which are updated every 2 years, provide information to individuals who are making decisions regarding education and training, entering the job market, or changing careers.

More detailed information on the 2008-18 projections appears in five articles in the November 2009 issue of the *Monthly Labor Review*, published by the Bureau of Labor Statistics, U.S. Department of Labor. The *Monthly Labor Review* is available online at www.bls.gov/opub/mlr/mlrhome.htm.

The 2010-11 editions of the *Occupational Outlook Handbook* and the *Career Guide to Industries* will feature the 2008-18 projections in assessing job prospects, work activities, wages, education and training

requirements, and more for numerous occupations and industries. The updated *Handbook* and *Career Guide* will be available online on December 17, 2009, at www.bls.gov/oco and www.bls.gov/oco/cg/, respectively. A graphic presentation of the highlights of the projections appears in the Winter 2009-10 issue of the *Occupational Outlook Quarterly*, available online on December 10, 2009, at www.bls.gov/ooq.

Tables with detailed, comprehensive statistics used in preparing the projections are available online at www.bls.gov/emp/tables.htm and projections methodology can be accessed at www.bls.gov/emp/ep_projections_methods.htm.

Print versions of the *Occupational Outlook Handbook* and *Occupational Outlook Quarterly* are sold by the U.S. Government Printing Office, Washington, DC 20401. To order, visit www.bls.gov/emp/ep_current_publications.htm.

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

Table 1. Civilian labor force by age, sex, race, and Hispanic origin, 1998, 2008, and projected 2018
(In thousands)

Age, sex, race, and ethnicity	Level			Change		Percent change		Percent distribution			Average annual rate of change	
	1998	2008	2018	1998-2008	2008-2018	1998-2008	2008-2018	1998	2008	2018	1998-2008	2008-2018
Total, 16 years and older	137,673	154,287	166,911	16,614	12,624	12.1	8.2	100.0	100.0	100.0	1.1	0.8
Age, years:												
16 to 24	21,894	22,032	21,131	138	-901	.6	-4.1	15.9	14.3	12.7	.1	-.4
25 to 54	98,718	104,396	105,944	5,678	1,548	5.8	1.5	71.7	67.7	63.5	.6	.1
55 and older	17,061	27,857	39,836	10,796	11,979	63.3	43.0	12.4	18.1	23.9	5.0	3.6
Sex:												
Men	73,959	82,520	88,682	8,561	6,162	11.6	7.5	53.7	53.5	53.1	1.1	.7
Women	63,714	71,767	78,229	8,053	6,462	12.6	9.0	46.3	46.5	46.9	1.2	.9
Race:												
White	115,415	125,635	132,490	10,220	6,855	8.9	5.5	83.8	81.4	79.4	.9	.5
Black	15,982	17,740	20,244	1,758	2,504	11.0	14.1	11.6	11.5	12.1	1.0	1.3
Asian	6,278	7,202	9,345	924	2,143	14.7	29.8	4.6	4.7	5.6	1.4	2.6
All other groups ¹	-	3,710	4,832	-	1,122	-	30.2	-	2.4	2.9	-	2.7
Ethnicity:												
Hispanic origin	14,317	22,024	29,304	7,707	7,280	53.8	33.1	10.4	14.3	17.6	4.4	2.9
Other than Hispanic origin	123,356	132,263	137,607	8,907	5,344	7.2	4.0	89.6	85.7	82.4	.7	.4
White non-Hispanic.....	101,767	105,210	106,834	3,443	1,624	3.4	1.5	73.9	68.2	64.0	.3	.2

¹ The "all other groups" category includes (1) those classified as being of multiple racial origin and (2) the race categories of (2a) American Indian and Alaska Native and (2b) Native Hawaiian and Other Pacific Islanders.

NOTE: Dash indicates no data collected for category. Details may not sum to totals because of rounding.

Table 2. Employment by major industry sector, 1998, 2008, and projected 2018
(In thousands)

Industry sector	Employment			Change		Percent distribution			Average annual rate of change	
	1998	2008	2018	1998-2008	2008-2018	1998	2008	2018	1998-2008	2008-2018
Total ¹	140,564	150,932	166,206	10,368	15,274	100.0	100.0	100.0	0.7	1.0
Nonagriculture wage and salary ²	126,625	137,815	152,443	11,190	14,629	90.1	91.3	91.7	.9	1.0
Goods-producing, excluding agriculture.....	24,274	21,363	21,390	-2,911	27	17.3	14.2	12.9	-1.3	.0
Mining.....	565	717	613	152	-104	.4	.5	.4	2.4	-1.6
Construction.....	6,149	7,215	8,552	1,066	1,337	4.4	4.8	5.1	1.6	1.7
Manufacturing.....	17,560	13,431	12,225	-4,128	-1,206	12.5	8.9	7.4	-2.6	-9
Service-providing.....	102,351	116,452	131,053	14,101	14,601	72.8	77.2	78.8	1.3	1.2
Utilities.....	613	560	500	-54	-59	.4	.4	.3	-.9	-1.1
Wholesale trade.....	5,795	5,964	6,220	169	256	4.1	4.0	3.7	.3	.4
Retail trade.....	14,610	15,356	16,010	747	654	10.4	10.2	9.6	.5	.4
Transportation and warehousing.....	4,168	4,505	4,950	337	445	3.0	3.0	3.0	.8	.9
Information.....	3,218	2,997	3,115	-222	118	2.3	2.0	1.9	-.7	.4
Financial activities.....	7,462	8,146	8,703	683	557	5.3	5.4	5.2	.9	.7
Professional and business services.....	15,147	17,778	21,968	2,632	4,190	10.8	11.8	13.2	1.6	2.1
Educational services.....	2,233	3,037	3,842	804	805	1.6	2.0	2.3	3.1	2.4
Health care and social assistance.....	12,214	15,819	19,816	3,605	3,997	8.7	10.5	11.9	2.6	2.3
Leisure and hospitality.....	11,232	13,459	14,601	2,227	1,142	8.0	8.9	8.8	1.8	.8
Other services.....	5,750	6,333	7,142	583	809	4.1	4.2	4.3	1.0	1.2
Federal government.....	2,772	2,764	2,859	-8	95	2.0	1.8	1.7	.0	.3
State and local government.....	17,137	19,735	21,327	2,598	1,591	12.2	13.1	12.8	1.4	.8
Agriculture, forestry, fishing, and hunting ³	2,528	2,098	2,020	-430	-78	1.8	1.4	1.2	-1.8	-.4
Agriculture wage and salary.....	1,373	1,210	1,206	-163	-3	1.0	.8	.7	-1.3	.0
Agriculture self-employed and unpaid family workers.....	1,155	889	814	-267	-75	.8	.6	.5	-2.6	-9
Nonagriculture self-employed and unpaid family workers.....	9,342	9,313	9,943	-30	631	6.6	6.2	6.0	.0	.7
Secondary wage and salary jobs in agriculture and private household industries ⁴	172	182	192	9	10	.1	.1	.1	.5	.5
Secondary jobs as a self-employed or unpaid family worker ⁵	1,897	1,524	1,607	-372	83	1.3	1.0	1.0	-2.2	.5

¹ Employment data for wage and salary workers are from the BLS Current Employment Statistics survey, which counts jobs, whereas self-employed, unpaid family workers, and agriculture, forestry, fishing, and hunting are from the Current Population Survey (household survey), which counts workers.

² Includes wage and salary data from the Current Employment Statistics survey, except private households, which is from the Current Population Survey. Logging workers are excluded.

³ Includes agriculture, forestry, fishing, and hunting data from the Current Population Survey, except logging, which is from the Current Employment Statistics survey. Government wage and salary workers are excluded.

⁴ Workers who hold a secondary wage and salary job in agricultural production, forestry, fishing, and private household industries.

⁵ Wage and salary workers who hold a secondary job as a self-employed or unpaid family worker.

Table 3. The 10 industries with the largest wage and salary employment growth, 2008-18 ¹
(In thousands)

Industry	Sector	Employment		Change	
		2008	2018	Number	Percent
Management, scientific, and technical consulting services.....	Professional and business services.....	1,009	1,844	835	82.8
Offices of physicians.....	Health care and social assistance.....	2,266	3,038	772	34.1
Computer systems design and related services.....	Professional and business services.....	1,450	2,107	656	45.3
Other general merchandise stores.....	Retail trade.....	1,490	2,097	607	40.7
Employment services.....	Professional and business services.....	3,144	3,744	600	19.1
Local government, excluding education and hospitals.....	Government.....	5,819	6,306	487	8.4
Home health care services.....	Health care and social assistance.....	958	1,399	441	46.1
Services for the elderly and persons with disabilities.....	Health care and social assistance.....	585	1,016	431	73.8
Nursing care facilities.....	Health care and social assistance.....	1,614	2,007	394	24.4
Full-service restaurants.....	Accommodation and food services.....	4,598	4,942	343	7.5

¹ Data are from the National Employment Matrix.

Table 4. The 10 industries with the largest wage and salary employment declines, 2008-18 ¹
(In thousands)

Industry	Sector	Employment		Change	
		2008	2018	Number	Percent
Department stores.....	Retail trade.....	1,557	1,398	-159	-10.2
Semiconductor and other electronic component manufacturing.....	Manufacturing.....	432	287	-146	-33.7
Motor vehicle parts manufacturing.....	Manufacturing.....	544	443	-101	-18.6
Postal service.....	Government.....	748	650	-98	-13.0
Printing and related support activities.....	Manufacturing.....	594	499	-95	-16.0
Cut and sew apparel manufacturing.....	Manufacturing.....	155	67	-89	-57.0
Newspaper publishers.....	Information.....	326	245	-81	-24.8
Support activities for mining.....	Mining.....	328	252	-76	-23.2
Gasoline stations.....	Retail trade.....	843	769	-75	-8.9
Wired telecommunications carriers.....	Information.....	666	593	-73	-11.0

¹ Data are from the National Employment Matrix.

Table 5. Employment by major occupational group, 2008 and projected 2018
(In thousands)

Occupational group	Employment		Percent distribution		Change	
	2008	2018	2008	2018	Percent	Number
Total, all occupations	150,932	166,206	100.0	100.0	10.1	15,274
Management, business, and financial occupations ¹	15,747	17,411	10.4	10.5	10.6	1,664
Professional and related occupations ²	31,054	36,280	20.6	21.8	16.8	5,227
Service occupations ³	29,576	33,645	19.6	20.2	13.8	4,069
Sales and related occupations	15,903	16,883	10.5	10.2	6.2	980
Office and administrative support occupations	24,101	25,943	16.0	15.6	7.6	1,842
Farming, fishing, and forestry occupations	1,035	1,026	.7	.6	-.9	-9
Construction and extraction occupations	7,810	8,829	5.2	5.3	13.0	1,019
Installation, maintenance, and repair occupations	5,798	6,238	3.8	3.8	7.6	440
Production occupations	10,083	9,734	6.7	5.9	-3.5	-349
Transportation and material moving occupations	9,826	10,217	6.5	6.1	4.0	391

¹ Major occupational groups 11-0000 through 13-0000 in the 2000 Standard Occupational Classification (SOC).

² Major occupational groups 15-0000 through 29-0000 in the 2000 Standard Occupational Classification (SOC).

³ Major occupational groups 31-0000 through 39-0000 in the 2000 Standard Occupational Classification (SOC).

Table 6. The 30 occupations with the largest employment growth, 2008-18
(In thousands)

Occupation	Occupational group	Employment		Change		Most significant source of postsecondary education or training ¹
		2008	2018	Number	Percent	
Registered nurses.....	Professional and related occupations ²	2,619	3,200	582	22.2	Associate degree
Home health aides.....	Service occupations ³	922	1,383	461	50.0	Short-term on-the-job training
Customer service representatives.....	Office and administrative support occupations.....	2,252	2,652	400	17.7	Moderate-term on-the-job training
Combined food preparation and serving workers, including fast food.....	Service occupations ³	2,702	3,096	394	14.6	Short-term on-the-job training
Personal and home care aides.....	Service occupations ³	817	1,193	376	46.0	Short-term on-the-job training
Retail salespersons.....	Sales and related occupations.....	4,489	4,864	375	8.4	Short-term on-the-job training
Office clerks, general.....	Office and administrative support occupations.....	3,024	3,383	359	11.9	Short-term on-the-job training
Accountants and auditors.....	Management, business, and financial occupations ⁴	1,291	1,570	279	21.7	Bachelor's degree
Nursing aides, orderlies, and attendants.....	Service occupations ³	1,470	1,746	276	18.8	Postsecondary vocational award
Postsecondary teachers.....	Professional and related occupations ²	1,699	1,956	257	15.1	Doctoral degree
Construction laborers.....	Construction and extraction occupations.....	1,249	1,505	256	20.5	Moderate-term on-the-job training
Elementary school teachers, except special education.....	Professional and related occupations ²	1,550	1,794	244	15.8	Bachelor's degree
Truck drivers, heavy and tractor-trailer.....	Transportation and material moving occupations.....	1,798	2,031	233	13.0	Short-term on-the-job training
Landscaping and groundskeeping workers.....	Service occupations ³	1,206	1,423	217	18.0	Short-term on-the-job training
Bookkeeping, accounting, and auditing clerks.....	Office and administrative support occupations.....	2,064	2,276	212	10.3	Moderate-term on-the-job training
Executive secretaries and administrative assistants.....	Office and administrative support occupations.....	1,594	1,799	204	12.8	Work experience in a related occupation
Management analysts.....	Management, business, and financial occupations ⁴	747	925	178	23.9	Bachelor's or higher degree, plus work experience
Computer software engineers, applications.....	Professional and related occupations ²	515	690	175	34.0	Bachelor's degree
Receptionists and information clerks.....	Office and administrative support occupations.....	1,139	1,312	173	15.2	Short-term on-the-job training
Carpenters.....	Construction and extraction occupations.....	1,285	1,450	165	12.9	Long-term on-the-job training
Medical assistants.....	Service occupations ³	484	648	164	33.9	Moderate-term on-the-job training
First-line supervisors/managers of office and administrative support workers.....	Office and administrative support occupations.....	1,457	1,618	160	11.0	Work experience in a related occupation
Network systems and data communications analysts.....	Professional and related occupations ²	292	448	156	53.4	Bachelor's degree
Licensed practical and licensed vocational nurses.....	Professional and related occupations ²	754	909	156	20.7	Postsecondary vocational award
Security guards.....	Service occupations ³	1,077	1,229	153	14.2	Short-term on-the-job training
Waiters and waitresses.....	Service occupations ³	2,382	2,533	152	6.4	Short-term on-the-job training
Maintenance and repair workers, general.....	Installation, maintenance, and repair occupations.....	1,361	1,509	148	10.9	Moderate-term on-the-job training
Physicians and surgeons.....	Professional and related occupations ²	661	806	144	21.8	First professional degree
Child care workers.....	Service occupations ³	1,302	1,444	142	10.9	Short-term on-the-job training
Teacher assistants.....	Professional and related occupations ²	1,313	1,448	135	10.3	Short-term on-the-job training

¹ An occupation is placed into 1 of 11 categories that best describes the postsecondary education or training needed by most workers to become fully qualified in that occupation. For more information about the categories, see Measures of Education and Training, on the Internet at www.bls.gov/emp/ep_projections_methods.htm.

² Major occupational groups 15-0000 through 29-0000 in the 2000 Standard Occupational Classification (SOC).

³ Major occupational groups 31-0000 through 39-0000 in the 2000 Standard Occupational Classification (SOC).

⁴ Major occupational groups 11-0000 through 13-0000 in the 2000 Standard Occupational Classification (SOC).

Table 7. The 30 fastest-growing occupations, 2008-18
(In thousands)

Occupation	Occupational group	Employment		Change		Most significant source of postsecondary education or training ¹
		2008	2018	Percent	Number	
Biomedical engineers.....	Professional and related occupations ²	16	28	72.0	12	Bachelor's degree
Network systems and data communications analysts.....	Professional and related occupations ²	292	448	53.4	156	Bachelor's degree
Home health aides.....	Service occupations ³	922	1,383	50.0	461	Short-term on-the-job training
Personal and home care aides.....	Service occupations ³	817	1,193	46.0	376	Short-term on-the-job training
Financial examiners.....	Management, business, and financial occupations ⁴	27	38	41.2	11	Bachelor's degree
Medical scientists, except epidemiologists.....	Professional and related occupations ²	109	154	40.4	44	Doctoral degree
Physician assistants.....	Professional and related occupations ²	75	104	39.0	29	Master's degree
Skin care specialists.....	Service occupations ³	39	54	37.9	15	Postsecondary vocational award
Biochemists and biophysicists.....	Professional and related occupations ²	23	32	37.4	9	Doctoral degree
Athletic trainers.....	Professional and related occupations ²	16	22	37.0	6	Bachelor's degree
Physical therapist aides.....	Service occupations ³	46	63	36.3	17	Short-term on-the-job training
Dental hygienists.....	Professional and related occupations ²	174	237	36.1	63	Associate degree
Veterinary technologists and technicians.....	Professional and related occupations ²	80	108	35.8	29	Associate degree
Dental assistants.....	Service occupations ³	295	401	35.8	106	Moderate-term on-the-job training
Computer software engineers, applications.....	Professional and related occupations ²	515	690	34.0	175	Bachelor's degree
Medical assistants.....	Service occupations ³	484	648	33.9	164	Moderate-term on-the-job training
Physical therapist assistants.....	Service occupations ³	64	85	33.3	21	Associate degree
Veterinarians.....	Professional and related occupations ²	60	79	33.0	20	First professional degree
Self-enrichment education teachers.....	Professional and related occupations ²	254	335	32.1	81	Work experience in a related occupation
Compliance officers, except agriculture, construction, health and safety, and transportation.....	Management, business, and financial occupations ⁴	260	341	31.1	81	Long-term on-the-job training
Occupational therapist aides.....	Service occupations ³	8	10	30.7	2	Short-term on-the-job training
Environmental engineers.....	Professional and related occupations ²	54	71	30.6	17	Bachelor's degree
Pharmacy technicians.....	Professional and related occupations ²	326	426	30.6	100	Moderate-term on-the-job training
Computer software engineers, systems software.....	Professional and related occupations ²	395	515	30.4	120	Bachelor's degree
Survey researchers.....	Professional and related occupations ²	23	31	30.4	7	Bachelor's degree
Physical therapists.....	Professional and related occupations ²	186	242	30.3	56	Master's degree
Personal financial advisors.....	Management, business, and financial occupations ⁴	208	271	30.1	63	Bachelor's degree
Environmental engineering technicians.....	Professional and related occupations ²	21	28	30.1	6	Associate degree
Occupational therapist assistants.....	Service occupations ³	27	35	29.8	8	Associate degree
Fitness trainers and aerobics instructors.....	Service occupations ³	261	338	29.4	77	Postsecondary vocational award

¹ An occupation is placed into 1 of 11 categories that best describes the postsecondary education or training needed by most workers to become fully qualified in that occupation. For more information about the categories, see Measures of Education and Training, on the Internet at www.bls.gov/emp/ep_projections_methods.htm.

² Major occupational groups 15-0000 through 29-0000 in the 2000 Standard Occupational Classification (SOC).

³ Major occupational groups 31-0000 through 39-0000 in the 2000 Standard Occupational Classification (SOC).

⁴ Major occupational groups 11-0000 through 13-0000 in the 2000 Standard Occupational Classification (SOC).

Table 8. The 30 occupations with the largest employment declines, 2008-18
(In thousands)

Occupation	Occupational group	Employment		Change		Most significant source of postsecondary education or training ¹
		2008	2018	Number	Percent	
Farmers and ranchers.....	Management, business, and financial occupations ²	986	907	-79	-8.0	Long-term on-the-job training
Sewing machine operators.....	Production occupations	212	141	-72	-33.7	Moderate-term on-the-job training
Order clerks.....	Office and administrative support occupations	246	182	-64	-26.1	Short-term on-the-job training
Postal service mail sorters, processors, and processing machine operators.....	Office and administrative support occupations	180	125	-55	-30.3	Short-term on-the-job training
File clerks.....	Office and administrative support occupations	212	163	-50	-23.4	Short-term on-the-job training
Shipping, receiving, and traffic clerks.....	Office and administrative support occupations	751	701	-49	-6.6	Short-term on-the-job training
Telemarketers.....	Sales and related occupations	342	304	-38	-11.1	Short-term on-the-job training
First-line supervisors/managers of production and operating workers.....	Production occupations	681	646	-36	-5.2	Work experience in a related occupation
Office and administrative support workers, all other.....	Office and administrative support occupations	307	271	-36	-11.6	Short-term on-the-job training
Packers and packagers, hand.....	Transportation and material moving occupations	759	725	-34	-4.5	Short-term on-the-job training
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic.....	Production occupations	237	204	-33	-14.1	Moderate-term on-the-job training
Electrical and electronic equipment assemblers.....	Production occupations	213	182	-31	-14.7	Short-term on-the-job training
Machine feeders and offbearers.....	Transportation and material moving occupations	141	110	-31	-22.2	Short-term on-the-job training
Door-to-door sales workers, news and street vendors, and related workers.....	Sales and related occupations	182	155	-27	-14.8	Short-term on-the-job training
Information and record clerks, all other.....	Office and administrative support occupations	227	200	-27	-11.8	Short-term on-the-job training
Paper goods machine setters, operators, and tenders.....	Production occupations	103	81	-22	-21.5	Moderate-term on-the-job training
Computer operators.....	Office and administrative support occupations	110	90	-21	-18.6	Moderate-term on-the-job training
Machinists.....	Production occupations	422	402	-19	-4.6	Long-term on-the-job training
Laborers and freight, stock, and material movers, hand.....	Transportation and material moving occupations	2,317	2,299	-19	-0.8	Short-term on-the-job training
Miscellaneous agricultural workers.....	Farming, fishing, and forestry occupations	807	789	-18	-2.3	Short-term on-the-job training
Data entry keyers.....	Office and administrative support occupations	284	267	-17	-6.1	Moderate-term on-the-job training
Inspectors, testers, sorters, samplers, and weighers.....	Production occupations	465	448	-17	-3.6	Moderate-term on-the-job training
Switchboard operators, including answering service.....	Office and administrative support occupations	155	138	-17	-10.9	Short-term on-the-job training
Mail clerks and mail machine operators, except postal service.....	Office and administrative support occupations	141	125	-17	-11.8	Short-term on-the-job training
Lathe and turning machine tool setters, operators, and tenders, metal and plastic.....	Production occupations	56	41	-15	-26.7	Moderate-term on-the-job training
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic.....	Production occupations	93	78	-15	-15.9	Moderate-term on-the-job training
Textile winding, twisting, and drawing out machine setters, operators, and tenders.....	Production occupations	35	21	-14	-40.7	Moderate-term on-the-job training
Postal service clerks.....	Office and administrative support occupations	76	62	-14	-18.0	Short-term on-the-job training
Multiple machine tool setters, operators, and tenders, metal and plastic.....	Production occupations	86	73	-13	-14.7	Moderate-term on-the-job training
Photographic processing machine operators.....	Production occupations	51	39	-13	-24.3	Short-term on-the-job training

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² Major occupational groups 11-0000 through 13-0000 in the 2000 Standard Occupational Classification (SOC).

Table 9. Employment and total job openings by postsecondary education or training category, 2008-18

(In thousands)

Most significant source of postsecondary education and training ¹	Employment				Change		Total job openings due to growth and replacement needs, 2008-2018 ²	
	Number		Percent distribution		2008-2018			
	2008	2018	2008	2018	Number	Percent	Number	Percent
Total, all occupations	150,932	166,206	100.0	100.0	15,274	10.1	50,929	100.0
First professional degree	2,001	2,354	1.3	1.4	353	17.6	746	1.5
Doctoral degree	2,085	2,430	1.4	1.5	345	16.6	743	1.5
Master's degree	2,531	2,995	1.7	1.8	464	18.3	1,008	2.0
Bachelor's or higher degree, plus work experience	6,518	7,068	4.3	4.3	550	8.4	2,106	4.1
Bachelor's degree	18,584	21,669	12.3	13.0	3,085	16.6	7,072	13.9
Associate degree	6,129	7,297	4.1	4.4	1,168	19.1	2,372	4.7
Postsecondary vocational award	8,787	9,951	5.8	6.0	1,164	13.2	2,927	5.7
Work experience in a related occupation	14,517	15,697	9.6	9.4	1,180	8.1	4,196	8.2
Long-term on-the-job training	10,815	11,620	7.2	7.0	806	7.5	3,081	6.1
Moderate-term on-the-job training	24,568	26,531	16.3	16.0	1,963	8.0	7,058	13.9
Short-term on-the-job training	54,396	58,593	36.0	35.3	4,197	7.7	19,619	38.5

¹ An occupation is placed into 1 of 11 categories that best describes the postsecondary education or training needed by most workers to become fully qualified in that occupation. For more information about the categories, please see Measures of Education and Training, on the Internet at www.bls.gov/emp/ep_projections_methods.htm.

² Total job openings represent the sum of employment increases and replacement needs. If employment change is negative, job openings due to growth are zero and total job openings equals replacements.

Table 10. The 30 occupations with the largest number of total job openings due to growth and replacements, 2008-18
(In thousands)

Occupation	Occupational group	Employment		Change Number	Replacement needs	Total job openings due to growth and replacements ¹	Most significant source of postsecondary education or training ²
		2008	2018				
Cashiers, except gaming.....	Sales and related occupations	3,550	3,676	126	1,594	1,720	Short-term on-the-job training
Retail salespersons.....	Sales and related occupations	4,489	4,864	375	1,252	1,627	Short-term on-the-job training
Waiters and waitresses.....	Service occupations ³	2,382	2,533	152	1,315	1,466	Short-term on-the-job training
Customer service representatives.....	Office and administrative support occupations	2,252	2,652	400	709	1,108	Moderate-term on-the-job training
Registered nurses.....	Professional and related occupations ⁴	2,619	3,200	582	458	1,039	Associate degree
Combined food preparation and serving workers, including fast food.....	Service occupations ³	2,702	3,096	394	573	967	Short-term on-the-job training
Office clerks, general.....	Office and administrative support occupations	3,024	3,383	359	412	771	Short-term on-the-job training
Laborers and freight, stock, and material movers, hand.....	Transportation and material moving occupations	2,317	2,299	-19	746	746	Short-term on-the-job training
Elementary school teachers, except special education.....	Professional and related occupations ⁴	1,550	1,794	244	352	597	Bachelor's degree
Stock clerks and order fillers.....	Office and administrative support occupations	1,859	1,993	134	428	563	Short-term on-the-job training
Truck drivers, heavy and tractor-trailer.....	Transportation and material moving occupations	1,798	2,031	233	322	555	Short-term on-the-job training
Janitors and cleaners, except maids and housekeeping cleaners.....	Service occupations ³	2,375	2,479	104	449	553	Short-term on-the-job training
Postsecondary teachers.....	Professional and related occupations ⁴	1,699	1,956	257	296	553	Doctoral degree
Home health aides.....	Service occupations ³	922	1,383	461	92	553	Short-term on-the-job training
Child care workers.....	Service occupations ³	1,302	1,444	142	381	523	Short-term on-the-job training
General and operations managers.....	Management, business, and financial occupations ⁵	1,733	1,731	-2	502	502	Bachelor's or higher degree, plus work experience
Accountants and auditors.....	Management, business, and financial occupations ⁵	1,291	1,570	279	218	498	Bachelor's degree
First-line supervisors/managers of office and administrative support workers.....	Office and administrative support occupations	1,457	1,618	160	329	489	Work experience in a related occupation
Receptionists and information clerks.....	Office and administrative support occupations	1,139	1,312	173	307	480	Short-term on-the-job training
Personal and home care aides.....	Service occupations ³	817	1,193	376	102	478	Short-term on-the-job training
Bookkeeping, accounting, and auditing clerks.....	Office and administrative support occupations	2,064	2,276	212	248	460	Moderate-term on-the-job training
Sales representatives, wholesale and manufacturing, except technical and scientific products.....	Sales and related occupations	1,540	1,641	101	357	458	Work experience in a related occupation
First-line supervisors/managers of retail sales workers.....	Sales and related occupations	1,686	1,774	88	362	450	Work experience in a related occupation
Counter attendants, cafeteria, food concession, and coffee shop.....	Service occupations ³	525	574	49	386	435	Short-term on-the-job training
Nursing aides, orderlies, and attendants.....	Service occupations ³	1,470	1,746	276	146	422	Postsecondary vocational award
Executive secretaries and administrative assistants.....	Office and administrative support occupations	1,594	1,799	204	215	419	Work experience in a related occupation
Teacher assistants.....	Professional and related occupations ⁴	1,313	1,448	135	278	413	Short-term on-the-job training
Secondary school teachers, except special and vocational education.....	Professional and related occupations ⁴	1,088	1,184	96	316	412	Bachelor's degree
Licensed practical and licensed vocational nurses.....	Professional and related occupations ⁴	754	909	156	236	391	Postsecondary vocational award
Security guards.....	Service occupations ³	1,077	1,229	153	222	374	Short-term on-the-job training

¹ Total job openings represent the sum of employment increases and replacements. If employment change is negative, job openings due to growth are zero and total job openings equal replacements. For more information about occupational replacement needs, see Estimating Occupational Replacement Needs, on the Internet at www.bls.gov/emp/ep_projections_methods.htm.

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