

Thinking about Careers

The following handout was compiled from about five reports issued by the US Bureau of Labor Statistics. You can find the complete version of these reports, plus additional interesting information on careers from their website: www.bls.gov.

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EMPLOYMENT PROJECTIONS: 2006-16

Over the 2006-16 decade, total employment is projected to increase by 15.6 million jobs, or 10 percent, slightly less than the 15.9 million jobs, or 12 percent, during the 1996-2006 decade. The labor force filling these jobs, while becoming more racially and ethnically diverse, is projected to grow more slowly than in the past. This slowdown in the growth of the labor force is expected, in part, because of the aging and retiring of baby boomers. As a result, the need to replace workers who retire or leave the labor force for other reasons--called replacement needs—is projected to create a significant number of additional job openings.

- Employment growth is projected to continue to be concentrated in the service-providing sector of the economy. Service-providing industries will generate almost all of the employment gain from 2006 to 2016 and will provide more than three-quarters of all jobs in 2016. Professional and business services and health care and social assistance, the industry sectors with the largest employment growth, will add 8.1 million jobs, more than half of the projected increase in total employment.
- The 10 detailed industries with the largest projected wage and salary employment growth--led by management, scientific, and technical consulting services; employment services; and general medical and surgical hospitals--all are in the service-providing sector.
- For 15 of the 30 fastest growing occupations, a bachelor's or higher degree is the most significant source of postsecondary education or training.
- The proportion of jobs in occupations that typically require a college degree will increase slightly between 2006 and 2016.
- Youths--those between the ages of 16 and 24--will decline in numbers and will see their share of the labor force fall from 14.8 to 12.7 percent. The number of prime-age workers--those between the ages of 25 and 54-- will increase by 2.4 percent, but their share of the labor force will decline from 68.4 to 64.6 percent.

Employment Projections: 2006-16 Summary
For more information: <http://www.bls.gov/emp/>

Employment and Wages by Major Occupational Group and Industry

by Fatemeh Hajiha

1. Information on average wages for an occupation is a useful tool for gauging an occupation's earnings potential. But data on average wages mask important differences within an occupation.
2. Workers in a given occupation may earn more or less than the average based on a number of factors, including their skills and experience, the industry and location in which they work, their specific employer, and, in some cases, their ability to negotiate a higher wage.
3. To learn that kind of information, you'll need to look beyond averages. A good place to start is with the U.S. Bureau of Labor Statistics (BLS) Occupational Employment Statistics (OES) program. OES data on wage distributions, or percentiles, provide more and better information on wage variability and earnings potential within an occupation. And data showing how wages vary by industry and location give additional details.

Chart 1. Mean hourly wage and percent total employment by major occupational group, May 2005

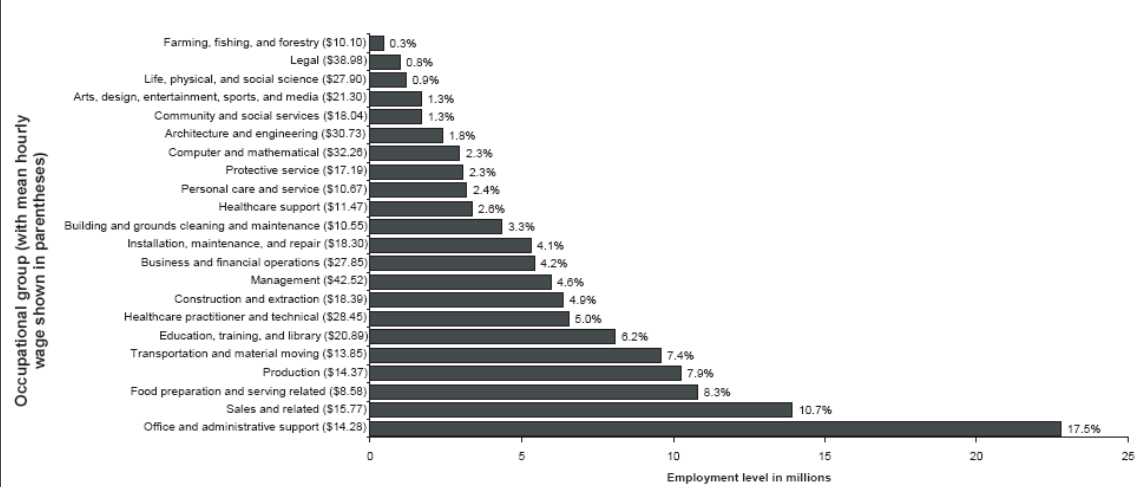
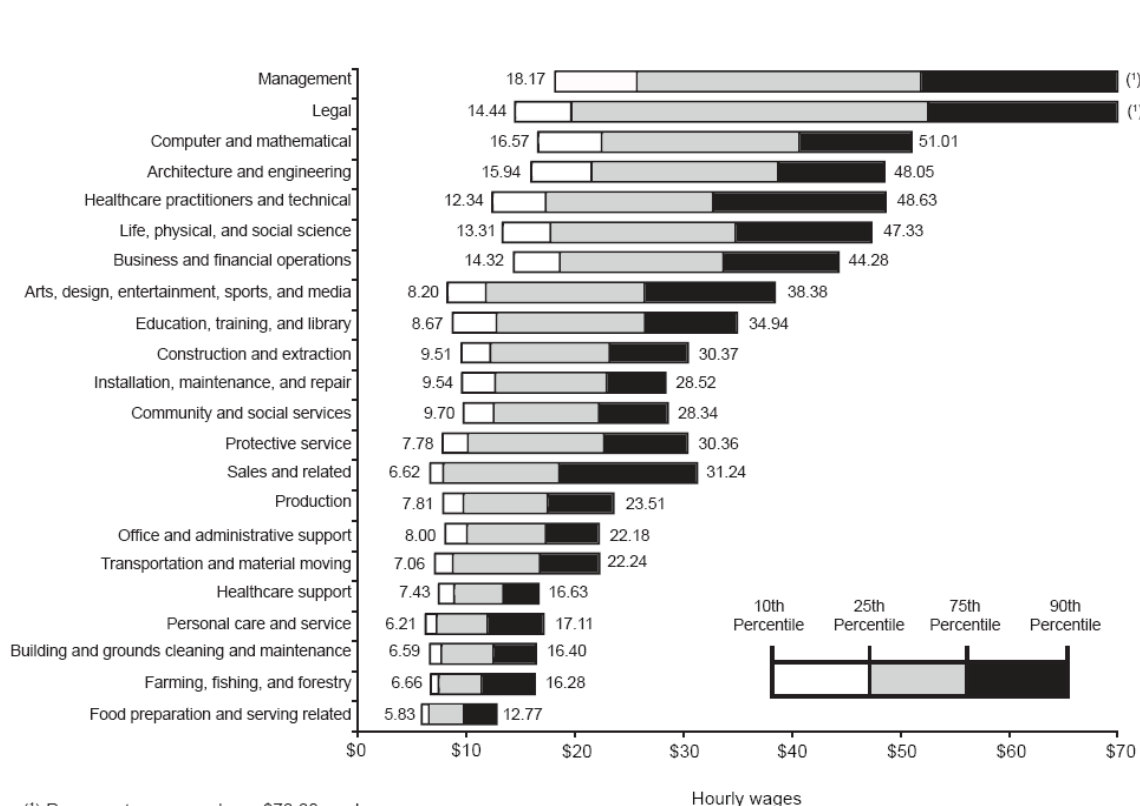


Chart 2. Wage distribution by occupational group, 10th percentile to 90th percentile, May 2005



(1) Represents a wage above \$70.00 per hour

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Living near Washington, DC

Text table 1. Employment shares and wage rates for the 10 metropolitan areas with the largest shares of high-tech workers, 2001

(Shares in percent)

MSA	High tech		Non-high-tech wage	Technology group		Non-technology group wage
	Employment share	Annual wage		Employment share	Annual wage	
San Jose, CA PMSA	10.68	\$79,800	\$45,210	19.92	\$73,460	\$43,190
Boulder-Longmont, CO PMSA	9.81	68,630	37,750	20.26	60,260	36,080
Melbourne-Titusville-Palm Bay, FL MSA	7.15	48,120	30,780	17.88	49,830	28,390
Huntsville, AL MSA	6.80	62,710	32,800	16.33	56,070	31,310
Lowell, MA-NH PMSA	6.43	71,560	39,120	15.53	62,480	37,410
Raleigh-Durham-Chapel Hill, NC MSA	6.20	65,330	34,730	16.48	55,960	32,900
Washington, DC-MD-VA-WV PMSA	6.16	67,830	41,030	14.72	63,340	39,250
Seattle-Bellevue-Everett, WA PMSA	5.71	69,880	39,830	14.48	63,890	37,910
Boise City, ID MSA	5.67	49,940	31,340	13.69	48,730	29,910
Austin-San Marcos, TX MSA	5.30	66,370	33,650	14.26	55,420	32,140

Patrick Kilcoyne. **High-Tech Occupations by Metropolitan Statistical Area.**

Metropolitan Area	All occupations	Management, business, and financial	Professional and related	Service	Sales and related	Office and administrative support	Construction and extraction	Installation, maintenance, and repair	Production	Transportation and material moving
Washington-Baltimore-Northern Virginia metro area	109%	105	110	106	108	112	101	114	105	108

Table 1. Pay relatives for major occupational groups in metropolitan areas, National Compensation Survey, July 2008

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New and Emerging Occupations in the 2000 Occupational Employment Survey: Developments in selected occupational groups.

By Jerome Pikulinski.

This section highlights and briefly discusses specific occupations flagged as new or emerging, based on the results of the 2000 OES survey round.

Occupations in the field of information technology

- GIS project managers
- GIS analysts—map production
- GIS analysts—land use

The pivotal role of visual information in land use decision making at the local government level continues to generate emerging Geographical Information System (GIS) occupations. Local government infrastructure investments and land-use regulations require systemic development plans and other land use data in visual form. Among other uses, GIS information and models aid in discussions and negotiations between local governments and various private entities, including developers.

Manufacturing processes.

- Senior engineers—operations due diligence
- Quality control crew leaders—production line

The concept of “due diligence” typically refers to a profound review of financial and accounting documents in the acquisition of a firm or in the process of investing in a firm. The concept also applies to the engineering and production activities, for which functional plans and systems may assume equal importance with the financial picture of a firm. Industry adoption of the International Standards Organization (ISO) 9000 procedures is closely related to the creation of a variety of management and technical positions that certify the efficacy of the engineering and production functions. Positions intended to certify manufacturing standards and quality production through use of well-documented procedures and processes continue to emerge.

Healthcare.

- Credentialing positions
- Eligibility, necessity, and utilization reviewers
- Selected medical specialties
- Adjuvant therapists

In the health field, N&E occupations have addressed concerns with legal liabilities, responses to advancing medical technologies, administrative adjustments to rising costs, and alternative medical approaches. As a consequence, increased attention has been directed toward establishing and updating the credentials and certifications of medical personnel. New technologies and related certifications have created or changed work content in emergency medicine, endoscopy, enterostomal therapy, sonography, and retinal angiography, to list only some areas. Rising costs have created the need for additional cost-containment positions that determine the necessity of treatment, the form of treatment, the duration and location of treatment, and approved providers, among other cost control measures. Adjuvant, or “helping,” therapies of alternative varieties have created additional occupational opportunities as insurers extend coverage options. Included among providers of adjuvant therapies are acupuncturists, cultural healers, biofeedback clinicians, and sleep technicians.

Human service occupations.

- Death and burial management
- Chaplains and religious educators
- Bereavement specialists

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- Behavioral modification and adaptation

The aging of the American population continues to create occupations related to deaths and burials. Some associated occupations include “death-call drivers,” who handle initial disposition of human remains. Others are cemetery personnel, who handle grave preparation and graveside arrangements. Other positions exist for persons who help in the management of bereavement and subsequent grief management. Chaplain occupations and others dealing with religious education have been reported in nontraditional areas such as home healthcare services, residential care facilities, other health and allied services, labor unions and similar labor organizations, and some units of local government. The need for behavior modification and adaptation by other means has created demand for habilitation specialists, alcohol education instructors, Americorp volunteers, victim-witness coordinators, and interpreters for the deaf. For example, aggressive enforcement and control efforts, including rehabilitation, have necessitated education and training programs for persons convicted of driving while intoxicated.

Transportation.

- Aircraft line and support technicians
- Armored car drivers
- Aircraft interior refurbishers
- Ship container placement planners

N&E transportation occupations are aircraft-line personnel, armored car drivers, and ship container placement planners. Aircraft occupations are associated with corporate aircraft ownership. These aircraft owners require line technicians to move, fuel, and clean airplanes. The growth in the number of corporate aircraft has led to demand for interior refurbishers to maintain and renew interior accommodations. The continued growth of various convenience stores and fast-food outlets, among other factors, has created a need for armored car drivers to collect receipts and deliver operating funds. Finally, international trade and current ship container technology have resulted in occupations for specialists who plan the loading and placement of containers aboard ships.

Security.

- Security screeners
- Crisis response specialists—telephone
- Surveillance analysts
- Construction traffic control officers
- 9-1-1 coordinators
- Alarm monitoring center operators

In 2000, a variety of airport screening occupations appeared. These included managers and assistant managers of airport screeners, screening supervisors, and screeners. Similar occupations were created for work in the lobbies and public areas of commercial and government buildings. Camera surveillance of retail sites created the need for analysts to review videotapes and reports. The need for telephone companies to support 9-1-1 call systems required the use of various coordinators to oversee the installation and maintenance of required switches. The expansion of telephone call centers of 9-1-1 type systems required increased staffing of crisis response specialists. The management of traffic around construction and utility repair sites called for the employment of specialized traffic control personnel. Finally, an expanded reliance upon silent alarm systems at businesses and homes supported the need for alarm monitoring personnel at central alarm locations, partly due to local police complaints about having to respond to false alarms.

Management support.

- Total quality management
- Bankruptcy coordinators
- Governmental affairs specialists
- Disaster business plan specialists

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- Regulatory specialists
- Supply chain and process control managers
- Overseas operations specialists
- Conflict of interest specialists

The total quality management label denotes a number of related occupations that incorporate integrated management functions: Total quality manager of process and International Standards Organization (ISO) compliance; ISO management representative in human resources, data processing, and safety; document control/safety manager, ISO Procedures; and safety director/quality control, among others. These integrated managerial positions have resulted from widespread adoption of the process improvement approach to management. The positions of governmental affairs specialist and manager of environmental affairs were created to address conditions outside of internal operations. Other regulatory specialist functions are more internal, such as those performed by regulatory compliance managers; directors, regulatory affairs and quality assurance; compliance representatives, software sales; regulatory specialists, branch level; and compliance/document control specialists. Global business opportunities and requirements have spurred demand for international sales managers, senior managers of international affairs, overseas operations specialists, directors of international accounting, and export/ import trade representatives. Domestically, business failures and personal credit problems have created the need for bankruptcy coordinators at a variety of loan and consumer finance establishments. At another level, concerns about business disruptions resulting from natural and other disasters have provided opportunities for specialists who prepare contingency plans that address possible risks. Modern systems development and related processes have created an entirely new set of integrated operations management functions. These require managers of supply chains, resource managers of material or manufacturing resources planning (MRP), supply chain managers, and process and inventory control managers. Law firms have increasingly found themselves in need of protection against conflict of interest charges. As a result, growing numbers of such firms have added conflict of interest specialists to their administrative staffs.

Technology-specific.

- Satellites
- Wheelchair and scooter maintenance
- Environmental care
- Nonmetallic technicians
- Underground operations
- Salvage technicians

The extensive development of satellite technology has created occupations such as satellite engineers, satellite tracking technicians, field engineers for satellite uplink systems, satellite tracking equipment repairers, telecommunications switch technicians, and cable/satellite technicians. Increased attention to environment management and care has led to growth in the numbers of restoration cleaning technicians, fire and water damage restoration technicians, mine cleanup technicians, waste water technicians dealing with disposal to city systems, and reverse osmosis repair and service technicians. The expanded use of underground routings of various pipeline and cable systems has boosted demand for underground utility locators, underground directional boring specialists and operators, and cathodic protection specialists. The mobility needs of an expanding senior population have driven increases in the numbers of wheelchair and scooter repair and service technicians. The prevalence of nonmetallic materials in everyday products has created positions for laminator/welders of fiberglass tanks and pipes, plastic welders, and laminators. Finally, the high intrinsic value of components and materials going into high-technology products has resulted in an increase in salvage activities and in the growth of occupations engaged in the salvage of such goods as automobile parts and materials in x-ray units.

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U.S. Bureau of Labor Statistics

Occupational Employment Statistics

May 2008 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates
Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Division

More information: <http://www.bls.gov/oes/>

Occupation Title	# Employed in DC metro area	Median Hourly	Mean Hourly	Mean Annual
All Occupations	2,324,910	\$21.67	\$27.70	\$57,620
1. Management Occupations		\$54.32	\$57.06	\$118,680
Chief Executives	7,110		\$87.61	\$182,230
Financial Managers	11,890	\$55.70	\$57.84	\$120,320
Education Administrators, Preschool and Child Care Center/Program	1,410	\$19.93	\$21.98	\$45,720
2. Business and Financial Operations Occupations	207,110	\$35.65	\$38.18	\$79,410
Management Analysts	44,550	\$41.52	\$43.68	\$90,860
Financial Examiners	610	\$51.24	\$50.57	\$105,190
Tax Preparers	1,080	\$17.23	\$19.16	\$39,850
3. Computer and Mathematical Science Occupations	169,810	\$42.02	\$42.97	\$89,390
Computer Software Engineers, Applications	26,650	\$44.55	\$45.60	\$94,850
Computer Support Specialists	15,530	\$24.73	\$25.38	\$52,790
Mathematicians	240	\$61.39	\$58.71	\$122,120
4. Architecture and Engineering Occupations	55,920	\$39.23	\$41.28	\$85,860
Civil Engineers	5,690	\$38.84	\$40.36	\$83,950
Materials Engineers	320	\$54.73	\$54.67	\$113,720
Surveying and Mapping Technicians	1,250	\$18.90	\$20.11	\$41,820
5. Life, Physical, and Social Science Occupations	45,110	\$40.31	\$41.89	\$87,140
Astronomers	240	\$61.51	\$59.23	\$123,200
Market Research Analysts	9,680	\$33.86	\$36.04	\$74,950
Urban and Regional Planners	870	\$33.23	\$34.48	\$71,720
Geographers	200	\$38.36	\$38.29	\$79,650
Biological Technicians	630	\$19.85	\$20.53	\$42,700
Environmental Science and Protection Technicians, Including	430	\$23.27	\$24.21	\$50,350

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Health					
Forensic Science Technicians	350	\$30.02	\$33.14	\$68,930	
Occupation Title	# Employed in DC metro area	Median Hourly	Mean Hourly	Mean Annual	
6. Community and Social Services Occupations	29,350	\$22.19	\$23.73	\$49,360	
Rehabilitation Counselors	2,860	\$13.80	\$16.48	\$34,280	
Health Educators	1,310	\$29.30	\$30.85	\$64,170	
Social and Human Service Assistants	5,020	\$15.59	\$16.02	\$33,320	
7. Legal Occupations	58,970	\$53.26	\$56.97	\$118,500	
Lawyers	38,000	\$67.48	\$69.73	\$145,040	
Title Examiners, Abstractors, and Searchers	800	\$18.13	\$19.22	\$39,980	
8. Education, Training, and Library Occupations	147,760	\$24.92	\$27.59	\$57,380	
Health Specialties Teachers, Postsecondary	2,650			\$108,630	
Preschool Teachers, Except Special Education	8,830	\$13.16	\$14.59	\$30,340	
Kindergarten Teachers, Except Special Education	3,030			\$64,100	
Elementary School Teachers, Except Special Education	24,910			\$63,620	
9. Arts, Design, Entertainment, Sports, and Media Occupations	55,020	\$30.06	\$33.47	\$69,620	
Floral Designers	730	\$13.85	\$13.25	\$27,560	
Broadcast News Analysts	260	\$29.54	\$40.01	\$83,220	
Public Relations Specialists	15,530	\$38.57	\$43.74	\$90,970	
10. Healthcare Practitioner and Technical Occupations	83,330	\$31.72	\$36.58	\$76,090	
Anesthesiologists	410		\$102.83	\$213,880	
Surgeons	690		\$89.90	\$187,000	
Registered Nurses	28,600	\$34.64	\$34.88	\$72,550	
Audiologists	290	\$31.89	\$31.70	\$65,940	
Occupational Therapists	910	\$36.98	\$37.18	\$77,340	
Physical Therapists	1,480	\$36.79	\$36.46	\$75,850	
Medical and Clinical Laboratory Technicians	1,690	\$18.75	\$19.58	\$40,720	
Dental Hygienists	1,990	\$38.09	\$37.79	\$78,610	
Pharmacy Technicians	3,430	\$14.40	\$14.72	\$30,610	

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Occupation Title	# Employed in DC metro area	Median Hourly	Mean Hourly	Mean Annual
11. <u>Healthcare Support Occupations</u>	35,270	\$13.47	\$14.40	\$29,950
Home Health Aides	5,610	\$11.00	\$11.31	\$23,520
Nursing Aides, Orderlies, and Attendants	11,930	\$12.67	\$13.05	\$27,150
Massage Therapists	560	\$21.47	\$23.55	\$48,990
12. <u>Protective Service Occupations</u>	66,380	\$20.10	\$23.16	\$48,160
First-Line Supervisors/Managers of Police and Detectives	1,430	\$49.37	\$47.96	\$99,760
Security Guards	31,560	\$15.12	\$15.87	\$33,010
Lifeguards	1,780	\$8.96	\$9.13	\$18,990
13. <u>Food Preparation and Serving Related Occupations</u>	170,150	\$9.52	\$10.95	\$22,770
Chefs and Head Cooks	2,200	\$23.13	\$25.58	\$53,200
Cooks, Restaurant	14,590	\$11.67	\$12.18	\$25,340
Dishwashers	10,080	\$8.34	\$8.74	\$18,180
14. <u>Building and Grounds Cleaning and Maintenance Occupations</u>	84,090	\$11.41	\$12.28	\$25,530
First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	1,950	\$20.89	\$22.59	\$46,990
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	45,210	\$10.84	\$11.21	\$23,320
Maids and Housekeeping Cleaners	15,100	\$10.77	\$11.20	\$23,300
15. <u>Personal Care and Service Occupations</u>	53,500	\$11.70	\$13.79	\$28,690
Embalmers	60	\$21.74	\$23.29	\$48,450
Hairdressers, Hairstylists, and Cosmetologists	6,350	\$14.01	\$17.33	\$36,050
Shampooers	1,320	\$8.89	\$9.35	\$19,440
Child Care Workers	6,810	\$10.44	\$10.66	\$22,160
16. <u>Sales and Related Occupations</u>	209,090	\$13.00	\$19.38	\$40,300
Cashiers	52,880	\$9.53	\$10.33	\$21,490
Retail Salespersons	66,120	\$10.44	\$12.51	\$26,030
Sales Engineers	830	\$46.53	\$49.88	\$103,740

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Occupation Title	# Employed in DC metro area	Median Hourly	Mean Hourly	Mean Annual
17. <u>Office and Administrative Support Occupations</u>	366,370	\$17.38	\$18.51	\$38,500
<u>Stock Clerks and Order Fillers</u>	21,490	\$11.02	\$12.16	\$25,280
<u>Legal Secretaries</u>	8,890	\$28.55	\$28.14	\$58,530
<u>Office Clerks, General</u>	63,860	\$15.25	\$15.68	\$32,620
18. <u>Farming, Fishing, and Forestry Occupations</u>	870	\$13.23	\$15.48	\$32,200
<u>Farmworkers, Farm and Ranch Animals</u>	470	\$12.89	\$14.76	\$30,700
19. <u>Construction and Extraction Occupations</u>	103,650	\$19.10	\$21.20	\$44,100
<u>Construction Laborers</u>	16,930	\$14.05	\$14.33	\$29,810
<u>Helpers--Electricians</u>	2,330	\$13.99	\$14.18	\$29,500
<u>Elevator Installers and Repairers</u>	560	\$34.46	\$32.11	\$66,790
20. <u>Installation, Maintenance, and Repair Occupations</u>	75,720	\$21.99	\$22.99	\$47,820
<u>Electrical and Electronics Repairers, Powerhouse, Substation, and Relay</u>	380	\$28.90	\$28.98	\$60,270
<u>Automotive Service Technicians and Mechanics</u>	9,400	\$19.62	\$21.36	\$44,420
<u>Bicycle Repairers</u>		\$11.63	\$11.70	\$24,350
21. <u>Production Occupations</u>	51,430	\$15.32	\$17.64	\$36,690
<u>Bakers</u>	2,180	\$12.88	\$13.62	\$28,340
<u>Machinists</u>	980	\$22.87	\$22.72	\$47,250
<u>Laundry and Dry-Cleaning Workers</u>	3,720	\$9.74	\$10.34	\$21,500
<u>Medical Appliance Technicians</u>		\$30.47	\$32.42	\$67,440
<u>Cooling and Freezing Equipment Operators and Tenders</u>	40	\$8.55	\$9.56	\$19,890
22. <u>Transportation and Material Moving Occupations</u>	98,090	\$14.61	\$17.19	\$35,760
<u>Airline Pilots, Copilots, and Flight Engineers</u>	2,600			\$106,480
<u>Air Traffic Controllers</u>	1,170	\$68.30	\$65.18	\$135,580
<u>Parking Lot Attendants</u>	3,850	\$10.00	\$10.39	\$21,610
<u>Laborers and Freight, Stock, and Material Movers, Hand</u>	22,260	\$11.97	\$12.77	\$26,560