

---

---

**Washington Metropolitan  
Statistical Area  
Employment Projections  
by Industry and  
Occupation, 2008-2018**

**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

**Government of the District of Columbia  
Department of Employment Services  
Labor Market Research and Information  
July 13, 2011**

Department of Employment Services

4508 Minnesota Ave, NE

Washington, DC 20019

Ph. (202) 671-1633

Website: [www.does.dc.gov](http://www.does.dc.gov)

# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## Table of Contents

List of Tables, Figures and Appendices .....	4
List of Tables.....	4
List of Figures .....	4
List of Appendices.....	4
Executive Summary.....	5
Introduction .....	8
Methods.....	8
Employment by Industry .....	9
Good Producing Sectors.....	14
Construction .....	15
Manufacturing .....	15
Service Providing Sectors.....	15
Trade, Transportation, Utilities .....	16
Professional and Business Services.....	18
Education and Health Care.....	19
Leisure and Hospitality.....	20
Other Services including Non-Profit Associations.....	21
Government .....	22
Employment by Occupation .....	23
Major Occupational Groups .....	26
Management, Business Operations and Financial Occupations .....	26
Professional and Related Occupations.....	26
Service Occupations .....	27
Sales and Related Occupations.....	27
Office and Administrative Support Occupations.....	27
Farming, Fishing and Forestry Occupations.....	28
Construction and Extraction Occupations .....	28
Installation, Maintenance and Repair Occupations .....	28
Production Occupations.....	28
Transportation and Materials Moving Occupations .....	29
Occupational Details .....	29
High Demand Occupations.....	29
High Growth Occupations.....	30
High Growth Rate Occupations.....	30
Employment by Skill Level.....	37
Wages in Occupational Groups .....	41
The Washington Metropolitan Statistical Area Compared to Other Major Metropolitan Areas .....	43

# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## List of Tables, Figures and Appendices

### List of Tables

TABLE 1: EMPLOYMENT BY INDUSTRY .....	10
TABLE 2: HIGH EMPLOYMENT GROWTH INDUSTRIES 2008-2018.....	13
TABLE 3: EMPLOYMENT PROJECTIONS BY MAJOR OCCUPATIONAL GROUP AND SUBGROUP .....	24
TABLE 4: HIGH DEMAND OCCUPATIONS .....	31
TABLE 5: HIGH GROWTH OCCUPATIONS .....	33
TABLE 6: HIGH GROWTH RATE OCCUPATIONS WITH GROWTH OVER 100 JOBS .....	35
TABLE 7: EMPLOYMENT AND GROWTH BY EDUCATIONAL SKILL LEVEL .....	40
TABLE 8: WASHINGTON MSA ANNUAL WAGES BY OCCUPATIONAL GROUP .....	43
TABLE 9: THE ELEVEN BIGGEST METROPOLITAN AREAS .....	46

### List of Figures

FIGURE 1: PERCENT SHARE BY INDUSTRY IN 2008 AND 2018 .....	12
FIGURE 2: WASHINGTON MSA OCCUPATIONAL SHARES 2008-2018.....	25
FIGURE 3: WASHINGTON MSA OCCUPATIONAL SKILLS IN 2008 AND PROJECTED 2018.....	40

### List of Appendices

APPENDIX 1: DC INDUSTRY DETAIL .....	47
APPENDIX 2: DC OCCUPATIONAL DETAIL .....	50

# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## Executive Summary

Total jobs including establishment employment and the self-employed are projected to increase from 3,305,236 to 3,644,454 between 2008 and 2018, or an average of 33,922 more jobs per year. This projection reflects the lingering consequences of the 2008-2009 Great Recession including the Federal Government's fiscal crisis. The projection anticipates just under a 1 percent (0.98 percent) average annual growth rate in employment. Industries break down into goods producing (about 7 percent of the total) and services providing including government (about 84 percent), and self-employed (about 9 percent). There is little growth in the goods producing sector except construction, which should recover to pre-crisis levels by 2018. Jobs in goods production - natural resources, construction and manufacturing - make up only about 7.1 percent of area employment. Manufacturing, barely 61 thousand jobs, has been declining since reaching a high of 80 thousand in the 1990's. A drop of 7.8 thousand jobs is projected as a continuation of yearly trends.

In the huge services sector, professional and business services, education and health care, and other services are all projected to have growth rates close to 2 percent per year. Health care and social assistance is the fastest growing subsector with a 2.25 percent projected growth rate, closely followed by professional, scientific and technical services with 2.16 percent per year. Arts, entertainment and recreation is also projected to grow rapidly (2.12 percent). The most jobs will originate in professional, scientific and technical services (109,228) and the least in arts, entertainment and recreation (8,852) with health care and social assistance in the middle (61,621). The professional, scientific and technical services group, which includes legal, engineering, computer, and consulting services, is already the biggest MSA subsector with 457.6 thousand jobs, 13.8 percent of area jobs. It is also the biggest part of all professional and business services, which also includes management of companies and enterprises as well as administrative support and waste management services. These three sub-sectors with twice the growth rate of the area as a whole will provide an increasing share of area employment. Other Services include non-profit organizations like the Chamber of Commerce, but also national professional associations, trade associations, international labor unions and political organizations. This sector had 176.7 thousand jobs in 2006 and 184.7 thousand in 2008 with growth rates above the metro area average over most of the past decade. That is projected to continue as the non-profit sector alone will add 27.6 thousand jobs at a projected growth rate of 2.46 percent.

Leisure and hospitality will grow at a 1.36 percent rate, slower than the non-profit sector. Leisure and hospitality (arts, entertainment, recreation, accommodations and food services) took third place in new jobs from 1990 to 2008 with 82 thousand, but 75 percent of the jobs were in restaurants. Continued growth above the area average will bring nearly 37.9 thousand new jobs. Government jobs excluding education are projected to decline with the Federal Government actually cutting jobs from 2008 levels and states and localities barely eking out an increase. Driving the federal job cuts are the winding down of the Iraq and Afghanistan wars and the effort to bring the mammoth federal deficit and accumulated debt under control. Similar declines occurred in the 1990s. We project a decline for federal, state and local government of 21.8 thousand jobs by 2018. Education rises with population growth. Hence public and private elementary and secondary school employment will provide more than half the new jobs in education with area colleges picking up most of the rest. We project 43 thousand new jobs in education by 2018.

Service sub-sectors in trade, transportation, warehousing and utilities, finance and insurance and real estate have had slow job growth since 1990, too slow to maintain their share of metropolitan employment over the past ten years. These trends are projected to continue with growth rates below 1 percent. Information services have been declining since 2000 from the digital revolution and national consolidation of publishers, broadcasters, the Internet and telecommunications into firms offering multiple services. Even though the Washington MSA remains a major source of news, we project a loss of nearly 3.6 thousand jobs by 2018.

This report includes projections for 775 detailed occupations from the Standard Occupational Classification (SOC). Each of these falls into one of 22 groups according to the first two digits of their six-digit occupational code. For example, purchasing managers (SOC 11-3061) are part of management occupations (11-0000). Some of the 22 two-digit groups are collected in three super groups. Management, business and financial occupations include two two-digit occupations, management (SOC 11-0000) and business and financial operations (SOC 13-0000). Professional and related services is a second super group

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

that contains eight two-digit occupations and service occupations is the third super group that contains five. The remaining seven two-digit occupations stand alone. Hence, there are ten major occupational groups three of which are super groups and seven of which are stand-alone two-digit occupations.

Two of the ten major occupational groups are projected to grow at rates greater than the average for the metro area, which is 0.98 percent per year. The first, service occupations are projected to grow at 1.54 percent per year. All five component two-digit occupations within this super group are projected to grow rapidly led by healthcare support (2.6 percent), and including protective occupations (1.26 percent), food preparation (1.74 percent), building and grounds cleaning (1.5 percent) and personal care (1.5 percent). The professional and related services will also grow at above average rates (1.41 percent per year). Six of its eight two-digit occupations are projected to grow at more than one percent per year with computer and mathematical (1.87 percent) and education, training and library (1.78 percent) growing most rapidly. At the other extreme, architecture and engineering (0.87 percent) and legal occupations (0.4 percent) are projected to grow below 1 percent per year. Growing at moderate above-average rates are life, physical and social sciences (1.15 percent), community and social services (1.57 percent), arts, design, entertainment, sports and media (1.06 percent) and healthcare practitioners and technical occupations (1.46 percent).

All the remaining occupational groups are projected to grow at below average rates. Production jobs are projected to decline. Farming, fishing and forestry may eke out a few jobs. A weak consumer sector will keep sales job growth to about a third of a percent each year. Construction and extraction jobs should recover by 2018. Transportation (0.6 percent) and installation, maintenance and repair (.84 percent) should both grow at decent if below average rates.

Average annual openings in the Washington MSA are projected at 111,113, more than triple job growth. Openings arise when a new job is created but also when an existing job is vacated. The top 40 of the 775 occupations accounts for about 48 percent of openings. Low skilled and/or high turnover occupations are among those with the largest annual openings: cashiers, waiters and waitresses, retail sales persons, food preparation workers, and others, but there are skilled occupations as well. There are four skilled occupations in the top 40 year in and year out: management analysts, lawyers, nurses and accountants and auditors. Four top computer occupations are there as well. Business operations specialist is another high demand occupation.

The top 40 growth occupations with respect to job growth have over 61 percent of the total projected job growth in 2008-2018, or 208,129 top 40 jobs out of a total projected increase of 339,218. Professional and related occupations lead the way for job growth and services occupations are second. There is considerable overlap between the top 40 high demand occupations and the top 40 high growth occupations with 30 high demand occupations also appearing among the 40 high growth occupations.

We also look at the growth rate of jobs, to be more precise the projected average annual compound rate of change of jobs over the ten year period. Because occupations with a small base can grow very fast without generating a numerically significant number of jobs, we look only at occupations with at least 100 jobs in 2008. This group of occupations is somewhat different than the high demand and high growth groups. Occupations for which there is significant numerical growth may not be growing at a high percentage rate since their base is already large. Professional and related occupations dominate the high growth rate group with 53 percent of the high growth rate total, or 43,190 of the total projected increase of 81,539.

New insights become available when the occupational projections are organized by skill using the Bureau of Labor Statistics skills taxonomy. The taxonomy enables the classifying occupations by their educational requirements. The occupational mix projected for 2018 will require more formal education be it to the associate degree level or on up to the doctoral level. Jobs requiring only work experience and on-the-job training, though still important, are less so. Most striking is the projected increase in jobs requiring a bachelor's degree from 20.1 to 21.3 percent to the workforce; other shifts are smaller. The Washington Metropolitan Statistical Area has 34.2 percent of its employment in occupations requiring a bachelor's degree or more compared to 22 percent for the nation as a whole. Jobs requiring an associate's degree are also growing in importance.

The Bureau of Labor Statistics wage distribution data enable us to compare wages among the different occupations in Washington and also to compare wages in Washington with wages in the rest of the country. The projections report summarizes the wage distribution for the 21 two-digit occupational groups using the 10<sup>th</sup> percentile, the median, and the 90<sup>th</sup> percentile. The median or middle wage in Washington was \$44,620, which means that half the workers earn less and half earn more than \$44,620. The 10<sup>th</sup> percentile

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

was \$18,970 and the 90<sup>th</sup> percentile was \$113,700, which means that 10 percent of the workers earn less than \$18,900 and 10 percent earn more than \$113,700. Comparable figures for the nation as a whole are less with a median of \$32,390, a 10<sup>th</sup> percentile of \$16,680 and a 90<sup>th</sup> percentile of \$79,020. Comparing these figures we see that Washingtonians are paid about 14 percent more than Americans overall at the bottom of the distribution, 30 percent more in the middle, and 40 percent more at the top. These differences reflect the higher cost of living in Washington and the larger concentration of highly educated and skilled persons in Washington to staff federal, military, consulting and research positions. Management occupations in Washington have the highest median wages at \$122,340 with legal occupations close behind at \$108,320. Business and professional occupations lag further behind with the highest median wages in the \$70 and \$80 thousand range. These and other fascinating snapshots on wages appear in the Wages in Occupational Groups section of the report.

In the final section of the report we compare changes in employment in Washington with the ten other largest metropolitan areas in the nation. In 2008 the Washington Metropolitan Area ranked fourth among the eleven largest metropolitan areas in the nation. Establishment employment was 3,006.1 thousand jobs. Washington had added 328.4 thousand jobs in the preceding eight years, more than all ten other metropolitan areas. In fact, four of the top eleven metropolitan areas had lost jobs since 2000. The decade of the 1990s had not been so spectacular for Washington. It had gained 428.3 thousand jobs, just under ten percent of employment for all eleven areas. Washington benefitted from the 9/11 attacks on the World Trade Center and the Pentagon and the wars in Iraq and Afghanistan, which followed. That situation is now reversing itself, however, as the wars are being scaled back and the Federal Government, faced with massive deficits and accumulated debt, struggles to cut spending.

# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## Introduction

This report presents summary data and discussion of the 2008-2018 projections of the Washington Metropolitan Statistical Area for industry and occupational employment. These projections are part of the regular cycle of state and regional projections sponsored by the Employment and Training Administration and the DC Department of Employment Services as part of the Projections Management Partnership (PMP) consortium between the U.S. Department of Labor, Employment and Training Administration (ETA); the U.S. Department of Labor, Bureau of Labor Statistics (BLS); the National Association of State Workforce Agencies (NASWA); and the State Projections Consortium. The Washington Metro area includes the District of Columbia along with 15 city and county jurisdictions in Virginia, 5 counties in Maryland and one West Virginia County with a total 2008 population of 5.378 million.

## Methods

The PMP consortium projections follow established methods and procedures using the consortium's Projections Suite software. The Projections Suite includes the Long Term Projections (LTP) software, which is used to project employment by industry, and the MicroMatrix software, which is used to project employment by occupation. The LTP software uses statistical routines for projecting industry employment from a base year to a projected year. These include shift-share analysis, time series estimation and regression analysis. The model uses past trends in employment, unemployment, income, population, gross state product, and other data series to project employment for detailed industry categories. We have employed shift-share analysis and time series analysis for the most part in these projections.

The MicroMatrix program uses the detailed industry projections produced by the LTP model as inputs to generate occupational projections that distribute each of the industry totals among occupational groups and detailed occupations. In addition, MicroMatrix uses occupational survey data to determine the percentage of an industry's employment in specific occupations. For example, if law firms use on the



## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

average 15 lawyers for each 100 employees, then 25 percent of law firm employment growth can be projected to be lawyers. These are referred to as staffing patterns. The Bureau of Labor Statistics regularly studies how staffing patterns change over time. These change factors are incorporated into the MicroMatrix Model. Using these data, forecasters can use industry employment projections to generate projected occupational changes over the coming years. The result of these projections is employment for 82 NAICS industries and 775 SOC (standard occupational classifications) occupations.

### **Employment by Industry**

We project for the Washington Metropolitan Statistical Area an annual increase of 33,922 jobs for the decade with employment rising from 3,305,236 in 2008 to 3,644,454 in 2018. The increase translates into an annual percentage rate of growth just under 1 percent per year (0.98 percent) for the decade. These and other figures discussed below are contained in Table 1.

The current projection reflects the lingering consequence of the 2008-2009 Great Recession. Job growth rates for the Washington Metropolitan area averaged 1.6 percent between 1991 and 2008, which makes 1 percent a guarded projection. While jobs in the Washington Metropolitan Statistical Area performed better than the national economy through the entire recession, the monthly average of area wide establishment jobs declined in 2009 over 2008. Establishment jobs were up a modest 12 thousand in 2010, but show no sign of returning to the annual gains exceeding 60 thousand jobs a year that occurred in the late 1990's and selected years after 2000.

Even though the Washington Metropolitan Statistical Area has an unusually high percentage of its jobs in the Federal Government, industry employment in both goods producing and service providing sectors shows many of the same long term trends and tendencies as other states and the national economy. The Washington Metropolitan Statistical Area goods producing sector has always been small, but like the national economy it continues to decline as a percentage share of area jobs.

Figure 1 provides a visual sense of the relative importance of industries classified into two-digit NAICS code categories. NAICS, which stands for the North American Industry Classification System, classifies industries into five increasingly detailed sectors described by numerical codes the broadest of which have two digits. For example, the two-digit code for wholesale trade is 42. The Figure shows 19 two-

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

digit industries arranged according to their share of total area employment in 2008 in decreasing order of importance, and also their share in 2018. The top red bar gives the 2018 share and the bottom blue bar gives the 2008 share. The most important two-digit industry is professional, scientific and technical services with close to 16 percent of area jobs. The least important is arts, entertainment and recreation. The two-digit NAICS codes are similar but not identical to the broad classification of industries used in Table 1. The classification in Table 1 is used in the monthly releases of the Department of Employment Services, and was in use before NAICS was developed.

TABLE 1: EMPLOYMENT BY INDUSTRY

Industry	2008	2018	2008 share	2018 share	Growth	Growth Rate %
Total, All Industries	3,305,236	3,644,454	100%	100%	339,218	0.98%
<b>Good Producing</b>	233,208	244,272	7.06%	6.70%	11,064	0.46%
Natural Resources	3,937	3,794	0.12%	0.10%	-143	-0.37%
Construction	168,438	187,478	5.10%	5.14%	19,040	1.08%
Manufacturing	60,833	53,000	1.84%	1.45%	-7,833	-1.37%
<b>Service Providing</b>	2,769,933	3,091,082	83.8%	84.8%	322,043	1.10%
<b>Trade, Transportation, Utilities</b>	401,717	414,578	12.15%	11.38%	12,861	0.32%
Wholesale Trade	69,383	68,750	2.10%	1.89%	-633	-0.09%
Retail Trade	265,484	271,141	8.03%	7.44%	5,657	0.21%
Transportation and Warehousing	57,685	66,287	1.75%	1.82%	8602	1.40%
Utilities	9,165	8,400	0.27%	0.23%	-765	-0.87%
<b>Information</b>	90,982	87,384	2.75%	2.40%	-3,598	-0.40%
<b>Financial Activities</b>	154,309	159,037	4.67%	4.36%	4,728	0.30%
Finance and Insurance	100,001	105,400	3.03%	2.89%	5,399	0.53%
Real Estate and Rental Leasing	54,308	53,637	1.64%	1.47%	-671	-0.12%
<b>Professional and Business Services</b>	681,757	830,173	20.63%	22.78%	148,416	1.99%
Professional, Scientific and Technical Services	457,608	566,836	13.84%	15.55%	109,228	2.16%
Management of Companies and Enterprises	40,308	43,287	1.22%	1.19%	2,979	0.72%
Administrative Support & Waste Mgmt Services	183,841	220,050	5.56%	6.04%	36,209	1.81%
<b>Education and Health Care</b>	486,235	590,931	14.71%	16.21%	104,696	1.97%
Educational Services (including public)	238,868	281,943	7.23%	7.74%	43,075	1.67%
Health Care and Social Assistance	247,367	308,988	7.48%	8.48%	61,621	2.25%

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

<b>Leisure and Hospitality</b>	261,818	299,720	7.92%	8.22%	37,902	1.36%
Arts, Entertainment & Recreation	38,001	46,853	1.15%	1.29%	8,852	2.12%
Accommodation and Food Services	223,817	252,867	6.77%	6.94%	29,050	1.23%
<b>Other Services</b>	184,741	223,541	5.59%	6.13%	38,800	1.92%
<b>Government</b>	508,374	485,718	15.38%	13.33%	-21,762	-0.45%
Federal Government	348,550	325,000	10.55%	8.92%	-22,656	-0.70%
State & Local Government excluding Education	159,824	160,718	4.84%	4.41%	894	0.06%
<b>Self Employed</b>	302,095	309,100	9.14%	8.48%	7,005	0.23%

FIGURE 1: PERCENT SHARE BY INDUSTRY IN 2008 AND 2018

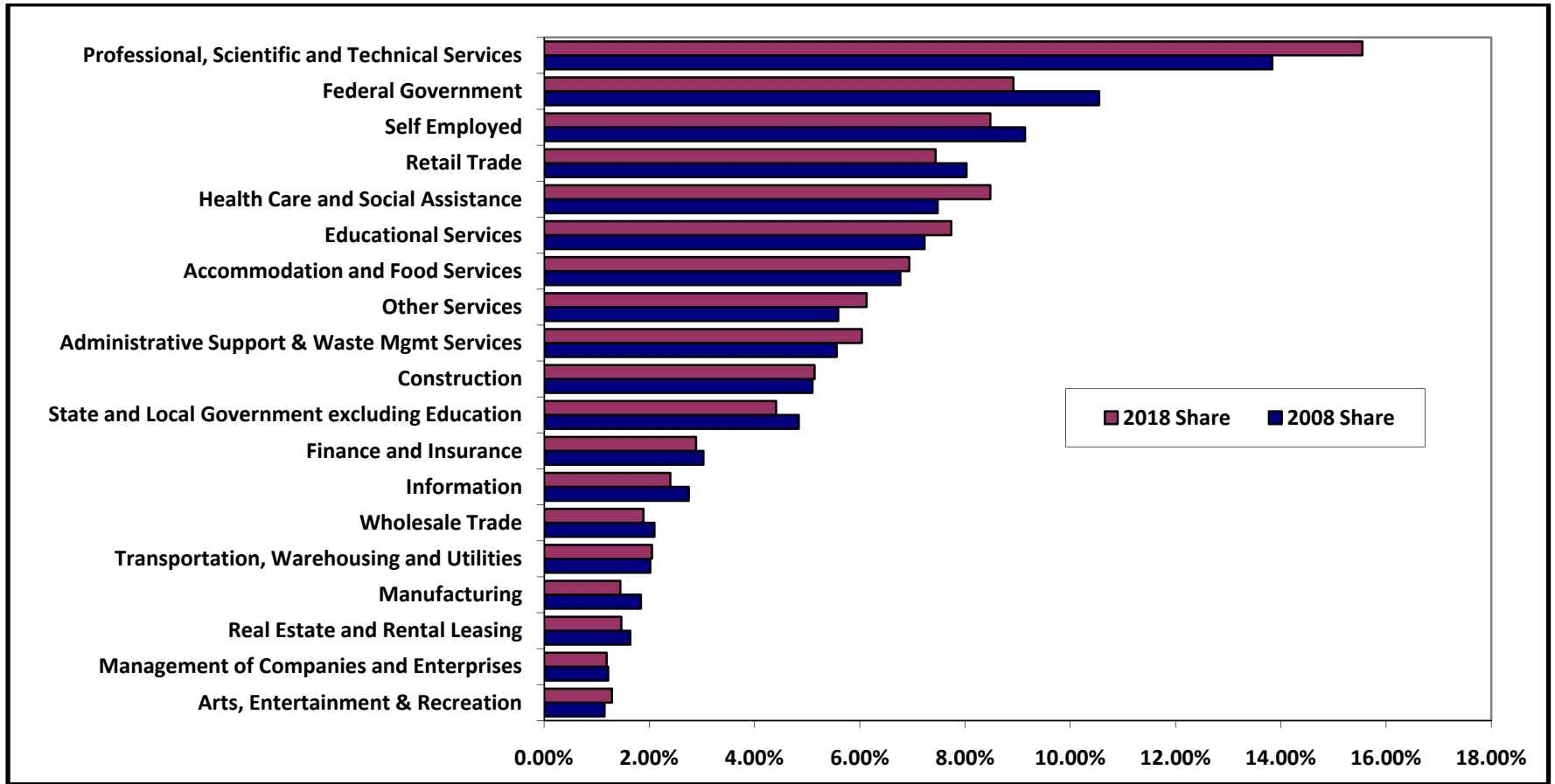


Figure 2 presents the top forty three and four digit industries with respect to projected job growth. The data are organized in major industry groups. For example, the top growth industry is computer systems design and related services with projected growth of 42,418 jobs. Elementary and secondary schools is next with 31,202 jobs. Ambulatory health care is fifth with 23,383 jobs, and so on. This table provides a lot of information on where the growth is expected with respect to industries.

Combined service providing sectors continue to be a bigger percentage of area jobs as in the national economy, but not because of the Federal Government. The 2008 Federal Government share of Washington area jobs is down over 3 percent since 1990. During that time professional and technical services gained 4.5 percent of area jobs, but other gainers include administrative support services, education, health care, leisure and hospitality and non-profit associations.

Trade, transportation, utilities, information services, and finance all lost share leading up to 2008, but the declining share of jobs results primarily from the adoption and use of developing computer technologies and the rise of labor productivity and not a decline in the use of the services themselves.

TABLE 2: HIGH EMPLOYMENT GROWTH INDUSTRIES 2008-2018

NAICS	Industry Title	Growth	Growth Rate
<b>230000</b>	<b>Construction</b>		
236000	Construction of Buildings	1,949	0.47%
237000	Heavy and Civil Engineering Construction	2,314	1.16%
238000	Specialty Trade Contractors	14,777	1.28%
<b>440000</b>	<b>Retail Trade</b>		
443000	Electronics and Appliance Stores	1,581	1.25%
444000	Building Material and Garden Equipment and Supplies Dealers	2,543	1.19%
<b>480000</b>	<b>Transportation and Warehousing</b>		
452000	General Merchandise Stores	2,816	0.60%
485000	Transit and Ground Passenger Transport	5,084	3.91%
488000	Support Activities for Transportation	1,242	1.62%
<b>510000</b>	<b>Information Services</b>		
519000	Other Information Services	1,133	1.73%
<b>520000</b>	<b>Finance and Insurance</b>		
522000	Credit Intermediation and Related Activities	5,850	1.08%
<b>540000</b>	<b>Professional Services</b>		
541100	Legal Services	8,514	1.43%
541200	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	5,121	1.72%
541300	Architectural, Engineering, and Related Services	10,940	1.68%
541500	Computer Systems Design and Related Services	42,418	2.45%
541600	Management, Scientific, and Technical Consulting Services	22,943	2.73%
541700	Scientific Research and Development Services	15,244	2.68%
541800	Advertising and Related Services	1,245	0.77%

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

541900	Other Professional, Scientific, and Technical Services	2,080	1.34%
<b>560000</b>	<b>Administrative Services</b>		
561100	Office Administrative Services	4,533	2.96%
561200	Facilities Support Services	1,724	1.81%
561600	Investigation and Security Services	11,006	3.19%
561700	Services to Buildings and Dwellings	17,841	2.43%
561900	Other Support Services	1,637	2.89%
<b>610000</b>	<b>Education</b>		
611100	Elementary and Secondary Schools	31,202	1.80%
611300	Colleges, Universities, and Professional Schools	7,571	1.32%
611400	Business Schools and Computer and Management Training	1,250	2.19%
611600	Other Schools and Instruction	1,807	1.53%
<b>620000</b>	<b>Health Care</b>		
621000	Ambulatory Health Care Services	23,383	2.28%
622000	Hospitals	12,243	1.62%
623000	Nursing and Residential Care Facilities	11,504	2.45%
624000	Social Assistance	14,491	2.96%
<b>710000</b>	<b>Arts, Entertainment, Recreation</b>		
711000	Performing Arts, Spectator Sports, and Related Industries	1,551	1.55%
713000	Amusement, Gambling, and Recreation Industries	6,807	2.32%
<b>720000</b>	<b>Accommodation and Food Services</b>		
721000	Accommodation	2,918	0.70%
722000	Food Services and Drinking Places	26,132	1.34%
<b>810000</b>	<b>Other Services</b>		
811000	Repair and Maintenance	3,232	1.28%
812000	Personal and Laundry Services	5,597	1.28%
813000	Religious, Grants making, Civic, Professional, and Similar Organizations	27,608	2.46%
814000	Private Households	2,363	1.14%
<b>900000</b>	<b>Government</b>		
930000	Total local government	1,503	0.16%

### *Good Producing Sectors*

Goods producing sectors in natural resources, construction and manufacturing provided only 233.2 thousand jobs in 2008, or 7.1 percent of area jobs. We project construction to return to pre recession levels, but manufacturing will continue its slow decline and natural resources will remain small.

# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## Construction

Construction jobs dropped from a monthly average of 187.6 thousand in 2006, or 1.7 percent of employment, to 168.4 thousand in 2008, a loss of 19.2 thousand jobs. The biggest numerical drop came in construction of buildings and specialty trade contractors. Heavy and civil engineering jobs lost only 2 thousand jobs. Construction jobs continued to decline into 2009. The share of construction employment in the total declined 5.1 percent in 2008. We project construction jobs to recover job losses since 2006, but our forecast total of 187.5 thousand construction jobs for 2018 anticipates construction will continue to be 5.1 percent of employment in 2018.

## Manufacturing

Metropolitan manufacturing jobs dropped to 60.8 thousand in 2008 as part of a 10 year record of decline along with an even longer decline in the share of area jobs. Area manufacturing jobs are primarily in printing, selected machinery manufacturing and computer and electronic product manufacturing. Manufacturing jobs have continued to decline into 2009-10. Nothing suggests a manufacturing turnaround. Our projection calls for 53,000 manufacturing jobs by 2018, which is expected to be 1.58 percent of total employment.

## *Service Providing Sectors*

Service providing sectors including government accounted for almost 2.8 million jobs in 2008, or 84.8 percent of total employment. The current projection allows for a continued negative trend of federal jobs with state and local government jobs up slightly. We project gains in professional services, education, health care, leisure and hospitality services and non-profit associations. We also project stable and declining employment for trade, transportation, utilities, information services and financial activities.

# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## Trade, Transportation, Utilities

### Trade

Trade has a 2008 base of 334.9 thousand jobs with 69.4 thousand jobs in wholesale and 265.5 thousand in retail trade. The combined trade total has 11.2 percent of metropolitan establishment jobs, well below the national average of 15.2 percent. Retail jobs are growing slowly around the country and generally much slower than overall employment. That is true in the Washington area as well.

Higher productivity restricts trade jobs because computer technology increases labor productivity where the use of computers for barcodes, inventory management and Internet sales raises sales per work hour and reduces the need for staff. Amazon computers put Borders books in bankruptcy as Netflix knocks out jobs at video stores.

Given the long period of slowly declining percentage of Metropolitan jobs our trade projection reflects this percentage decline. We project a small decline in wholesale trade, and for retail trade jobs to climb to just 271.1 thousand jobs by 2018, an average annual increase of 566 jobs a year for retail. Selected retail stores such as electronic stores, building materials stores and grocery stores will maintain their percentage of area jobs over time, but motor vehicle and parts dealers, gasoline stations, clothing and sports stores will continue to decline with the combined percentage total off about 1 percent to just over 10 percent of area jobs.

### Transportation and Warehousing

Transportation and warehousing includes modal transportation, but also couriers and messengers and warehouse and storage services. Modal transportation jobs in air and truck transportation declined generally, but slowly, in the midst of annual ups and downs in the years before 2008. Air transportation had just over 13 thousand jobs by 2008; truck transportation had almost 9.5 thousand jobs.

Area jobs in transit and ground passenger transportation maintained a steady by moderate growth after 2000. Jobs include a core of 3.8 thousand Washington Area Transit Authority jobs and additional regional transit employment bringing the total to 10.9 thousand area transit jobs. Both couriers and messengers



## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

services and warehousing and storage have been stable: couriers and messengers with 10.5 thousand jobs in 2008, warehousing and storage with 6.1 thousand jobs.

The combined 2008 total of 57.7 thousand jobs is projected to increase to 66.3 thousand jobs by 2018, an increase of 860 jobs a year. The increase is greater than the growth rate for area wide employment, which assures transportation will have a higher share of future jobs. The biggest gains are expected in area transit and ground passenger transportation.

### **Utilities**

Washington area utility employment keeps dropping as it does in the national economy. By 2008 it dropped below 9 thousand jobs with little prospect of increasing as a result of higher labor productivity and consolidation in the industry. Utility employment is projected to be 8.4 thousand by 2018.

### **Information services**

Information service jobs increased through the 1990's only to decline after 2000. Information services lost a little more than 1.5 percent of area jobs after 2000. Computer technologies continue to change the job mix for information services in the national economy as well as the local economy, especially publishing and telecommunications. Craigslist website offers free classified advertising with a few dozen jobs while fewer and fewer bother with the Yellow Pages. More people get their news electronically where newspapers cannot compete with continuously updating Internet stock quotations and instant video news.

The 2008 job base of almost 91 thousand jobs is down from 131 thousand jobs in 2000. Telecommunications and publishing remain as the biggest employers among area information services sub sectors with 65 percent of area information jobs, but they had the biggest job losses after 2000. Jobs in motion picture and video production, Internet services, and data processing are not dropping as fast and broadcasting jobs appear to be leveling off, but there is little prospect of more jobs in information services. The information services projection calls for a decrease of 3.5 thousand jobs down to 87.4 thousand jobs by 2018. The share of jobs will drop as well, reaching only 2.6 percent if establishment employment by 2018.

# **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

## **Financial Activities**

Financial activities include finance and insurance and real estate and rental leasing. The combined Washington metropolitan area financial activities finished 2008 with a monthly average of 154.3 thousand jobs, a little less than the previous five years when monthly employment averaged 159 thousand jobs, a 0.6 percent drop in the percentage share of area establishment jobs.

In a digital world finance is computer code. Some Americans enjoy the convenience of on line banking from their home computer eliminating the need for tellers and teller's jobs. Higher labor productivity in computerized finance limits job growth, but proportionately more in banking and insurance than investments and real estate and rental leasing. The financial activities projection calls for an increase of 4.7 thousand jobs to 159 thousand jobs. We project insurance and real estate jobs to decline as banking and investment jobs increase, but the increases will not be fast enough to prevent a decline in the share of financial jobs in the total of Washington area jobs by 2018.

## **Professional and Business Services**

Jobs in professional and business services are reported in three sub sectors: professional, scientific and technical services, management of companies and enterprises, and administrative support and waste management services.

## **Professional, Scientific and Technical Services**

The Washington metropolitan area supports a massive professional, scientific and technical services sector with 457.6 thousand jobs in legal services, accounting, architecture, engineering, computer design and related computer services, management consulting, scientific research, and advertising-public relations. Jobs in these services make up 15.2 percent of establishment jobs, or 13.8 percent of total employment. In comparison, professional, scientific and technical services are 7.7 percent of New York metropolitan establishment jobs and they average 5.7 percent of national establishment employment.

Professional, scientific and technical services have an established record of job growth and at rates above the average for the metropolitan area. Computer design and related services and management consulting account for over half of area professional service jobs in 2008 and they have the highest growth

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

rates among professional services. Computer design and related services has added an average of over 5 thousand jobs a year for nearly two decades. Even though legal services, architecture, engineering and scientific research are smaller, they continue to add jobs fast enough to replace other jobs that are decreasing, or in slow growth sectors.

We project professional, scientific and technical services to climb to 566.8 thousand jobs, an average increase of 10,900 jobs a year. Growth will be fast enough to increase the professional services share by 1.5 percent of area jobs.

### **Management of Companies and Enterprises**

Managing offices of holding companies and corporate, subsidiary and regional managing offices and the administrative support sub sector have smaller job totals. Managing offices have 40.3 thousand jobs; administrative support services have 183.8 thousand area jobs. Combined they have 7.5 percent of area establishment jobs or 6.8 percent of total jobs, barely half the professional share.

### **Administrative Support and Waste Management Services**

Administrative support jobs are in office administration and facilities support, employment services, temporary help services, telemarketing, security, and services to buildings like janitorial maintenance and landscaping. Services to buildings have the most support jobs: 65.6 thousand. Second place goes to employment services including temporary help services which had 40.2 thousand jobs in 2008. Temp jobs fluctuate more than other sectors, but current job totals remain well below the high of 58.8 thousand, which came in 2000.

We project the administrative support services portion of business and professional services to increase from a total of 224.1 thousand jobs in 2008 to 263.3 thousand jobs in 2018, an increase slightly above 3.9 thousand jobs a year.

## **Education and Health Care**

### **Education**

Public and private education had 238.9 thousand jobs in the Washington Metropolitan area in 2008. Private school education had 91.2 thousand of the education jobs in the District, which is projected to

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

continue trending upward. Private elementary and secondary schools have added 7 to 8 hundred jobs a year for more than a decade and that is projected to continue. Private colleges, business and computer training, various art, dance, and music schools, tutoring and other educational support activities all have a record of increasing jobs.

Public school education includes 132.6 thousand public elementary and secondary school jobs and just under 15.0 thousand more jobs at the area's three public colleges: University of Maryland, University of the District of Columbia, and George Mason University. These jobs also have a record of moderate but steady increase. We project education to expand to 281.9 thousand jobs, an increase of 4,308 a year, which will increase education as a percentage of Washington area employment.

### **Health Care and Social Assistance**

The Washington metropolitan area health care sector reached 247.4 thousand jobs by 2008 after years of annual job growth. The total was only 8.6 percent of Washington area establishment employment when health care in the national economy has 12.6 percent of America's jobs. Except for the low percentage of area jobs, the growth in area health care employment follows national trends. It keeps going up with a steady trend and at a rate above the average of area-wide employment. The higher than average growth rate guarantees a higher percentage of health care employment over time. Health care is projected to have 308.9 thousand jobs by 2018 which will add 6.1 thousand jobs a year to area employment.

### **Leisure and Hospitality**

Leisure and hospitality includes the trio, arts, entertainment and recreation, accommodations and food service, mostly restaurants. Combined they have 261.8 thousand jobs in 2008.

### **Arts, Entertainment and Recreation**

Arts, entertainment and recreation have 38 thousand jobs. In spite of the many federal museums in the District and the Washington metropolitan area 38 thousand jobs provides only 1.27 percent of area establishment jobs, a share lower than the national average of 1.5 percent. The recreation part of the trio has 26.4 thousand establishment jobs, but it is also less than the national percentage. Despite its small size these

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

jobs have a record of steady growth close to the area wide average. We project jobs to increase to 46.8 thousand jobs by 2018, an increase of 885 jobs a year.

### **Accommodations and Food Services**

The accommodations part of leisure and hospitality has 40.6 thousand jobs; food services have the remaining 183.2 thousand jobs for a combined total of 223.8 thousand establishment jobs. The share of establishment jobs in accommodations about equals the national average, but area food services have 6.1 percent of establishment jobs when the national average equals 7.2 percent. The many colleges in the area provide a source of cheap labor, but the high costs of rent and transportation works against a larger restaurant sector.

Both accommodations and food services have a long run record of job growth despite its lower share. However, the fastest and biggest increases came in food services. We project accommodations to increase to 43.5 thousand jobs by 2018, an increase of 290 jobs a year. We project food services to increase to 209.3 thousand jobs, an increase of 2.6 thousand jobs a year.

### **Other Services including Non-Profit Associations**

When the government defined America's industry sectors four sub-sectors were put into a classification called, other. They have little in common with each other, but one is non-profit organizations, an especially important industry in the Washington Metropolitan area. The other three are repair and maintenance services, personal and laundry services, and private households.

Combined these services were up to 184.7 thousand jobs in 2008. All have a record of job growth going back more than a decade, but non-profit organizations have just over 54 percent of these jobs, a total of 100 thousand jobs. The large number of non-profit organization jobs reflects the presence of the national government in the Washington metro area, which is home to many non-profit organizations like the Chamber of Commerce, national professional associations, trade associations, international labor unions and political organizations. Washington area nonprofit organizations have 3.3 percent of area establishment employment compared to 2.2 percent in the national economy.

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

The projection calls for jobs to increase from a combined total of 184.7 thousand jobs to 223.5 thousand jobs by 2018, an increase of almost 3.9 thousand jobs a year. A little over 70 percent of the increase will be in non-profit associations, but repair and maintenance services, personal services and jobs in private households are also projected to increase. Repair and maintenance service jobs, which are mostly automobile repair, are expected to continue increasing from 23.7 thousand to 26.9 thousand. The personal services sector is expected to continue increasing from 41.1 thousand to 46.7 thousand while personal household services will be up from 19.6 to 22 thousand jobs by 2018.

### **Government**

Federal, state and local governments, excluding education and hospitals, support almost 508.4 thousand jobs with over half of them in the Federal Government. The projected increase relies on both the historical employment record and the well publicized political pressures on federal, state and local governments to cut government spending and jobs.

We project government services employment to fall to 485.7 thousand jobs, an average decrease of 2.2 thousand jobs a year. Small gains in state and local government excluding education offset some projected losses in the Federal Government.

### **Federal Government**

The Federal Government employed a monthly average of 349.4 thousand in 1990 and 348.5 thousand jobs in 2008. Federal employment increased above 360 thousand in the early 1990s but declined to 325.7 thousand jobs by 1999 as the Federal Government grappled with chronic deficits as it is once again today. Our projection is for employment to return to 325 thousand by 2018 as austerity measures take hold. The number actually results from a time trend of federal employment from 1990 to 2018.

### **State and Local Government**

State and local government excluding education had 159.8 thousand jobs in Washington area economy in 2008. The total excludes 132 thousand area jobs in public elementary and secondary education, in addition to excluding 14,997 college jobs at the University of the District Columbia, University of Maryland and George Mason University, which are counted as part of education employment.

# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## Employment by Occupation

The Washington Metropolitan Statistical Area occupational projections give base and projected year counts for 775 individual occupations. Individual occupations are listed in Appendix 2. Table 3 below has occupational totals and percentages for the ten major occupational groups and for 15 subgroups. Figure 2 presents the ten major occupational groups in order of their share of total employment in 2008 shown by the blue bar. It also presents their 2018 shares shown by the red bar. The discussion for occupations in this section follows the order in Table 3. Following the Major Occupational Groups section is an Occupational Details section which presents the highest demand occupations, the highest growth occupations and the highest growth rate occupations.

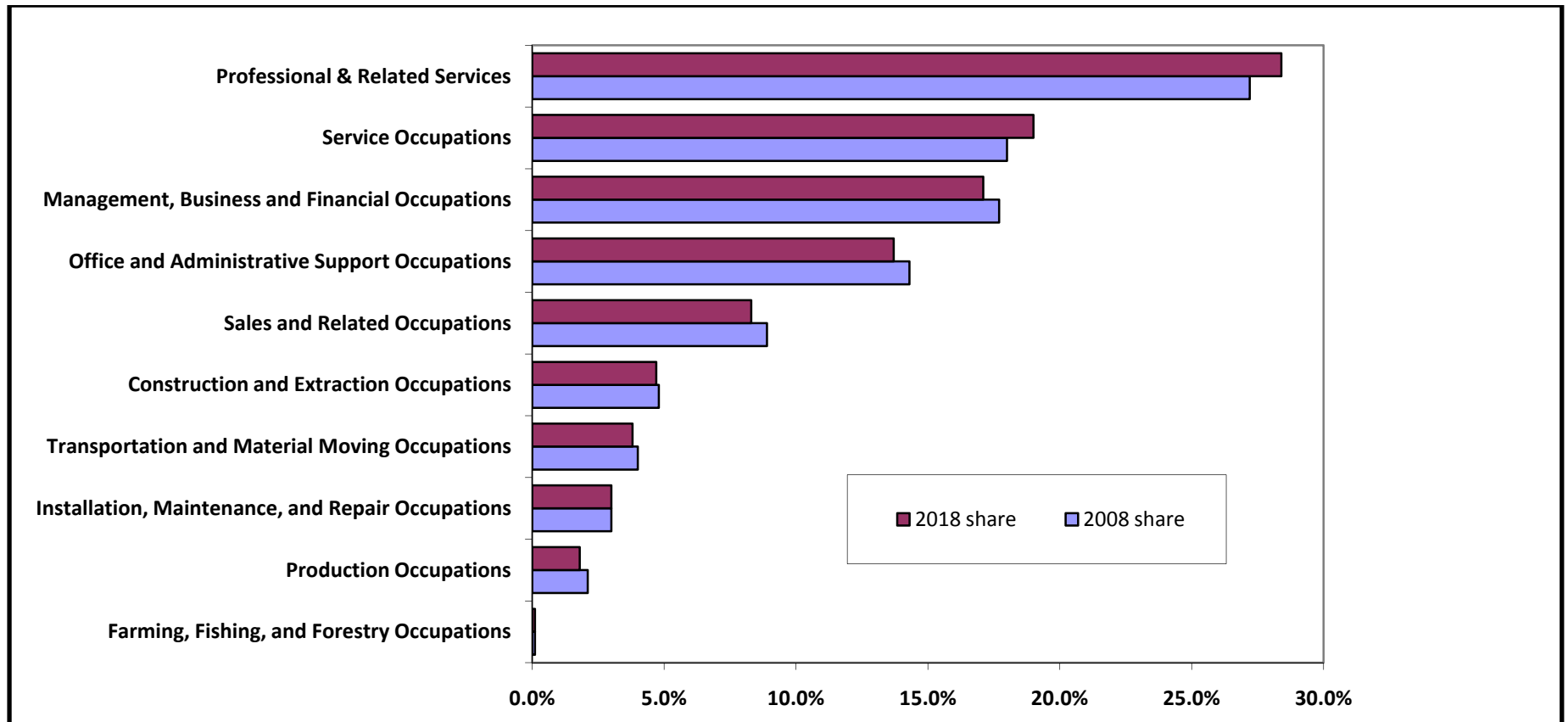
**TABLE 3: EMPLOYMENT PROJECTIONS BY MAJOR OCCUPATIONAL GROUP AND SUBGROUP**

<b>Occupational Titles</b>	<b>2008</b>	<b>2018</b>	<b>2008 share</b>	<b>2018 share</b>	<b>Growth</b>	<b>Growth Rate</b>
Total, All Occupations	3,305,236	3,644,454	100.00%	100.00%	339,218	0.98%
<b>Management, Business and Financial Occupations</b>	583,596	624,771	17.66%	17.14%	41,175	0.68%
Management occupations	283,081	292,745	8.56%	8.03%	9,664	0.34%
Business & financial operations occupations	300,515	332,026	9.09%	9.11%	31,511	1.00%
<b>Professional &amp; Related Services</b>	899,488	1,035,113	27.21%	28.40%	135,625	1.41%
Computer and mathematical occupations	220,887	265,897	6.68%	7.30%	45,010	1.87%
Architecture and engineering occupations	77,137	84,080	2.33%	2.31%	6,943	0.87%
Life, physical, and social science occupations	70,855	79,465	2.14%	2.18%	8,610	1.15%
Community and social services occupations	40,420	47,256	1.22%	1.30%	6,836	1.57%
Legal occupations	92,889	96,675	2.81%	2.65%	3,786	0.40%
Education, training, and library occupations	176,074	210,128	5.33%	5.77%	34,054	1.78%
Arts, design, entertainment, sports, & media occupations	91,994	102,235	2.78%	2.81%	10,241	1.06%
Healthcare practitioners & technical occupations	129,232	149,377	3.91%	4.10%	20,145	1.46%
<b>Service Occupations</b>	593,581	691,507	17.96%	18.97%	97,926	1.54%
Healthcare support occupations	54,580	70,583	1.65%	1.94%	16,003	2.60%
Protective service occupations	88,052	99,805	2.66%	2.74%	11,753	1.26%
Food preparation & serving related occupations	211,429	243,095	6.40%	6.67%	31,666	1.41%
Building and grounds cleaning & maintenance occupations	133,550	155,051	4.04%	4.25%	21,501	1.50%
Personal care and service occupations	105,970	122,973	3.21%	3.37%	17,003	1.50%
<b>Sales and Related Occupations</b>	294,568	303,815	8.91%	8.34%	9,247	0.31%
<b>Office and Administrative Support Occupations</b>	473,707	501,012	14.33%	13.75%	27,305	0.56%
<b>Farming, Fishing, and Forestry Occupations</b>	2,651	2,658	0.08%	0.07%	7	0.03%
<b>Construction and Extraction Occupations</b>	158,286	171,193	4.79%	4.70%	12,907	0.79%
<b>Installation, Maintenance, and Repair Occupations</b>	100,183	108,967	3.03%	2.99%	8,784	0.84%
<b>Production Occupations</b>	68,008	66,202	2.06%	1.82%	-1,806	-0.27%
<b>Transportation and Material Moving Occupations</b>	131,168	139,216	3.97%	3.82%	8,048	0.60%



## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

**FIGURE 2: WASHINGTON MSA OCCUPATIONAL SHARES 2008-2018**



## ***Major Occupational Groups***

### **Management, Business Operations and Financial Occupations**

Management, business and financial occupations have 17.7 percent of the Washington Metropolitan Statistical Area employment, much larger than the 9.1 percent share for the US economy as a whole. Growth in managerial, business, and financial occupations is projected to be 41.2 thousand jobs in the decade from 2008 to 2018. This major group has two subgroups, management occupations and business and financial operation occupations. This major group has projected growth rates of .68 percent per year, which is slower than the average for all occupations. The managerial occupations are growing slowly in the Washington area, 0.34 percent per year, as they are in the national economy, while the business and financial occupations are growing at about the same rate as the area as a whole, 1 percent per year. Within the business and financial operations subgroup, business operations occupations will have bigger increases than financial occupations. Management analysts, accounting analysts, and financial business operations specialists will have the largest individual job gains in this occupational group. Business operations specialist is an especially important occupation in the federal government. These and other details on individual occupations appear in Appendix II under SOC (Standard Occupational Code) 13-0000.

### **Professional and Related Occupations**

Professional and related occupations are 27.2 percent of total employment in Washington compared to the national average of 20.2 percent. This is one of only two major occupational groups that have a growth rate, 1.41 percent, above the metropolitan area growth rate. This group should produce 135.6 thousand new jobs in the decade beginning from 2008 to 2018.

The professional and related occupations group has eight subgroups listed in Table 3. The largest of these is computer and mathematical occupations, which has 220.9 thousand jobs. Second in importance are education, training and library occupations holding with 176.1 thousand jobs. Healthcare occupations have third place with 129.2 thousand jobs. In the national economy education occupations have 1.4 million more jobs than healthcare practitioners and many more jobs than computer occupations, a distant third. Computer specialties in the Washington Metropolitan Statistical Area are projected to have the highest growth, growth rate, and openings in the professional and related occupations group. The growth is highest even

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

though computing started from the largest base of employment. We project 45 thousand new jobs in computer and mathematical occupations. Education, training and library occupations have the next highest growth rate at 1.78 percent with 34 thousand new jobs projected from a slightly lower job base. Health care is third in job growth and third in growth rate compared to the other professional occupations. We project 20.1 thousand new jobs in health care. Legal service occupations have had lower growth in the past few years. Only 3.7 thousand new jobs are projected by 2018.

### **Service Occupations**

Service occupations are the second largest major occupational group in the Washington Metropolitan Area with 593.6 thousand jobs and the one with the highest growth rate, 1.54 percent per year. It is the only other major occupational group with a growth rate above the metropolitan average. We project 97.9 thousand additional jobs by 2018. Service occupations make up 18.0 percent of metropolitan area jobs while the national share equals nearly 19.4 percent.

This group of occupations has five subgroups. The largest is food service occupations with 211.4 thousand jobs. The second is building and grounds cleaning and maintenance with 133.5 thousand jobs. The third is personal care and service with 106 thousand jobs followed by protective service occupations with 88.1 thousand jobs. Health care support brings up the rear with 54.6 thousand jobs in 2008, but this group is projected to grow at 2.6 percent per year, the most rapid of the five subgroups.

### **Sales and Related Occupations**

Sales occupations have 294.6 thousand jobs, 8.9 percent of total jobs, but it is growing slowly so that even with more jobs than in construction occupations, only 9.2 thousand new jobs, most of them in retail sales, are projected by 2018, and fewer than the 12.9 thousand projected for construction. The low growth in these jobs reflects the low growth in the trade sector. We project the growth rate at 0.3 percent per year.

### **Office and Administrative Support Occupations**

Office support occupations have 476.7 thousand jobs, which is a 14.3 percent of total jobs, the fourth largest of the ten major occupational groups. However, growth rates for administrative support occupations are projected to be much lower than most of the others. The projection calls for only 27.3

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

thousand new jobs. Administrative support occupations in the Washington Metropolitan Statistical Area have a lower share of total jobs than in the national economy which has 17.2 percent. Office automation limits the growth of these jobs and reduces their share of new office jobs in the local as well as the national economy.

### **Farming, Fishing and Forestry Occupations**

This is the least important of the major occupational groups in the Washington area with only 26 hundred jobs. Washington is a highly urbanized area, but there are some nursery jobs. We project growth of only seven jobs in this group.

### **Construction and Extraction Occupations**

Construction occupations in the Washington Metropolitan Statistical Area had 158.3 thousand jobs in construction occupations in 2008, which is 4.8 percent of total jobs and the same as the national average. Given housing foreclosure's effect on housing demand, we project job growth in construction will bring only 12.9 thousand new jobs.

### **Installation, Maintenance and Repair Occupations**

Installation, maintenance and repair occupations have 100.2 thousand jobs, which is 3.0 percent of total jobs. The national economy has just nearly 4 percent in these occupations. We project 8.8 thousand new jobs and a growth rate of .84 percent per year. About 16 hundred jobs will be in automotive, bus and truck maintenance and repair occupations. See Appendix Table II, Standard Occupational Codes 49-0000. Other significant sources of new jobs in this group are heating and refrigeration mechanics with about 1450 new jobs over the decade, and security and fire alarm system installers with about 515.

### **Production Occupations**

Production occupations are a diverse group of occupations that are not especially important in the Washington area given its low base of manufacturing industries. Just 68 thousand jobs fall into this group. Jobs are expected to decline by 18 hundred but some occupations will increase to offset small declines in most other production occupations. Among those with projected increases are inspectors, testers, samplers and weighers (337 new jobs), water and liquid waste treatment operators (229), painters of transportation equipment (182), and upholsterers (93). There are others with somewhat smaller increases.

# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## Transportation and Materials Moving Occupations

Transportation has 131.2 thousand jobs, but a projected growth rate of 0.6 percent will limit the increase of new jobs to 8.0 thousand. Of those, 7.4 thousand are projected in driving occupations including taxi drivers, chauffeurs and school bus drivers.

## *Occupational Details*

In this section we select the top 40 occupations with respect to three different criteria: demand, growth and growth rate. High demand occupations are the occupations with the highest number of average annual projected openings. High growth occupations are those with the highest projected increase in the number of jobs over the decade. High growth rate occupations have the highest projected percentage rate of growth over the decade. Since the overall rate of growth is .98 percent, occupations with growth rates higher than .98 percent will increase their share of employment in the coming decade.

## High Demand Occupations

Table 4 shows the annual openings for the top 40 occupations. Openings have two components: job growth and net replacements. Job growth is the annual increase in new jobs by occupation, where negative numbers mean fewer jobs, or just loss. However, job growth does not equal openings. If people leave an occupation they must be replaced before there can be more jobs. If we know there are 5 thousand more bartenders this year than last, but a net of 5 thousand bartenders left bartending then there are 10 thousand openings defined as 5 thousand of growth and 5 thousand net replacements. Net replacements are jobs created by people leaving an occupation for retirement, promotion or other causes. Openings are the sum of job growth and net replacements.

Annual openings in the Washington Metropolitan Statistical Area due to growth and replacements total 111,113. The top 40 occupations account for 48.4 percent of these openings. Among the occupations with the largest number of annual openings are occupations that are relatively low-skilled and/or those with high turnover: cashiers, waiters and waitresses, retail sales persons, food preparation workers, janitors and cleaners, office clerks and security guards. Almost 53 percent of the top 40 high demand occupations are in two occupational groups: professional occupations, and service occupations. Together they have 28,398 thousand of the projected annual openings. There are six skilled professional computer occupations in the

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

top 40. Four occupations from the management and professional occupations groups make the top forty year after year: management analysts, lawyers, registered nurses, and accountants and auditors. Business operations specialist, primarily a government professional job, also made the high demand occupations. Openings in office and administrative support occupations reflect the high number of professional service occupations in the area, although the projected annual openings of 8.5 thousand dropped slightly from previous years. Office automation restricts these jobs.

### **High Growth Occupations**

Table 5 shows the 40 top high growth occupations. Growth is the projected increase in the number of jobs. The top 40 growth occupations are projected to have over 61 percent of the total projected 2008-2018 job growth, or 208,129 top 40 jobs out of a total projected increase of 339,218. Again, professional and related occupations lead the way for job growth and service occupations are second. The list of high growth occupations in Table 5 is similar to the list of high demand Occupations in Table 4. Thirty occupations of the top 40 for growth are also in the top for 40 occupations for demand. Management analysts, accountants and auditors, all six computing occupations, paralegal assistants, six teaching jobs, public relations specialists, nurses and home health aides are included in both tables. The six teaching occupations among the top 40 have a total projected increase of 23.6 thousand jobs.

Sixteen of the 40 high growth occupations come from the professional occupations group. They account for just over 25 percent of the projected increase in jobs for this group. The six high growth computer occupations account for 44.1 thousand projected new jobs. Service occupations account for 13 of the 40 high growth occupations and just over 20 percent of the top 40's projected increase in jobs. Management analysts and accountants and auditors are projected to increase as they have in previous projections with another 12.3 thousand projected among the 40 top gainers.

### **High Growth Rate Occupations**

Table 6 has the top 40 growth rate occupations for occupations that have at least 100 jobs. Occupations with a small number of base year jobs may have a high growth rate but still generate too small a number of jobs to be considered important. To eliminate this tendency to include unimportant high growth rate jobs,

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

the table includes the top 40 with 2008 employment over 100. Still, the top 40 high growth rate occupations add only 81,539 jobs, or 24 percent of projected job growth over the 2008-2018 decade.

The 40 high growth rate occupations have a different mix than high growth occupations from those in Table 5. Managerial occupations are not among the high growth rate occupations. Managerial jobs have slow growth and a generally declining share of jobs throughout the larger economy. Instead, 20 professional and related occupations dominate high growth rate occupations with 53 percent of the high growth rate total, or 43,190 of the total projected increase of 81,539. Computer occupations overlap tables 4, 5 and 6 with at least 4 occupations in each of the tables: computer software engineers and computer system analyst, database administrators, and network systems and data communications analysts. These computing occupations just mentioned account for 34.7 thousand of the 81.5 thousand projected new jobs in high growth rate occupations. Professional research and health care practitioner occupations dominate the remainder of high growth rate professional jobs.

Service occupations take second place with 14 occupations and a 31,320 projected increase in jobs, or 38 percent of the high growth rate occupations. Security guards have biggest count of projected increase of service occupations in the high growth rate occupations, 9,367. There are five health care support occupations including home health aides with a projected increase of 8,593. Landscaping and grounds keeping takes third place with 6,626 projected more jobs. All of the jobs in the top 40 high growth rate occupations have growth rates above 2 percent when the metropolitan area total increase is just under one percent. All of these occupations are expected to have a higher share of future employment.

**TABLE 4: HIGH DEMAND OCCUPATIONS**

<b>SOC</b>	<b>Occupational Title</b>	<b>Average Annual Openings</b>
	<b>Management, Business &amp; Financial Occupations</b>	
11-1021	General and Operations Managers	2226
11-9199	Managers, All Other	1724
13-1111	Management Analysts	1632
13-1199	Business Operations Specialists, All Other	1653
13-2011	Accountants and Auditors	1560
	<b>Professional &amp; Related Occupations</b>	
15-1031	Computer Software Engineers, Applications	1170
15-1032	Computer Software Engineers, Systems Software	1200
15-1041	Computer Support Specialists	854
15-1051	Computer Systems Analysts	1464

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

15-1071	Network and Computer Systems Administrators	921
15-1081	Network Systems and Data Communications Analysts	1426
23-1011	Lawyers	1314
25-2021	Elementary School Teachers, Except Special Education	1364
25-2031	Secondary School Teachers, Except Special and Vocational Education	928
25-3099	Teachers and Instructors, All Other	734
25-9041	Teacher Assistants	800
27-3031	Public Relations Specialists	880
29-1111	Registered Nurses	1489
	<b>Service Occupations</b>	
31-1011	Home Health Aides	722
33-9032	Security Guards	1660
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	2300
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	850
35-3031	Waiters and Waitresses	2942
35-9021	Dishwashers	686
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2029
37-2012	Maids and Housekeeping Cleaners	843
37-3011	Landscaping and Grounds keeping Workers	961
39-9011	Child Care Workers	861
	<b>Sales &amp; Related Occupations</b>	
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	721
41-2011	Cashiers	3000
41-2031	Retail Salespersons	2751
	<b>Office and Administrative Support Occupations</b>	
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	967
43-3031	Bookkeeping, Accounting, and Auditing Clerks	737
43-4051	Customer Service Representatives	1914
43-4171	Receptionists and Information Clerks	1110
43-5081	Stock Clerks and Order Fillers	787
43-6011	Executive Secretaries and Administrative Assistants	1029
43-9061	Office Clerks, General	1974
	<b>Installation, Maintenance, and Repair Occupations</b>	
49-9042	Maintenance and Repair Workers, General	741
	<b>Transportation and Materials Moving Occupations</b>	
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	875



**TABLE 5: HIGH GROWTH OCCUPATIONS**

<b>SOC</b>	<b>Occupational Title</b>	<b>2008</b>	<b>2018</b>	<b>Growth</b>	<b>Growth Rate</b>
	<b>Management, Business &amp; Financial Occupations</b>	<b>114,652</b>	<b>127,006</b>	<b>12,354</b>	<b>1.03%</b>
13-1111	Management Analysts	71,519	75,564	4,045	0.55%
13-2011	Accountants and Auditors	43,133	51,442	8,309	1.78%
	<b>Professional &amp; Related Occupations</b>	<b>357,849</b>	<b>443,370</b>	<b>85,521</b>	<b>2.17%</b>
15-1031	Computer Software Engineers, Applications	32,196	41,186	8,990	2.49%
15-1032	Computer Software Engineers, Systems Software	31,595	40,935	9,340	2.62%
15-1041	Computer Support Specialists	19,956	22,974	3,018	1.42%
15-1051	Computer Systems Analysts	38,292	44,669	6,377	1.55%
15-1071	Network and Computer Systems Administrators	20,776	26,523	5,747	2.47%
15-1081	Network Systems and Data Communications Analysts	20,272	30,896	10,624	4.30%
19-3021	Market Research Analysts	11,748	14,316	2,568	2.00%
23-2011	Paralegals and Legal Assistants	13,067	15,385	2,318	1.65%
25-2011	Preschool Teachers, Except Special Education	10,685	13,466	2,781	2.34%
25-2021	Elementary School Teachers, Except Special Education	28,361	35,551	7,190	2.29%
25-2022	Middle School Teachers, Except Special and Vocational Education	11,291	14,099	2,808	2.25%
25-2031	Secondary School Teachers, Except Special and Vocational Education	19,793	23,323	3,530	1.65%
25-3099	Teachers and Instructors, All Other	23,974	27,619	3,645	1.43%
25-9041	Teacher Assistants	20,360	24,052	3,692	1.68%
27-3031	Public Relations Specialists	17,497	22,144	4,647	2.38%
29-1111	Registered Nurses	37,986	46,232	8,246	1.98%
	<b>Service Occupations</b>	<b>349,801</b>	<b>418,231</b>	<b>68,430</b>	<b>1.80%</b>
31-1011	Home Health Aides	11,001	17,122	6,121	4.52%
31-1012	Nursing Aides, Orderlies, and Attendants	18,621	23,326	4,705	2.28%
33-9032	Security Guards	35,122	44,489	9,367	2.39%
35-2014	Cooks, Restaurant	16,844	19,181	2,337	1.31%
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	54,412	65,871	11,459	1.93%

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

35-3031	Waiters and Waitresses	43,279	48,810	5,531	1.21%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	62,027	70,600	8,573	1.30%
37-2012	Maids and Housekeeping Cleaners	29,875	32,945	3,070	0.98%
37-3011	Landscaping and Grounds keeping Workers	24,724	31,350	6,626	2.40%
39-5012	Hairdressers, Hairstylists, and Cosmetologists	18,075	20,746	2,671	1.39%
39-9011	Child Care Workers	20,161	22,873	2,712	1.27%
39-9021	Personal and Home Care Aides	7,491	10,052	2,561	2.98%
39-9031	Fitness Trainers and Aerobics Instructors	8,169	10,866	2,697	2.89%
	<b>Sales and Related Occupations</b>	<b>83,631</b>	<b>87,810</b>	<b>4,179</b>	<b>0.49%</b>
41-2031	Retail Salespersons	83,631	87,810	4,179	0.49%
	<b>Office and Administrative Support Occupations</b>	<b>247,920</b>	<b>278,640</b>	<b>30,720</b>	<b>1.17%</b>
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	28,357	31,626	3,269	1.10%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	33,331	36,693	3,362	0.97%
43-4051	Customer Service Representatives	39,889	46,483	6,594	1.54%
43-4171	Receptionists and Information Clerks	28,098	31,614	3,516	1.19%
43-6011	Executive Secretaries and Administrative Assistants	39,921	44,835	4,914	1.17%
43-9061	Office Clerks, General	78,324	87,389	9,065	1.10%
	<b>Construction and Extraction Occupations</b>	<b>27,216</b>	<b>30,730</b>	<b>3,514</b>	<b>1.22%</b>
47-2061	Construction Laborers	27,216	30,730	3,514	1.22%
	<b>Installation, Maintenance, and Repair Occupations</b>	<b>25,974</b>	<b>29,382</b>	<b>3,408</b>	<b>1.24%</b>
49-9042	Maintenance and Repair Workers, General	25,974	29,382	3,408	1.24%

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

**TABLE 6: HIGH GROWTH RATE OCCUPATIONS WITH GROWTH OVER 100 JOBS**

SOC	Occupational Title	2008	2018	Growth	Growth Rate
	<b>Management, Business &amp; Financial Occupations</b>	<b>10,666</b>	<b>13,648</b>	<b>2,982</b>	<b>2.50%</b>
13-1121	Meeting and Convention Planners	4,955	6,342	1,387	2.50%
13-2052	Personal Financial Advisors	4,845	6,147	1,302	2.41%
13-2061	Financial Examiners	866	1,159	293	2.96%
	<b>Professional &amp; Related Occupations</b>	<b>130,446</b>	<b>173,636</b>	<b>43,190</b>	<b>2.90%</b>
15-1031	Computer Software Engineers, Applications	32,196	41,186	8,990	2.49%
15-1032	Computer Software Engineers, Systems Software	31,595	40,935	9,340	2.62%
15-1071	Network and Computer Systems Administrators	20,776	26,523	5,747	2.47%
15-1081	Network Systems and Data Communications Analysts	20,272	30,896	10,624	4.30%
17-2031	Biomedical Engineers	685	1,170	485	5.50%
17-2112	Industrial Engineers	3,113	4,121	1,008	2.84%
19-1012	Food Scientists and Technologists	121	156	35	2.57%
19-1021	Biochemists and Biophysicists	588	916	328	4.53%
19-1042	Medical Scientists, Except Epidemiologists	2,540	3,485	945	3.21%
19-3022	Survey Researchers	2,304	3,346	1,042	3.80%
19-3041	Sociologists	692	895	203	2.61%
25-2041	Special Education Teachers, Preschool, Kindergarten, and Elementary School	4,924	6,319	1,395	2.53%
25-2042	Special Education Teachers, Middle School	2,304	2,944	640	2.48%
29-1071	Physician Assistants	1,782	2,340	558	2.76%
29-1123	Physical Therapists	2,564	3,259	695	2.43%
29-1124	Radiation Therapists	261	333	72	2.47%
29-2031	Cardiovascular Technologists and Technicians	569	724	155	2.44%
29-2055	Surgical Technologists	1,815	2,342	527	2.58%
29-2056	Veterinary Technologists and Technicians	1,239	1,598	359	2.58%
29-9091	Athletic Trainers	106	148	42	3.39%
	<b>Service Occupations</b>	<b>99,801</b>	<b>131,121</b>	<b>31,320</b>	<b>2.77%</b>
31-1011	Home Health Aides	11,001	17,122	6,121	4.52%
31-2012	Occupational Therapist Aides	111	146	35	2.78%
31-2021	Physical Therapist Assistants	865	1,154	289	2.92%

**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

31-2022	Physical Therapist Aides	612	837	225	3.18%
31-9092	Medical Assistants	7,054	8,977	1,923	2.44%
33-9021	Private Detectives and Investigators	1,772	2,307	535	2.67%
33-9032	Security Guards	35,122	44,489	9,367	2.39%
37-3011	Landscaping and Grounds keeping Workers	24,724	31,350	6,626	2.40%
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	612	801	189	2.73%
37-3013	Tree Trimmers and Pruners	616	808	192	2.75%
39-2011	Animal Trainers	458	619	161	3.06%
39-5094	Skin Care Specialists	1,194	1,593	399	2.93%
39-9021	Personal and Home Care Aides	7,491	10,052	2,561	2.98%
39-9031	Fitness Trainers and Aerobics Instructors	8,169	10,866	2,697	2.89%
	<b>Installation, Maintenance, and Repair Occupations</b>	<b>1,823</b>	<b>2,338</b>	<b>515</b>	<b>2.52%</b>
49-2098	Security and Fire Alarm Systems Installers	1,823	2,338	515	2.52%
	<b>Transportation and Material Moving Occupations</b>	<b>10,669</b>	<b>14,201</b>	<b>3,532</b>	<b>2.90%</b>
53-3021	Bus Drivers, Transit and Intercity	5,271	6,775	1,504	2.54%
53-3041	Taxi Drivers and Chauffeurs	5,398	7,426	2,028	3.24%

## Employment by Skill Level

The Bureau of Labor Statistics has developed skills taxonomy to reflect the training and qualifications associated with labor data reported within its occupational categories. This taxonomy appears below in the Bureau of Labor Statistics Educational Training and Skills Categories table. The skills taxonomy makes it possible to reorganize industry and occupational projections by skill category. Jobs requiring college degree skills make up only 20 to 22 percent of jobs in the national economy whereas the the Washington Metropolitan Statistical Area job mix has 34.2 percent of its employment in the first five skill categories, which are the categories requiring at least a BA degree, but often an advanced or professional degree.

Professional degrees in the skills taxonomy primarily apply to law and medicine. A little over a third of professional degree holders in the national economy with jobs in their professional field need law degrees and most of the rest need medical degrees for a career in medicine, although that includes chiropractors, pharmacists, veterinarians and audiologists as well as physicians. However, in the Washington area almost 70 percent of professionals working in their professional field need a law degree.

The high percentage of lawyers among professional job holders does not include law school faculty, which the Bureau of Labor Statistics classifies as professors requiring a doctorate. Law professors are a small part of a large academic community numbering almost 22 thousand teaching faculty at public, and private colleges and universities in the area. See Appendix II, SOC 25-0000. Ironically, college faculty needing a doctorate make up a smaller percentage of local area jobs requiring a doctorate than in the national economy because Washington has many research positions needing a doctorate to do a variety of medical and scientific research. The Bureau of Labor Statistics itself and the Bureau of Census need many mathematicians but astronomer, physicist, biochemistry, biophysics and other medical science jobs needing a doctorate make up 45 percent of area jobs needing a doctorate. Washington also has over 4 thousand jobs for those with a doctorate in computing.

The Bureau of Labor Statistics skills taxonomy includes many jobs that require a master's degree or baccalaureate degree. Even though many think of jobs needing BA or MA degree skills as a career and a

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

profession, the skills taxonomy limits professional degree jobs to a limited category that needs a 2 to 4 year specialized degree beyond the baccalaureate degree.

Washington has a higher percentage of jobs needing a master's degree than the national economy. Librarians, economists, political scientists, epidemiologists and a variety of counselor and health care practitioners have the highest share of these jobs in the Washington area.

The large management, business and financial occupations sector supports an unprecedented share of jobs needing BA and MA degree skills and some on-the-job experience that leads to managerial and supervisory jobs. Jobs with BA degree skills have about 11.7 percent of jobs in the national economy but, as Table 7 shows, that figure reached 20.1 percent in the area economy. Business operations specialist, a common designation in government bureaucracies, accountant, computer engineers, programmers and specialists are several of the significant area jobs with BA degree skills. Jobs needing BA degree skills and experience tend to be managerial jobs. Management analyst has 71 thousand jobs, which is the next to largest reported occupation in the category, which is general and operations managers.

Despite the relatively high percentage of jobs requiring college degree skills, there are 143.6 thousand jobs in technical areas that require associate's degree training and these jobs are growing at faster than the metropolitan average. Projected growth in these occupations exceeds 18.0 thousand. Many of these positions are nurse, medical records and health information technicians, dental hygienists, therapy occupations in allied health, but also some computer support positions and legal services occupations.

Jobs needing post-secondary training are even more numerous, but with slightly lower growth than jobs requiring AA (associate degree) degree skills. Job growth in post secondary training is projected at 2,108 per year, but AA degree jobs are projected for 1,881 per year. Post-secondary jobs with the highest projected growth are nurse's aides and licensed practical nurse. Pre-school teachers, hair stylists, automotive service technicians, legal secretary, fitness and aerobics instructor, and heating, air conditioning, and refrigeration mechanics and installers are in this group with the highest projection for new jobs. Because the Washington Metropolitan Statistical Area supports physical and life science research, the area has many assistant and technician positions that require AA degree and other technical training. Table 7 below gives a summary of DC employment and growth by skill category.

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

Bureau of Labor Statistics Educational Training and Skills Categories
<b>1. First Professional Degree</b> -Entry into a job in this skill category requires 2 to 4 years of degree study beyond a baccalaureate degree. Almost all professionals must pass state licensing exams or private board certification exams to enter practice. Physicians, veterinarians, dentists, lawyers, pharmacists are all examples. Ministers are generally included here although there is not ordinarily board or state certification.
<b>2. Doctorate Degree</b> -Entry into a job in this skill category requires a doctorate following completion of a baccalaureate degree as minimum education for entry. College teaching at four year colleges is an example. A doctorate is also required for many science and medical research positions. Many require licenses and board exams. Medical and biological researchers, physicists, and astronomers are other examples because employment is mostly in research and these require doctorates.
<b>3. Master's Degree</b> -Entry into a job in this skill category typically requires license, certification, credentials or registry in a specialized skill area that requires work beyond a BA degree, leading to a master's degree. Health care professions such as physical therapists, speech-language audiology or pathology, counseling are examples. Librarians are now also included.
<b>4. Master's or Bachelor's degree combined with previous experience</b> -Entry into a job in this skill category requires formal education, but these jobs are usually not accessible without experienced practice in the field at an entry job. Health Services managers usually have experience working in health care in addition to degrees and credentials. Some businesses now require work experience and an MBA before jobs are accessible for entry. Almost all of these jobs have manager in the SOC title.
<b>5. Bachelor's Degree</b> -Entry into a job in this skill category requires a BA or BS degree. In some cases a BA degree in any field is satisfactory to establish reading and computational skills necessary to begin a job. Other jobs need a BA in a particular major to establish skills, credentials or obtain a license.
<b>6. Associate Degree</b> -Entry into a job in this skill category usually requires some formal education such as an educational internship, or co-op program, but leading to an associate's degree. Some employers require graduation from an accredited two year community or junior college program in order to take required licensing exams. Health technician occupations are examples. Some skill types have professional associations with certification or accreditation to help establish skill levels for job entrants. Dental hygienists, licensed practical nursing are examples.
<b>7. Post-secondary vocational training</b> -Entry into a job in this skill category requires pre-employment skill training and often a license from a state agency. Barbers, hairstylists, office machine repairers, computer repair specialists and technicians are examples. Employers may provide some on-the-training but entrants must arrive with the skills and certification to do their job.
<b>8. Work Experience in a Related Occupation</b> -Entry into these jobs usually requires that applicants show a high level of skills. These skills can be acquired through degree training, but long term practice, and specialized talents acquired as part of a career in the field are necessary. It is a separate category because degrees and training do not assure entry into these occupations. First line supervisors, police detectives and investigators, adult education instructors are examples.
<b>9. Long-term on the Job Training</b> -Entry into a job in this skill category typically requires skills acquired from work experience that takes longer than one year. The additional skills needed for the job are taught on the job, through an apprenticeship or employer sponsored classroom instruction or training, and the skills required take a long time or a lot of effort to learn with training of over a year. Actors, athletes, dancers, electricians, carpenters and mechanics are examples. Entry into these jobs is not open to those leaving a degree program or skills training. Prior job relevant skills are necessary for advancement into these positions. For many of these positions a high school degree maybe sufficient but entry is not available to high school graduates. Entry skills are high school plus on the job skills and experience.
<b>10. Moderate-term on the job Training</b> -Entry into these jobs usually requires basic reading and language skills learned in high school or a GED program, but additional on-the-job training is usually necessary. Additional skills can be learned quickly, but 1 to 12 months can be needed to acquire additional skills. Medical assistants, dental assistants, social and human resource assistants are examples.
<b>11. Short-term on the job Training</b> -Entry into these jobs usually requires basic reading and language skills learned in high school or a GED program. Work that can be learned from written or verbal instructions, or carried out successfully after a demonstration are classified as high school skills. Additional skills can be learned quickly, typically a month or less of on-the-job experience or instruction. High school degree skills can also be thought of as general workforce skills.

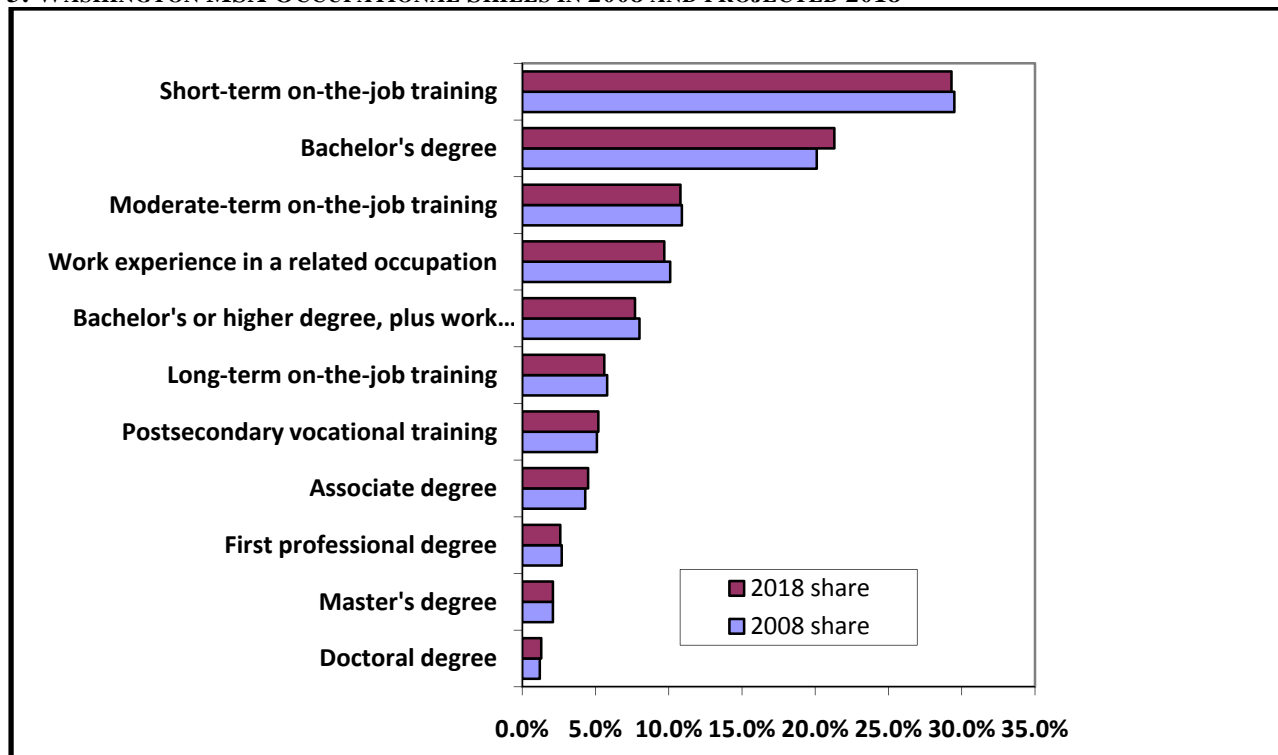
Figure 3 summarizes the skill mix for the Washington Metropolitan Statistical Area in 2008 and the projected skill mix for 2018. It shows that skills categories requiring formal education are expanding relative to those requiring on-the-job training.

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

**TABLE 7: EMPLOYMENT AND GROWTH BY EDUCATIONAL SKILL LEVEL**

Education Category	# of Occ.	2008	2008 share	2018	2018 share	Growth	Growth Rate
1. First professional degree	20	89,833	2.7%	93,953	2.6%	4,120	0.45%
2. Doctoral degree	47	40,421	1.2%	46,602	1.3%	6,181	1.43%
3. Master's degree	32	69,065	2.1%	77,606	2.1%	8,541	1.17%
4. BA degree, plus work experience	33	264,539	8.0%	280,147	7.7%	15,608	0.57%
5. Bachelor's degree	112	665,352	20.1%	774,644	21.3%	109,292	1.53%
6. Associate degree	42	143,629	4.3%	162,436	4.5%	18,807	1.24%
7. Postsecondary vocational training	55	168,477	5.1%	189,559	5.2%	21,082	1.19%
8. Work experience in a related occupation	46	334,879	10.1%	354,116	9.7%	19,237	0.56%
9. Long-term on-the-job training	84	192,667	5.8%	205,301	5.6%	12,634	0.64%
10. Moderate-term on-the-job training	164	360,431	10.9%	391,910	10.8%	31,479	0.84%
11. Short-term on-the-job training	140	975,943	29.5%	1,068,180	29.3%	92,237	0.91%

**FIGURE 3: WASHINGTON MSA OCCUPATIONAL SKILLS IN 2008 AND PROJECTED 2018**





# Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

## Wages in Occupational Groups

Table 8 shows wage distribution data for 21 two-digit occupations in the Washington Metropolitan Statistical Area. These data, produced under the supervision of the Bureau of Labor Statistics for occupations in the Standard Occupation Classification (SOC), summarize the wage distribution using percentiles. For wages arranged from lowest to highest, the 10<sup>th</sup> percentile is the wage for which 10 percent of wages are lower and 90 percent are higher. The median is the wage for which half of the wages are lower and half are higher. The 90<sup>th</sup> percentile is the reverse of the 10<sup>th</sup> percentile. Thus, the first row of the table shows that for all occupations, 10 percent of workers earn less than \$18,970, half of workers earn less than and half earn more than \$44,620, and ten percent earn more than \$113,700.

In the Washington Metropolitan Statistical Area, managerial occupations have the highest median annual wages at \$112,340. Business and financial operations occupations with median wages of \$73,490 lag behind the highest paid of the professional occupations. Legal occupations have the highest professional wages with a median reported as \$108,320, just below managerial occupations. Computer and mathematical occupations are second among in the professions with median wages of \$87,120 followed by architecture, engineering and life, physical science and social science occupations.

Community and social service occupations and education, training and library occupations have the lowest paid professional occupations. Community and social service occupation wages start at a 10<sup>th</sup> percentile wage of \$23,640 with a median wage of \$46,530, just a few percent higher than the metropolitan wide median. Education, training and library occupations do slightly better at the median and 90<sup>th</sup> percentile wages, but the 10<sup>th</sup> percentile wage lags behind at \$23,850. The 90<sup>th</sup> percentile wage for education, training and library occupations reaches \$99,010.

Among service occupations, protective service occupations like police officer, detective, investigator, and security guard have the highest median wages, \$41,850, and by far the highest 90<sup>th</sup> percentile wages, \$83,820. Health support occupations rank second among service occupations but median wages drop to \$28,140. Food preparation and serving-related occupations come in last among service occupations with the lowest median wage of \$19,810, but also the lowest of all occupational groups in the Washington metropolitan area. Building and grounds maintenance and personal care occupations do

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

slightly better but median wages are in the low twenties. Except for protective service jobs, none of these occupations have high enough 90<sup>th</sup> percentile wages to suggest much opportunity for advancement.

The remaining occupational groups show some of the same tendencies as service occupations, but the 90<sup>th</sup> percentile wages are higher in sales occupations than all-service occupations except protective services, even though sales has a low 10<sup>th</sup> percentile wage of only \$16,060. Relatively high 90<sup>th</sup> percentile wages also applies to construction, installation, maintenance and repair occupations with 90<sup>th</sup> percentile wages just above \$70,000. Office and administrative support occupations, production occupations and transportation and materials moving occupations start with low 10<sup>th</sup> percentile wages but somewhat higher 90<sup>th</sup> percentile wages give these occupational categories better opportunities for advancement.

Wages tend to be higher in the Washington Metropolitan area than in the national economy. The national median wage is reported as \$32,390, when it is \$44,620 in the Washington area. Both the 10<sup>th</sup> and 90<sup>th</sup> percentile wages are higher as well; \$16,680 compared to \$18,970 in the Washington area and \$79,020 compared to \$113,740 for Washington.

Washington area wages in both the managerial and professional occupations exceed the 10<sup>th</sup> percentile, median, and 90<sup>th</sup> percentile wages reported in these same occupational groups for the national economy. Even though the 10<sup>th</sup> percentile and 90<sup>th</sup> percentile wages are higher in the Washington Metropolitan Statistical Area the ratio of the 90<sup>th</sup> to the 10<sup>th</sup> percentile wages exceeds the ratio for the national economy suggesting professional advancement generates a relatively higher return in the Washington Metropolitan Area than it does in the larger national economy.

A comparison of the Washington wage distribution to America's wage distribution suggests that the region's economy is generating "good" jobs, and has a higher percentage of professional jobs than national economy, jobs that tend to have higher wages and will raise reported wages for all occupations combined.

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

**TABLE 8: WASHINGTON MSA ANNUAL WAGES BY OCCUPATIONAL GROUP**

<b>SOC</b>	<b>Occupational Title</b>	<b>Tenth Percentile Annual Wage</b>	<b>Median Annual Wage</b>	<b>Ninetieth Percentile Annual Wage</b>
00-0000	All Occupations	\$18,970		\$113,740
	<b>Management, Business &amp; Financial Occupations</b>			
11-0000	Management occupations	\$56,590	\$112,340	\$166,400
13-0000	Business & financial operations occupations	\$41,410	\$73,490	\$125,940
	<b>Professional &amp; Related Occupations</b>			
15-0000	Computer and mathematical occupations	\$49,310	\$87,120	\$131,970
17-0000	Architecture and engineering occupations	\$43,240	\$81,070	\$135,850
19-0000	Life, physical, and social science occupations	\$41,390	\$81,980	\$137,180
21-0000	Community and social services occupations	\$23,640	\$46,530	\$83,340
23-0000	Legal occupations	\$45,320	\$108,320	\$166,400
25-0000	Education, training, and library occupations	\$23,850	\$52,010	\$99,010
27-0000	Arts, design, entertainment, sports, & media occupations	\$26,420	\$61,150	\$114,150
29-0000	Healthcare practitioners & technical occupations	\$34,530	\$70,080	\$135,270
	<b>Service Occupations</b>			
31-0000	Healthcare support occupations	\$20,060	\$28,140	\$44,960
33-0000	Protective service occupations	\$21,740	\$41,850	\$83,820
35-0000	Food preparation & serving related occupations	\$14,250	\$19,810	\$35,140
37-0000	Building and grounds cleaning & maintenance occupations	\$15,900	\$23,560	\$37,910
39-0000	Personal care and service occupations	\$15,030	\$24,180	\$48,600
	<b>Sales &amp; Related Occupations</b>			
41-0000	Sales and related occupations	\$16,060	\$27,210	\$80,240
	<b>Office and Administrative Support Occupations</b>			
43-0000	Office and administrative support occupations	\$20,770	\$35,930	\$59,490
	<b>Construction Occupations</b>			
47-0000	Construction and extraction occupations	\$25,040	\$39,720	\$70,720
	<b>Installation, Maintenance &amp; Repair Occupations</b>			
49-0000	Installation, maintenance, and repair occupations	\$25,930	\$45,250	\$71,110
	<b>Production Occupations</b>			
51-0000	Production occupations	\$18,530	\$31,780	\$61,510
	<b>Transportation and Materials Moving Occupations</b>			
53-0000	Transportation and material moving occupations	\$17,650	\$30,190	\$54,390

## The Washington Metropolitan Statistical Area Compared to Other Major Metropolitan Areas

In this section we compare changes in employment in the Washington Metropolitan Area with the ten other largest metropolitan areas in the nation. Table 9 shows America's eleven largest metropolitan areas ranked by 2008 establishment employment (employment excluding self-employed), which is shown in the first column followed by the metropolitan census population in the second. These eleven metropolitan areas

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

have 80.4 million people and a little over 38 million establishment jobs, which is between 27 and 28 percent of America's total establishment employment for 2008. The third column, which presents new jobs since 1990, shows 18 years of establishment job growth. The last two columns split the employment growth between the decade of the 1990's in the fourth column and new jobs in the eight years from 2000 to 2008 in the last column.

The last two columns of Table 9 illustrate the sharp contrast of fast employment growth in the 1990's with the slow growth after 2000. Rapid job growth in the 1990's accounted for 85 percent of the 11 largest metropolitan area job growth from 1990 to 2008. The Washington Metropolitan area was fourth in job growth from 1990 to 2000 with 428,300 new jobs. Dallas, New York and Chicago had more new jobs than the Washington area in the 1990's decade. However, from 2000 to 2008 Washington climbed to first place in job growth by a wide margin with 328,400 more establishment jobs. During the same period four metropolitan areas declined and Dallas fell to second place with just 223.1 thousand more jobs. Washington stands out after 2000 as the metropolitan area with the most job growth.

In 2008 the Federal Government provided 348 thousand federal jobs equal to 11.6 percent of Washington Metropolitan Area establishment jobs. No other metropolitan area has more than 63 thousand federal jobs and no other metropolitan area had more than a 2.1 percent share. The popular media still occasionally report that federal jobs make the Washington area recession proof. While few doubt the advantage of having the Federal Government in area job markets, the advantage should be weighed against a number of disadvantages.

In contrast to its high percentage of federal jobs, the Washington Metropolitan Area has the lowest percentage of manufacturing jobs of the eleven metropolitan areas with barely 2 percent of establishment jobs in manufacturing. For example, as of 2008 Detroit continues to have 12.4 percent of jobs in manufacturing in spite of a loss of 121.2 thousand manufacturing jobs since 1990.

The high share of government jobs for Washington helps make up for the small share of manufacturing jobs, but Washington has several other small and declining service sectors that have to be offset with a higher share of jobs in other services or by more government jobs. Washington has the smallest retail trade sector of all eleven metropolitan areas, a mere 8.8 percent of establishment employment. Miami has over 12 percent and the nine others generally have 10 percent or above. Likewise Washington area jobs in

## **Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018**

wholesale trade support only 69 thousand jobs and 2.3 percent of establishment employment, the smallest wholesale trade sector among the 11 metropolitan areas. Five of the other metro areas have wholesale trade sectors above 5 percent of area jobs.

Other service providing sectors in the Washington area are small compared with the other large metropolitan areas. Washington has a tiny transportation and utility sector measured against the other 10 largest metropolitan areas, a mere 2.1 percent of establishment jobs and the lowest share of jobs among the 11 major metropolitan areas. New York has 320 thousand transportation jobs, which is 3.7 percent of New York Metropolitan area jobs.

Financial activities for the Washington Metropolitan Area, which includes banking, insurance, real estate and rental and leasing services, comes in next to last among the eleven metropolitan areas in percentage share of area establishment employment. At 5.1 percent Washington is slightly above Los Angeles but below, sometimes far below, the other major metropolitan areas. New York has 9.1 percent of establishment employment in financial activities, and five others are above 7 percent. Health care too lags in Washington with only 8.2 percent of establishment jobs when 12 percent would be typical. New York has 13.9 percent of establishment jobs in health care.

The higher share of jobs in the Federal Government makes up for some of Washington's small sectors but other service providing sectors have become a much bigger share of Washington than the other metropolitan areas. The other services include non-profit organizations as well as a large and growing public and private education sector, but especially professional and technical services like legal services, computer design and related services and management consulting. Washington has a higher share of professional and technical services jobs than any of the other 10 metropolitan areas. Where Washington has 15.2 percent the other 10 metropolitan areas generally remain below 10 percent. The national average is 5.7 percent in professional and technical services.

Where other metropolitan areas were unable to generate enough service jobs to replace their declining manufacturing jobs, the Washington area had few manufacturing jobs to lose. Instead professional and technical services provided a bigger boost to job growth after 2000 than other metropolitan areas.

Washington has a unique dependence on professional services and office administration jobs to maintain

Employment; and at least until 2008 it has been a dependence that has been good for employment and employment growth.

**TABLE 9: THE ELEVEN BIGGEST METROPOLITAN AREAS**

MSA	Establishment	Population 2008	Employment Growth		
	Employment 2008		1990 - 2008	1990 - 2000	2000-2008
1. NY-North New Jersey-Long Island NY-NJ-PA	8,610,400	18,815,988	717,600	499,300	218,300
2. Los Angeles-Long Beach-Santa Ana, CA	5,553,900	12,875,587	245,800	152,800	93,000
3. Chicago-Naperville-Joilet, IL-IN-WI	4,528,800	9,524,673	517,600	560,200	-42,600
<b>4. Wash-Arlington-Alexandria, DC-VA-MD-WV</b>	<b>3,006,800</b>	<b>5,306,565</b>	<b>756,700</b>	<b>428,300</b>	<b>328,400</b>
5. Dallas-Fort Worth-Arlington, TX	2,986,300	6,145,037	985,000	761,900	223,100
6. Phil-Camden-Wilmington, PA-NJ-DE-MD	2,809,700	5,827,962	310,900	245,600	65,300
7. Boston-Cambridge-Quincy, MA-NH	2,493,600	4,482,857	268,100	313,300	-45,200
8. Miami-Fort Lauderdale-Miami Beach, FL	2,365,600	5,413,212	615,600	409,000	206,600
9. San Francisco-Oakland-Fremont, CA	2,024,900	4,203,898	198,400	300,200	-101,800
10. Detroit-Warren-Livonia, MI	1,898,800	4,467,592	-13,300	293,200	-306,500
11. Seattle-Tacoma-Bellevue, WA	1,757,500	3,309,347	455,700	344,900	110,800
All MSAs	38,036,300	80,372,718	5,058,100	4,308,700	749,400

Acknowledgements

The 2008-2018 projections were prepared by Job Trends Associates, Inc., Ray D. Whitman, President and Chief Economist, Fred Siegmund, Senior Economist, with the assistance and counsel of John Kangethe, PhD, Labor Economist, Office of Labor Market Research and Information, D.C. Department of Employment Services, Washington, DC

**APPENDIX 1: DC INDUSTRY DETAIL**

<b>Appendix 1- DC Industry Detail</b>						
<b>NAICS</b>	<b>Industry Title</b>	<b>2008</b>	<b>2018</b>	<b>% of 2008</b>	<b>Growth</b>	<b>Growth Rate</b>
0000	Total, All Industries	3,305,236	3,644,454		339,218	0.98%
110000	Agriculture, Forestry, Fishing and Hunting	2686	2683	0.08%	-3	-0.01%
210000	Mining	1,251	1,111	0.04%	-140	-1.18%
221000	Utilities	9,165	8,400	0.28%	-765	-0.87%
236000	Construction of Buildings	40,888	42,837	1.24%	1,949	0.47%
237000	Heavy and Civil Engineering Construction	18,965	21,279	0.57%	2,314	1.16%
238000	Specialty Trade Contractors	108,585	123,362	3.29%	14,777	1.28%
310000	Manufacturing	60,833	53,000	1.84%	-7,833	-1.37%
420000	Merchant Wholesalers, Durable Goods	69,383	68,750	2.10%	-633	-0.09%
441000	Motor Vehicle and Parts Dealers	32,201	33,138	0.97%	937	0.29%
442000	Furniture and Home Furnishings Stores	12,277	12,600	0.37%	323	0.26%
443000	Electronics and Appliance Stores	11,949	13,530	0.36%	1,581	1.25%
444000	Building Material & Garden Equipment & Supplies Dealers	20,242	22,785	0.61%	2,543	1.19%
445000	Food and Beverage Stores	52,969	53,777	1.60%	808	0.15%
446000	Health and Personal Care Stores	14,663	13,554	0.44%	-1,109	-0.78%
447000	Gasoline Stations	11,247	10,682	0.34%	-565	-0.51%
448000	Clothing and Clothing Accessories Stores	30,642	29,669	0.93%	-973	-0.32%
451000	Sporting Goods, Hobby, Book, and Music Stores	13,424	13,257	0.41%	-167	-0.13%
452000	General Merchandise Stores	46,033	48,849	1.39%	2,816	0.60%
453000	Miscellaneous Store Retailers	16,598	16,200	0.50%	-398	-0.24%
454000	Nonstore Retailers	3,239	3,100	0.10%	-139	-0.44%
481000	Air Transportation	13,027	13,476	0.39%	449	0.34%
483000	Water Transportation	378	385	0.01%	7	0.18%
484000	Truck Transportation	9,496	10,250	0.29%	754	0.77%
485000	Transit and Ground Passenger Transport	10,890	15,974	0.33%	5,084	3.91%
486000	Pipeline Transportation	116	125	0.00%	9	0.75%
488000	Support Activities for Transportation	7,135	8,377	0.22%	1,242	1.62%

**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

492000	Couriers and Messengers	10,498	11,000	0.32%	502	0.47%
493000	Warehousing and Storage	6,145	6,700	0.19%	555	0.87%
511000	Publishing Industries(Except Internet)	23,494	22,312	0.71%	-1,182	-0.51%
512000	Motion Picture and Sound Recording Industries	4,716	4,701	0.14%	-15	-0.03%
515000	Broadcasting (except Internet)	10,100	10,700	0.31%	600	0.58%
517000	Telecommunications	35,655	30,531	1.08%	-5,124	-1.54%
518000	Data Processing, Hosting and Related Services	10,950	11,940	0.33%	990	0.87%
519000	Other Information Services	6,067	7,200	0.18%	1,133	1.73%
522000	Credit Intermediation and Related Activities	51,650	57,500	1.56%	5,850	1.08%
523000	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	14,780	15,800	0.45%	1,020	0.67%
524000	Insurance Carriers and Related Activities	25,976	23,600	0.79%	-2,376	-0.95%
525000	Funds, Trusts, and Other Financial Vehicles	7,595	8,500	0.23%	905	1.13%
530000	Real Estate and Rental and Leasing	54,308	53,637	1.64%	-671	-0.12%
541100	Legal Services	55,986	64,500	1.69%	8,514	1.43%
541200	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	27,530	32,651	0.83%	5,121	1.72%
541300	Architectural, Engineering, and Related Services	60,177	71,117	1.82%	10,940	1.68%
541400	Specialized Design Services	3,933	4,656	0.12%	723	1.70%
541500	Computer Systems Design and Related Services	154,983	197,401	4.69%	42,418	2.45%
541600	Management, Scientific, and Technical Consulting Services	74,350	97,293	2.25%	22,943	2.73%
541700	Scientific Research and Development Services	50,445	65,689	1.53%	15,244	2.68%
541800	Advertising and Related Services	15,553	16,798	0.47%	1,245	0.77%
541900	Other Professional, Scientific, and Technical Services	14,651	16,731	0.44%	2,080	1.34%
550000	Management of Companies and Enterprises	40,308	43,287	1.22%	2,979	0.72%
561100	Office Administrative Services	13,367	17,900	0.40%	4,533	2.96%
561200	Facilities Support Services	8,776	10,500	0.27%	1,724	1.81%
561300	Employment Services	40,200	38,000	1.22%	-2,200	-0.56%
561400	Business Support Services	10,858	11,900	0.33%	1,042	0.92%
561500	Travel Arrangement and Reservation Services	4,063	3,750	0.12%	-313	-0.80%
561600	Investigation and Security Services	29,794	40,800	0.90%	11,006	3.19%
561700	Services to Buildings and Dwellings	65,659	83,500	1.99%	17,841	2.43%
561900	Other Support Services	4,963	6,600	0.15%	1,637	2.89%



**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

562000	Waste Management and Remediation Service	6,161	7,100	0.19%	939	1.43%
611100	Elementary and Secondary Schools	159,416	190,618	4.82%	31,202	1.80%
611300	Colleges, Universities, and Professional Schools	53,835	61,406	1.63%	7,571	1.32%
611400	Business Schools & Computer & Management Training	5,173	6,423	0.16%	1,250	2.19%
611500	Technical and Trade Schools	2,427	2,965	0.07%	538	2.02%
611600	Other Schools and Instruction	11,034	12,841	0.33%	1,807	1.53%
611700	Educational Support Services	6,983	7,690	0.21%	707	0.97%
621000	Ambulatory Health Care Services	92,617	116,000	2.80%	23,383	2.28%
622000	Hospitals	70,025	82,268	2.12%	12,243	1.62%
623000	Nursing and Residential Care Facilities	41,989	53,493	1.27%	11,504	2.45%
624000	Social Assistance	42,736	57,227	1.29%	14,491	2.96%
711000	Performing Arts, Spectator Sports, and Related Industries	9,321	10,872	0.28%	1,551	1.55%
712000	Museums, Historical Sites, and Similar Institution	2,251	2,745	0.07%	494	2.00%
713000	Amusement, Gambling, and Recreation Industries	26,429	33,236	0.80%	6,807	2.32%
721000	Accommodation	40,592	43,510	1.23%	2,918	0.70%
722000	Food Services and Drinking Places	183,225	209,357	5.54%	26,132	1.34%
811000	Repair and Maintenance	23,749	26,981	0.72%	3,232	1.28%
812000	Personal and Laundry Services	41,126	46,723	1.24%	5,597	1.28%
813000	Religious, Grantmaking, Civic, Professional, and Similar Organizations	100,229	127,837	3.03%	27,608	2.46%
814000	Private Households	19,637	22,000	0.59%	2,363	1.14%
6010	Self-Employed Workers, Primary Job	300,022	306,962	9.08%	6,940	0.23%
7010	Unpaid Family Workers, Primary Job	2,073	2,138	0.06%	65	0.31%
910000	Federal Government	348,550	325,000	10.55%	-23,550	-0.70%
999200	State Government, Excluding Education and Hospitals	66,709	66,100	2.02%	-609	-0.09%
999300	Local Government, Excluding Educating and Hospitals	93,115	94,618	2.82%	1,503	0.16%

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

### APPENDIX 2: DC OCCUPATIONAL DETAIL

Appendix II - DC Occupational Detail						
SOC	Occupational Title	2008	2018	Growth	Growth Rate	Annual Openings
00-0000	Total, All Occupations	3,305,236	3,644,454	339,218	0.98%	111,113
<b>11-0000</b>	<b>Management Occupations</b>	283,081	292,745	9,664	0.34%	8,054
11-1011	Chief Executives	13,066	13,358	292	0.22%	396
11-1021	General and Operations Managers	74,096	74,887	791	0.11%	2,226
11-1031	Legislators	353	333	-20	-0.58%	10
11-2011	Advertising and Promotions Managers	1,234	1,293	59	0.47%	35
11-2021	Marketing Managers	4,998	5,571	573	1.09%	165
11-2022	Sales Managers	6,365	7,284	919	1.36%	229
11-2031	Public Relations Managers	3,881	4,597	716	1.71%	163
11-3011	Administrative Services Managers	7,715	8,739	1,024	1.25%	264
11-3021	Computer and Information Systems Managers	17,279	19,482	2,203	1.21%	501
11-3031	Financial Managers	18,140	19,230	1,090	0.59%	435
11-3041	Compensation and Benefits Managers	1,213	1,402	189	1.46%	45
11-3042	Training and Development Managers	1,118	1,297	179	1.50%	42
11-3049	Human Resources Managers, All Other	2,380	2,524	144	0.59%	65
11-3051	Industrial Production Managers	756	706	-50	-0.68%	27
11-3061	Purchasing Managers	3,418	3,392	-26	-0.08%	97
11-3071	Transportation, Storage, and Distribution Managers	1,502	1,365	-137	-0.95%	41
11-9011	Farm, Ranch, and Other Agricultural Managers	21	22	1	0.47%	0
11-9021	Construction Managers	14,622	15,620	998	0.66%	214
11-9031	Education Administrators, Preschool and Child Care Center/Program	1,786	2,124	338	1.75%	88
11-9032	Education Administrators, Elementary and Secondary School	4,932	5,776	844	1.59%	232
11-9033	Education Administrators, Postsecondary	1,786	1,874	88	0.48%	63
11-9039	Education Administrators, All Other	1,538	1,658	120	0.75%	58
11-9041	Engineering Managers	6,813	7,237	424	0.61%	180
11-9051	Food Service Managers	4,790	5,296	506	1.01%	144
11-9061	Funeral Directors	224	236	12	0.52%	6

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

11-9071	Gaming Managers	13	14	1	0.74%	0
11-9081	Lodging Managers	1,116	1,205	89	0.77%	33
11-9111	Medical and Health Services Managers	6,781	7,491	710	1.00%	200
11-9121	Natural Sciences Managers	3,829	3,914	85	0.22%	122
11-9131	Postmasters and Mail Superintendents	190	141	-49	-2.94%	4
11-9141	Property, Real Estate, and Community Association Managers	7,560	7,396	-164	-0.22%	130
11-9151	Social and Community Service Managers	2,738	3,257	519	1.75%	115
11-9199	Managers, All Other	66,828	64,024	-2,804	-0.43%	1,724
<b>13-0000</b>	<b>Business and Financial Operations Occupations</b>	<b>300,515</b>	<b>332,026</b>	<b>31,511</b>	<b>1.00%</b>	<b>9,114</b>
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	493	608	115	2.12%	23
13-1021	Purchasing Agents and Buyers, Farm Products	124	136	12	0.93%	4
13-1022	Wholesale and Retail Buyers, Except Farm Products	2,000	1,892	-108	-0.55%	50
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	12,153	13,741	1,588	1.24%	479
13-1031	Claims Adjusters, Examiners, and Investigators	3,721	3,612	-109	-0.30%	94
13-1032	Insurance Appraisers, Auto Damage	551	573	22	0.39%	16
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	9,512	11,564	2,052	1.97%	306
13-1051	Cost Estimators	5,351	6,561	1,210	2.06%	240
13-1061	Emergency Management Specialists	412	515	103	2.26%	19
13-1071	Employment, Recruitment, and Placement Specialists	6,580	7,601	1,021	1.45%	274
13-1072	Compensation, Benefits, and Job Analysis Specialists	3,732	4,726	994	2.39%	196
13-1073	Training and Development Specialists	6,736	8,424	1,688	2.26%	345
13-1079	Human Resources, Training, and Labor Relations Specialists, All Other	12,809	14,242	1,433	1.07%	477
13-1081	Logisticians	4,837	5,581	744	1.44%	181
13-1111	Management Analysts	71,519	75,564	4,045	0.55%	1,632
13-1121	Meeting and Convention Planners	4,955	6,342	1,387	2.50%	249
13-1199	Business Operations Specialists, All Other	67,465	69,016	1,551	0.23%	1,653
13-2011	Accountants and Auditors	43,133	51,442	8,309	1.78%	1,560
13-2021	Appraisers and Assessors of Real Estate	1,357	1,302	-55	-0.41%	25
13-2031	Budget Analysts	5,601	6,116	515	0.88%	154
13-2041	Credit Analysts	1,522	1,788	266	1.62%	55
13-2051	Financial Analysts	9,623	11,706	2,083	1.98%	383

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

13-2052	Personal Financial Advisors	4,845	6,147	1,302	2.41%	182
13-2053	Insurance Underwriters	1,513	1,305	-208	-1.47%	44
13-2061	Financial Examiners	866	1,159	293	2.96%	45
13-2071	Loan Counselors	635	688	53	0.80%	12
13-2072	Loan Officers	8,607	9,869	1,262	1.38%	220
13-2081	Tax Examiners, Collectors, and Revenue Agents	1,060	1,068	8	0.08%	39
13-2082	Tax Preparers	2,267	2,272	5	0.02%	38
13-2099	Financial Specialists, All Other	6,536	6,466	-70	-0.11%	119
<b>15-0000</b>	<b>Computer and Mathematical Occupations</b>	<b>220,887</b>	<b>265,897</b>	<b>45,010</b>	<b>1.87%</b>	<b>8,571</b>
15-1011	Computer and Information Scientists, Research	4,096	4,777	681	1.55%	156
15-1021	Computer Programmers	14,514	13,611	-903	-0.64%	273
15-1031	Computer Software Engineers, Applications	32,196	41,186	8,990	2.49%	1,170
15-1032	Computer Software Engineers, Systems Software	31,595	40,935	9,340	2.62%	1,200
15-1041	Computer Support Specialists	19,956	22,974	3,018	1.42%	854
15-1051	Computer Systems Analysts	38,292	44,669	6,377	1.55%	1,464
15-1061	Database Administrators	5,487	6,709	1,222	2.03%	214
15-1071	Network and Computer Systems Administrators	20,776	26,523	5,747	2.47%	921
15-1081	Network Systems and Data Communications Analysts	20,272	30,896	10,624	4.30%	1,426
15-1099	Computer Specialists, All Other	23,241	22,375	-866	-0.38%	501
15-2011	Actuaries	562	591	29	0.50%	20
15-2021	Mathematicians	418	462	44	1.01%	16
15-2031	Operations Research Analysts	5,237	6,016	779	1.40%	230
15-2041	Statisticians	4,187	4,115	-72	-0.17%	124
15-2091	Mathematical Technicians	5	6	1	1.84%	0
15-2099	Mathematical Science Occupations, All Other	53	52	-1	-0.19%	2
<b>17-0000</b>	<b>Architecture and Engineering Occupations</b>	<b>77,137</b>	<b>84,080</b>	<b>6,943</b>	<b>0.87%</b>	<b>2,348</b>
17-1011	Architects, Except Landscape and Naval	5,982	6,523	541	0.87%	155
17-1012	Landscape Architects	855	964	109	1.21%	25
17-1021	Cartographers and Photogrammetrists	1,090	1,270	180	1.54%	46
17-1022	Surveyors	1,687	1,831	144	0.82%	57
17-2011	Aerospace Engineers	2,980	3,198	218	0.71%	84
17-2021	Agricultural Engineers	30	32	2	0.65%	1

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

17-2031	Biomedical Engineers	685	1,170	485	5.50%	63
17-2041	Chemical Engineers	521	512	-9	-0.17%	13
17-2051	Civil Engineers	9,193	10,989	1,796	1.80%	335
17-2061	Computer Hardware Engineers	3,123	3,499	376	1.14%	124
17-2071	Electrical Engineers	5,935	6,325	390	0.64%	175
17-2072	Electronics Engineers, Except Computer	4,962	4,883	-79	-0.16%	114
17-2081	Environmental Engineers	2,124	2,497	373	1.63%	81
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	478	494	16	0.33%	14
17-2112	Industrial Engineers	3,113	4,121	1,008	2.84%	181
17-2121	Marine Engineers and Naval Architects	828	814	-14	-0.17%	17
17-2131	Materials Engineers	442	470	28	0.62%	14
17-2141	Mechanical Engineers	5,597	5,967	370	0.64%	181
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	7	9	2	2.54%	0
17-2161	Nuclear Engineers	527	560	33	0.61%	14
17-2171	Petroleum Engineers	76	91	15	1.82%	4
17-2199	Engineers, All Other	9,545	9,769	224	0.23%	220
17-3011	Architectural and Civil Drafters	2,385	2,467	82	0.34%	59
17-3012	Electrical and Electronics Drafters	807	852	45	0.54%	22
17-3013	Mechanical Drafters	549	571	22	0.39%	14
17-3019	Drafters, All Other	116	117	1	0.09%	3
17-3021	Aerospace Engineering and Operations Technicians	173	174	1	0.06%	3
17-3022	Civil Engineering Technicians	2,554	2,849	295	1.10%	78
17-3023	Electrical and Electronic Engineering Technicians	4,563	4,483	-80	-0.18%	86
17-3024	Electro-Mechanical Technicians	438	370	-68	-1.67%	8
17-3025	Environmental Engineering Technicians	409	505	96	2.13%	18
17-3026	Industrial Engineering Technicians	858	923	65	0.73%	23
17-3027	Mechanical Engineering Technicians	714	735	21	0.29%	16
17-3029	Engineering Technicians, Except Drafters, All Other	1,948	1,907	-41	-0.21%	37
17-3031	Surveying and Mapping Technicians	1,843	2,139	296	1.50%	63
<b>19-0000</b>	<b>Life, Physical, and Social Science Occupations</b>	<b>70,855</b>	<b>79,465</b>	<b>8,610</b>	<b>1.15%</b>	<b>3,219</b>
19-1011	Animal Scientists	114	132	18	1.48%	6
19-1012	Food Scientists and Technologists	121	156	35	2.57%	8

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

19-1013	Soil and Plant Scientists	394	402	8	0.20%	15
19-1021	Biochemists and Biophysicists	588	916	328	4.53%	52
19-1022	Microbiologists	1,719	1,817	98	0.56%	65
19-1023	Zoologists and Wildlife Biologists	392	377	-15	-0.39%	13
19-1029	Biological Scientists, All Other	3,855	4,074	219	0.55%	146
19-1031	Conservation Scientists	726	759	33	0.45%	11
19-1032	Foresters	113	112	-1	-0.09%	1
19-1041	Epidemiologists	293	367	74	2.28%	13
19-1042	Medical Scientists, Except Epidemiologists	2,540	3,485	945	3.21%	146
19-1099	Life Scientists, All Other	810	989	179	2.02%	34
19-2011	Astronomers	330	335	5	0.15%	10
19-2012	Physicists	1,778	1,787	9	0.05%	52
19-2021	Atmospheric and Space Scientists	508	486	-22	-0.44%	11
19-2031	Chemists	3,568	3,439	-129	-0.37%	118
19-2032	Materials Scientists	186	232	46	2.23%	11
19-2041	Environmental Scientists and Specialists, Including Health	4,287	4,760	473	1.05%	169
19-2042	Geoscientists, Except Hydrologists and Geographers	741	787	46	0.60%	26
19-2043	Hydrologists	209	209	0	0.00%	6
19-2099	Physical Scientists, All Other	3,564	3,552	-12	-0.03%	92
19-3011	Economists	5,358	4,996	-362	-0.70%	152
19-3021	Market Research Analysts	11,748	14,316	2,568	2.00%	573
19-3022	Survey Researchers	2,304	3,346	1,042	3.80%	166
19-3031	Clinical, Counseling, and School Psychologists	3,007	3,395	388	1.22%	124
19-3032	Industrial-Organizational Psychologists	256	284	28	1.04%	10
19-3039	Psychologists, All Other	620	567	-53	-0.89%	18
19-3041	Sociologists	692	895	203	2.61%	33
19-3051	Urban and Regional Planners	1,145	1,256	111	0.93%	33
19-3091	Anthropologists and Archeologists	162	190	28	1.61%	11
19-3092	Geographers	273	282	9	0.32%	15
19-3093	Historians	611	511	-100	-1.77%	31
19-3094	Political Scientists	3,062	3,289	227	0.72%	176
19-3099	Social Scientists and Related Workers, All Other	7,321	8,325	1,004	1.29%	467

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

19-4011	Agricultural and Food Science Technicians	245	294	49	1.84%	14
19-4021	Biological Technicians	2,583	3,005	422	1.52%	133
19-4031	Chemical Technicians	513	542	29	0.55%	13
19-4041	Geological and Petroleum Technicians	30	35	5	1.55%	2
19-4051	Nuclear Technicians	33	36	3	0.87%	1
19-4061	Social Science Research Assistants	1,349	1,668	319	2.15%	90
19-4091	Environmental Science and Protection Technicians, Including Health	515	623	108	1.92%	33
19-4092	Forensic Science Technicians	661	778	117	1.64%	40
19-4093	Forest and Conservation Technicians	19	18	-1	-0.54%	1
19-4099	Life, Physical, and Social Science Technicians, All Other	1,512	1,641	129	0.82%	78
<b>21-0000</b>	<b>Community and Social Services Occupations</b>	<b>40,420</b>	<b>47,256</b>	<b>6,836</b>	<b>1.57%</b>	<b>1,569</b>
21-1011	Substance Abuse and Behavioral Disorder Counselors	1,573	1,793	220	1.32%	54
21-1012	Educational, Vocational, and School Counselors	5,652	6,643	991	1.63%	213
21-1013	Marriage and Family Therapists	349	395	46	1.25%	12
21-1014	Mental Health Counselors	2,515	2,814	299	1.13%	81
21-1015	Rehabilitation Counselors	3,922	4,696	774	1.82%	156
21-1019	Counselors, All Other	390	413	23	0.57%	10
21-1021	Child, Family, and School Social Workers	5,908	6,639	731	1.17%	221
21-1022	Medical and Public Health Social Workers	1,613	1,958	345	1.96%	76
21-1023	Mental Health and Substance Abuse Social Workers	2,594	3,051	457	1.64%	111
21-1029	Social Workers, All Other	1,115	1,270	155	1.31%	44
21-1091	Health Educators	2,995	3,228	233	0.75%	86
21-1092	Probation Officers and Correctional Treatment Specialists	1,753	1,958	205	1.11%	58
21-1093	Social and Human Service Assistants	6,175	7,784	1,609	2.34%	292
21-1099	Community and Social Service Specialists, All Other	2,403	2,786	383	1.49%	89
21-2011	Clergy	747	929	182	2.20%	33
21-2021	Directors, Religious Activities and Education	524	662	138	2.37%	25
21-2099	Religious Workers, All Other	192	237	45	2.13%	8
<b>23-0000</b>	<b>Legal Occupations</b>	<b>92,889</b>	<b>96,675</b>	<b>3,786</b>	<b>0.40%</b>	<b>2,004</b>
23-1011	Lawyers	62,063	63,606	1,543	0.25%	1,314
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	584	559	-25	-0.44%	11
23-1022	Arbitrators, Mediators, and Conciliators	498	564	66	1.25%	16

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

23-1023	Judges, Magistrate Judges, and Magistrates	44	40	-4	-0.95%	1
23-2011	Paralegals and Legal Assistants	13,067	15,385	2,318	1.65%	380
23-2091	Court Reporters	1,876	1,998	122	0.63%	40
23-2092	Law Clerks	1,560	1,779	219	1.32%	45
23-2093	Title Examiners, Abstractors, and Searchers	1,319	1,343	24	0.18%	22
23-2099	Legal Support Workers, All Other	11,878	11,401	-477	-0.41%	175
<b>25-0000</b>	<b>Education, Training, and Library Occupations</b>	<b>176,074</b>	<b>210,128</b>	<b>34,054</b>	<b>1.78%</b>	<b>7,267</b>
25-1011	Business Teachers, Postsecondary	1,887	2,186	299	1.48%	63
25-1021	Computer Science Teachers, Postsecondary	686	798	112	1.52%	23
25-1022	Mathematical Science Teachers, Postsecondary	560	654	94	1.56%	19
25-1031	Architecture Teachers, Postsecondary	328	384	56	1.59%	12
25-1032	Engineering Teachers, Postsecondary	412	482	70	1.58%	14
25-1041	Agricultural Sciences Teachers, Postsecondary	78	91	13	1.55%	2
25-1042	Biological Science Teachers, Postsecondary	507	592	85	1.56%	18
25-1043	Forestry and Conservation Science Teachers, Postsecondary	14	17	3	1.96%	0
25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	29	34	5	1.60%	2
25-1052	Chemistry Teachers, Postsecondary	281	329	48	1.59%	10
25-1053	Environmental Science Teachers, Postsecondary	46	54	8	1.62%	2
25-1054	Physics Teachers, Postsecondary	221	258	37	1.56%	8
25-1061	Anthropology and Archeology Teachers, Postsecondary	124	144	20	1.51%	4
25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	137	161	24	1.63%	4
25-1063	Economics Teachers, Postsecondary	335	392	57	1.58%	12
25-1064	Geography Teachers, Postsecondary	37	43	6	1.51%	2
25-1065	Political Science Teachers, Postsecondary	749	876	127	1.58%	26
25-1066	Psychology Teachers, Postsecondary	583	683	100	1.60%	20
25-1067	Sociology Teachers, Postsecondary	192	224	32	1.55%	6
25-1069	Social Sciences Teachers, Postsecondary, All Other	28	32	4	1.34%	1
25-1071	Health Specialties Teachers, Postsecondary	4,014	4,604	590	1.38%	129
25-1072	Nursing Instructors and Teachers, Postsecondary	701	809	108	1.44%	23
25-1081	Education Teachers, Postsecondary	710	828	118	1.55%	24
25-1082	Library Science Teachers, Postsecondary	26	31	5	1.77%	2
25-1111	Criminal Justice and Law Enforcement Teachers, Postsecondary	207	242	35	1.57%	8



**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

25-1112	Law Teachers, Postsecondary	936	1,093	157	1.56%	32
25-1113	Social Work Teachers, Postsecondary	333	390	57	1.59%	12
25-1121	Art, Drama, and Music Teachers, Postsecondary	1,254	1,421	167	1.26%	39
25-1122	Communications Teachers, Postsecondary	481	560	79	1.53%	16
25-1123	English Language and Literature Teachers, Postsecondary	894	1,043	149	1.55%	31
25-1124	Foreign Language and Literature Teachers, Postsecondary	917	1,016	99	1.03%	26
25-1125	History Teachers, Postsecondary	380	444	64	1.57%	13
25-1126	Philosophy and Religion Teachers, Postsecondary	373	436	63	1.57%	13
25-1191	Graduate Teaching Assistants	1,836	2,144	308	1.56%	63
25-1193	Recreation and Fitness Studies Teachers, Postsecondary	355	415	60	1.57%	12
25-1194	Vocational Education Teachers, Postsecondary	508	556	48	0.91%	14
25-1199	Postsecondary Teachers, All Other	817	956	139	1.58%	28
25-2011	Preschool Teachers, Except Special Education	10,685	13,466	2,781	2.34%	492
25-2012	Kindergarten Teachers, Except Special Education	3,517	4,347	830	2.14%	154
25-2021	Elementary School Teachers, Except Special Education	28,361	35,551	7,190	2.29%	1,364
25-2022	Middle School Teachers, Except Special and Vocational Education	11,291	14,099	2,808	2.25%	538
25-2023	Vocational Education Teachers, Middle School	373	415	42	1.07%	13
25-2031	Secondary School Teachers, Except Special and Vocational Education	19,793	23,323	3,530	1.65%	928
25-2032	Vocational Education Teachers, Secondary School	1,579	1,869	290	1.70%	75
25-2041	Special Education Teachers, Preschool, Kindergarten, and Elementary School	4,924	6,319	1,395	2.53%	268
25-2042	Special Education Teachers, Middle School	2,304	2,944	640	2.48%	124
25-2043	Special Education Teachers, Secondary School	3,029	3,708	679	2.04%	147
25-3011	Adult Literacy, Remedial Education, and GED Teachers and Instructors	1,095	1,307	212	1.79%	38
25-3021	Self-Enrichment Education Teachers	5,274	6,167	893	1.58%	170
25-3099	Teachers and Instructors, All Other	23,974	27,619	3,645	1.43%	734
25-4011	Archivists	350	331	-19	-0.56%	10
25-4012	Curators	357	391	34	0.91%	14
25-4013	Museum Technicians and Conservators	1,259	1,326	67	0.52%	45
25-4021	Librarians	4,923	5,244	321	0.63%	161
25-4031	Library Technicians	2,867	3,040	173	0.59%	146
25-9011	Audio-Visual Collections Specialists	275	320	45	1.53%	11
25-9021	Farm and Home Management Advisors	40	37	-3	-0.78%	1

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

25-9031	Instructional Coordinators	4,867	5,902	1,035	1.95%	211
25-9041	Teacher Assistants	20,360	24,052	3,692	1.68%	800
25-9099	Education, Training, and Library Workers, All Other	2,601	2,929	328	1.19%	90
<b>27-0000</b>	<b>Arts, Design, Entertainment, Sports, and Media Occupations</b>	<b>91,994</b>	<b>102,235</b>	<b>10,241</b>	<b>1.06%</b>	<b>3,415</b>
27-1011	Art Directors	1,942	2,118	176	0.87%	62
27-1012	Craft Artists	51	59	8	1.47%	2
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	435	473	38	0.84%	14
27-1014	Multi-Media Artists and Animators	1,936	2,007	71	0.36%	50
27-1019	Artists and Related Workers, All Other	4,621	4,207	-414	-0.93%	103
27-1021	Commercial and Industrial Designers	347	382	35	0.97%	15
27-1022	Fashion Designers	85	94	9	1.01%	4
27-1023	Floral Designers	1,384	1,328	-56	-0.41%	43
27-1024	Graphic Designers	8,826	9,572	746	0.81%	346
27-1025	Interior Designers	2,908	3,048	140	0.47%	103
27-1026	Merchandise Displayers and Window Trimmers	994	972	-22	-0.22%	31
27-1027	Set and Exhibit Designers	594	614	20	0.33%	20
27-1029	Designers, All Other	272	258	-14	-0.53%	8
27-2011	Actors	1,402	1,642	240	1.59%	58
27-2012	Producers and Directors	3,839	3,915	76	0.20%	128
27-2021	Athletes and Sports Competitors	520	601	81	1.46%	18
27-2022	Coaches and Scouts	3,889	4,755	866	2.03%	162
27-2023	Umpires, Referees, and Other Sports Officials	328	409	81	2.23%	14
27-2031	Dancers	307	315	8	0.26%	15
27-2032	Choreographers	611	500	-111	-1.98%	28
27-2041	Music Directors and Composers	364	419	55	1.42%	13
27-2042	Musicians and Singers	1,434	1,525	91	0.62%	38
27-2099	Entertainers and Performers, Sports and Related Workers, All Other	390	433	43	1.05%	13
27-3011	Radio and Television Announcers	536	496	-40	-0.77%	15
27-3012	Public Address System and Other Announcers	55	57	2	0.36%	2
27-3021	Broadcast News Analysts	372	377	5	0.13%	11
27-3022	Reporters and Correspondents	3,385	3,241	-144	-0.43%	93
27-3031	Public Relations Specialists	17,497	22,144	4,647	2.38%	880

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

27-3041	Editors	7,951	8,997	1,046	1.24%	313
27-3042	Technical Writers	3,465	3,869	404	1.11%	96
27-3043	Writers and Authors	9,999	11,394	1,395	1.31%	349
27-3091	Interpreters and Translators	2,180	2,635	455	1.91%	98
27-3099	Media and Communication Workers, All Other	637	702	65	0.98%	22
27-4011	Audio and Video Equipment Technicians	1,346	1,496	150	1.06%	56
27-4012	Broadcast Technicians	1,319	1,291	-28	-0.21%	40
27-4013	Radio Operators	222	224	2	0.09%	7
27-4014	Sound Engineering Technicians	403	422	19	0.46%	14
27-4021	Photographers	2,301	2,423	122	0.52%	58
27-4031	Camera Operators, Television, Video, and Motion Picture	958	966	8	0.08%	25
27-4032	Film and Video Editors	496	515	19	0.38%	14
27-4099	Media and Communication Equipment Workers, All Other	1,393	1,340	-53	-0.39%	34
<b>29-0000</b>	<b>Healthcare Practitioners and Technical Occupations</b>	<b>129,232</b>	<b>149,377</b>	<b>20,145</b>	<b>1.46%</b>	<b>4,704</b>
29-1011	Chiropractors	832	924	92	1.05%	24
29-1021	Dentists, General	2,816	3,015	199	0.69%	98
29-1022	Oral and Maxillofacial Surgeons	78	83	5	0.62%	3
29-1023	Orthodontists	136	150	14	0.98%	5
29-1024	Prosthodontists	8	10	2	2.26%	0
29-1029	Dentists, All Other Specialists	338	350	12	0.35%	10
29-1031	Dietitians and Nutritionists	1,064	1,183	119	1.07%	48
29-1041	Optometrists	599	684	85	1.34%	29
29-1051	Pharmacists	4,277	4,478	201	0.46%	115
29-1061	Anesthesiologists	708	847	139	1.81%	27
29-1062	Family and General Practitioners	2,090	2,480	390	1.73%	76
29-1063	Internists, General	895	1,068	173	1.78%	33
29-1064	Obstetricians and Gynecologists	661	789	128	1.79%	25
29-1065	Pediatricians, General	498	590	92	1.71%	18
29-1066	Psychiatrists	744	809	65	0.84%	20
29-1067	Surgeons	1,019	1,219	200	1.81%	38
29-1069	Physicians and Surgeons, All Other	10,061	10,441	380	0.37%	215
29-1071	Physician Assistants	1,782	2,340	558	2.76%	89

**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

29-1081	Podiatrists	401	406	5	0.12%	8
29-1111	Registered Nurses	37,986	46,232	8,246	1.98%	1,489
29-1121	Audiologists	312	376	64	1.88%	12
29-1122	Occupational Therapists	1,423	1,769	346	2.20%	61
29-1123	Physical Therapists	2,564	3,259	695	2.43%	101
29-1124	Radiation Therapists	261	333	72	2.47%	12
29-1125	Recreational Therapists	361	421	60	1.55%	19
29-1126	Respiratory Therapists	1,326	1,629	303	2.08%	54
29-1127	Speech-Language Pathologists	2,123	2,528	405	1.76%	80
29-1129	Therapists, All Other	454	519	65	1.35%	16
29-1131	Veterinarians	1,297	1,628	331	2.30%	56
29-1199	Health Diagnosing and Treating Practitioners, All Other	5,494	5,122	-372	-0.70%	100
29-2011	Medical and Clinical Laboratory Technologists	3,670	4,201	531	1.36%	123
29-2012	Medical and Clinical Laboratory Technicians	2,326	2,709	383	1.54%	82
29-2021	Dental Hygienists	2,572	3,246	674	2.35%	120
29-2031	Cardiovascular Technologists and Technicians	569	724	155	2.44%	24
29-2032	Diagnostic Medical Sonographers	782	935	153	1.80%	26
29-2033	Nuclear Medicine Technologists	385	449	64	1.55%	12
29-2034	Radiologic Technologists and Technicians	3,385	4,012	627	1.71%	112
29-2041	Emergency Medical Technicians and Paramedics	5,193	5,324	131	0.25%	119
29-2051	Dietetic Technicians	527	602	75	1.34%	21
29-2052	Pharmacy Technicians	4,445	5,108	663	1.40%	178
29-2053	Psychiatric Technicians	1,403	1,435	32	0.23%	38
29-2054	Respiratory Therapy Technicians	238	246	8	0.33%	7
29-2055	Surgical Technologists	1,815	2,342	527	2.58%	99
29-2056	Veterinary Technologists and Technicians	1,239	1,598	359	2.58%	67
29-2061	Licensed Practical and Licensed Vocational Nurses	9,234	11,225	1,991	1.97%	488
29-2071	Medical Records and Health Information Technicians	2,042	2,367	325	1.49%	75
29-2081	Opticians, Dispensing	1,701	1,643	-58	-0.35%	35
29-2091	Orthotists and Prosthetists	48	56	8	1.55%	2
29-2099	Health Technologists and Technicians, All Other	1,192	1,384	192	1.50%	43
29-9011	Occupational Health and Safety Specialists	1,293	1,322	29	0.22%	46

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

29-9012	Occupational Health and Safety Technicians	281	285	4	0.14%	9
29-9091	Athletic Trainers	106	148	42	3.39%	8
29-9099	Healthcare Practitioners and Technical Workers, All Other	2,178	2,334	156	0.69%	89
<b>31-0000</b>	<b>Healthcare Support Occupations</b>	<b>54,580</b>	<b>70,583</b>	<b>16,003</b>	<b>2.60%</b>	<b>2,243</b>
31-1011	Home Health Aides	11,001	17,122	6,121	4.52%	722
31-1012	Nursing Aides, Orderlies, and Attendants	18,621	23,326	4,705	2.28%	656
31-1013	Psychiatric Aides	649	679	30	0.45%	10
31-2011	Occupational Therapist Assistants	218	275	57	2.35%	9
31-2012	Occupational Therapist Aides	111	146	35	2.78%	6
31-2021	Physical Therapist Assistants	865	1,154	289	2.92%	42
31-2022	Physical Therapist Aides	612	837	225	3.18%	32
31-9011	Massage Therapists	2,312	2,673	361	1.46%	67
31-9091	Dental Assistants	5,544	6,958	1,414	2.30%	245
31-9092	Medical Assistants	7,054	8,977	1,923	2.44%	271
31-9093	Medical Equipment Preparers	397	454	57	1.35%	10
31-9094	Medical Transcriptionists	942	1,042	100	1.01%	21
31-9095	Pharmacy Aides	726	587	-139	-2.10%	8
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	2,429	2,883	454	1.73%	72
31-9099	Healthcare Support Workers, All Other	3,099	3,470	371	1.14%	72
<b>33-0000</b>	<b>Protective Service Occupations</b>	<b>88,052</b>	<b>99,805</b>	<b>11,753</b>	<b>1.26%</b>	<b>3,514</b>
33-1011	First-Line Supervisors/Managers of Correctional Officers	432	435	3	0.07%	16
33-1012	First-Line Supervisors/Managers of Police and Detectives	2,771	2,708	-63	-0.23%	121
33-1021	First-Line Supervisors/Managers of Fire Fighting and Prevention Workers	1,342	1,349	7	0.05%	69
33-1099	First-Line Supervisors/Managers, Protective Service Workers, All Other	1,583	1,827	244	1.44%	81
33-2011	Fire Fighters	5,132	5,527	395	0.74%	198
33-2021	Fire Inspectors and Investigators	222	221	-1	-0.05%	6
33-3011	Bailiffs	269	270	1	0.04%	6
33-3012	Correctional Officers and Jailers	6,761	7,028	267	0.39%	177
33-3021	Detectives and Criminal Investigators	6,197	6,747	550	0.85%	182
33-3031	Fish and Game Wardens	42	41	-1	-0.24%	1
33-3041	Parking Enforcement Workers	716	658	-58	-0.84%	17
33-3051	Police and Sheriff's Patrol Officers	20,310	20,216	-94	-0.05%	524

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

33-3052	Transit and Railroad Police	40	42	2	0.49%	1
33-9011	Animal Control Workers	291	318	27	0.89%	11
33-9021	Private Detectives and Investigators	1,772	2,307	535	2.67%	90
33-9031	Gaming Surveillance Officers and Gaming Investigators	6	7	1	1.55%	0
33-9032	Security Guards	35,122	44,489	9,367	2.39%	1,660
33-9091	Crossing Guards	1,111	1,170	59	0.52%	36
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	2,514	2,840	326	1.23%	203
33-9099	Protective Service Workers, All Other	1,419	1,605	186	1.24%	115
<b>35-0000</b>	<b>Food Preparation and Serving Related Occupations</b>	211,429	243,095	31,666	1.41%	10,611
35-1011	Chefs and Head Cooks	3,840	4,016	176	0.45%	56
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	15,934	18,018	2,084	1.24%	360
35-2011	Cooks, Fast Food	5,367	6,126	759	1.33%	213
35-2012	Cooks, Institution and Cafeteria	4,632	5,541	909	1.81%	210
35-2013	Cooks, Private Household	75	74	-1	-0.13%	2
35-2014	Cooks, Restaurant	16,844	19,181	2,337	1.31%	665
35-2015	Cooks, Short Order	4,182	4,437	255	0.59%	133
35-2019	Cooks, All Other	289	348	59	1.88%	13
35-2021	Food Preparation Workers	13,895	15,152	1,257	0.87%	623
35-3011	Bartenders	6,865	7,877	1,012	1.38%	346
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	54,412	65,871	11,459	1.93%	2,300
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	9,764	11,095	1,331	1.29%	850
35-3031	Waiters and Waitresses	43,279	48,810	5,531	1.21%	2,942
35-3041	Food Servers, Nonrestaurant	3,482	3,981	499	1.35%	110
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	9,803	10,916	1,113	1.08%	536
35-9021	Dishwashers	11,724	13,756	2,032	1.61%	686
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	6,558	7,405	847	1.22%	541
35-9099	Food Preparation and Serving Related Workers, All Other	484	491	7	0.14%	25
<b>37-0000</b>	<b>Building and Grounds Cleaning and Maintenance Occupations</b>	133,550	155,051	21,501	1.50%	4,365
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	9,054	10,371	1,317	1.37%	226
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	5,348	6,624	1,276	2.16%	186
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	62,027	70,600	8,573	1.30%	2,029

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

37-2012	Maids and Housekeeping Cleaners	29,875	32,945	3,070	0.98%	843
37-2019	Building Cleaning Workers, All Other	20	23	3	1.41%	0
37-2021	Pest Control Workers	1,148	1,412	264	2.09%	66
37-3011	Landscaping and Groundskeeping Workers	24,724	31,350	6,626	2.40%	961
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	612	801	189	2.73%	26
37-3013	Tree Trimmers and Pruners	616	808	192	2.75%	26
37-3019	Grounds Maintenance Workers, All Other	126	117	-9	-0.74%	2
<b>39-0000</b>	<b>Personal Care and Service Occupations</b>	<b>105,970</b>	<b>122,973</b>	<b>17,003</b>	<b>1.50%</b>	<b>4,218</b>
39-1011	Gaming Supervisors	41	49	8	1.80%	2
39-1012	Slot Key Persons	12	13	1	0.80%	0
39-1021	First-Line Supervisors/Managers of Personal Service Workers	5,310	6,140	830	1.46%	228
39-2011	Animal Trainers	458	619	161	3.06%	25
39-2021	Nonfarm Animal Caretakers	5,719	6,653	934	1.52%	218
39-3011	Gaming Dealers	41	51	10	2.21%	3
39-3012	Gaming and Sports Book Writers and Runners	36	44	8	2.03%	3
39-3019	Gaming Service Workers, All Other	13	13	0	0.00%	1
39-3021	Motion Picture Projectionists	88	79	-9	-1.07%	4
39-3031	Ushers, Lobby Attendants, and Ticket Takers	2,790	3,079	289	0.99%	206
39-3091	Amusement and Recreation Attendants	4,836	5,563	727	1.41%	324
39-3092	Costume Attendants	170	198	28	1.54%	12
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	351	392	41	1.11%	22
39-3099	Entertainment Attendants and Related Workers, All Other	300	345	45	1.41%	21
39-4011	Embalmers	113	113	0	0.00%	5
39-4021	Funeral Attendants	340	404	64	1.74%	22
39-5011	Barbers	3,815	4,007	192	0.49%	75
39-5012	Hairdressers, Hairstylists, and Cosmetologists	18,075	20,746	2,671	1.39%	532
39-5091	Makeup Artists, Theatrical and Performance	40	45	5	1.18%	2
39-5092	Manicurists and Pedicurists	2,767	3,112	345	1.18%	75
39-5093	Shampooers	2,735	2,955	220	0.78%	62
39-5094	Skin Care Specialists	1,194	1,593	399	2.93%	57
39-6011	Baggage Porters and Bellhops	1,981	2,178	197	0.95%	71
39-6012	Concierges	2,058	2,330	272	1.25%	80

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

39-6021	Tour Guides and Escorts	633	714	81	1.21%	35
39-6022	Travel Guides	124	118	-6	-0.49%	5
39-6031	Flight Attendants	3,522	3,679	157	0.44%	95
39-6032	Transportation Attendants, Except Flight Attendants and Baggage Porters	348	426	78	2.04%	16
39-9011	Child Care Workers	20,161	22,873	2,712	1.27%	861
39-9021	Personal and Home Care Aides	7,491	10,052	2,561	2.98%	350
39-9031	Fitness Trainers and Aerobics Instructors	8,169	10,866	2,697	2.89%	417
39-9032	Recreation Workers	8,132	9,102	970	1.13%	243
39-9041	Residential Advisors	1,797	2,051	254	1.33%	89
39-9099	Personal Care and Service Workers, All Other	2,310	2,371	61	0.26%	57
<b>41-0000</b>	<b>Sales and Related Occupations</b>	<b>294,568</b>	<b>303,815</b>	<b>9,247</b>	<b>0.31%</b>	<b>9,573</b>
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	31,569	32,013	444	0.14%	721
41-1012	First-Line Supervisors/Managers of Non-Retail Sales Workers	9,436	9,463	27	0.03%	199
41-2011	Cashiers	63,457	64,953	1,496	0.23%	3,000
41-2012	Gaming Change Persons and Booth Cashiers	139	138	-1	-0.07%	6
41-2021	Counter and Rental Clerks	7,641	7,431	-210	-0.28%	204
41-2022	Parts Salespersons	3,291	3,450	159	0.47%	132
41-2031	Retail Salespersons	83,631	87,810	4,179	0.49%	2,751
41-3011	Advertising Sales Agents	2,532	2,801	269	1.01%	77
41-3021	Insurance Sales Agents	5,944	5,863	-81	-0.14%	138
41-3031	Securities, Commodities, and Financial Services Sales Agents	5,259	5,677	418	0.77%	203
41-3041	Travel Agents	2,166	2,026	-140	-0.67%	16
41-3099	Sales Representatives, Services, All Other	17,181	18,564	1,383	0.78%	564
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	6,599	7,056	457	0.67%	199
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	21,165	22,183	1,018	0.47%	592
41-9011	Demonstrators and Product Promoters	2,828	2,716	-112	-0.40%	82
41-9012	Models	23	25	2	0.84%	1
41-9021	Real Estate Brokers	3,983	3,819	-164	-0.42%	65
41-9022	Real Estate Sales Agents	18,043	18,576	533	0.29%	348
41-9031	Sales Engineers	1,341	1,389	48	0.35%	53



## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

41-9041	Telemarketers	3,877	3,367	-510	-1.40%	98
41-9091	Door-To-Door Sales Workers, News and Street Vendors, and Related Workers	1,747	1,474	-273	-1.68%	32
41-9099	Sales and Related Workers, All Other	2,716	3,021	305	1.07%	92
<b>43-0000</b>	<b>Office and Administrative Support Occupations</b>	<b>473,707</b>	<b>501,012</b>	<b>27,305</b>	<b>0.56%</b>	<b>13,719</b>
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	28,357	31,626	3,269	1.10%	967
43-2011	Switchboard Operators, Including Answering Service	3,061	2,733	-328	-1.13%	63
43-2021	Telephone Operators	66	75	9	1.29%	2
43-2099	Communications Equipment Operators, All Other	116	91	-25	-2.40%	3
43-3011	Bill and Account Collectors	6,043	6,989	946	1.46%	209
43-3021	Billing and Posting Clerks and Machine Operators	9,117	10,430	1,313	1.35%	281
43-3031	Bookkeeping, Accounting, and Auditing Clerks	33,331	36,693	3,362	0.97%	737
43-3041	Gaming Cage Workers	83	76	-7	-0.88%	2
43-3051	Payroll and Timekeeping Clerks	3,153	2,923	-230	-0.75%	75
43-3061	Procurement Clerks	1,919	1,981	62	0.32%	65
43-3071	Tellers	9,465	10,561	1,096	1.10%	499
43-4011	Brokerage Clerks	704	656	-48	-0.70%	20
43-4021	Correspondence Clerks	299	263	-36	-1.27%	9
43-4031	Court, Municipal, and License Clerks	922	916	-6	-0.07%	26
43-4041	Credit Authorizers, Checkers, and Clerks	598	577	-21	-0.36%	17
43-4051	Customer Service Representatives	39,889	46,483	6,594	1.54%	1,914
43-4061	Eligibility Interviewers, Government Programs	1,978	1,989	11	0.06%	47
43-4071	File Clerks	3,254	2,408	-846	-2.97%	79
43-4081	Hotel, Motel, and Resort Desk Clerks	3,920	4,543	623	1.49%	195
43-4111	Interviewers, Except Eligibility and Loan	3,530	3,949	419	1.13%	126
43-4121	Library Assistants, Clerical	2,807	3,067	260	0.89%	143
43-4131	Loan Interviewers and Clerks	5,719	6,215	496	0.84%	191
43-4141	New Accounts Clerks	1,182	1,237	55	0.46%	40
43-4151	Order Clerks	2,927	2,098	-829	-3.28%	83
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	5,126	4,795	-331	-0.67%	145
43-4171	Receptionists and Information Clerks	28,098	31,614	3,516	1.19%	1,110
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	3,401	3,738	337	0.95%	111
43-4199	Information and Record Clerks, All Other	14,669	11,345	-3,324	-2.54%	416

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

43-5011	Cargo and Freight Agents	665	789	124	1.72%	27
43-5021	Couriers and Messengers	1,775	1,694	-81	-0.47%	41
43-5031	Police, Fire, and Ambulance Dispatchers	1,609	1,761	152	0.91%	48
43-5032	Dispatchers, Except Police, Fire, and Ambulance	2,633	2,725	92	0.34%	63
43-5041	Meter Readers, Utilities	366	286	-80	-2.44%	10
43-5051	Postal Service Clerks	1,921	1,370	-551	-3.32%	41
43-5052	Postal Service Mail Carriers	7,274	6,277	-997	-1.46%	227
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	4,766	2,897	-1,869	-4.86%	44
43-5061	Production, Planning, and Expediting Clerks	3,852	4,075	223	0.56%	117
43-5071	Shipping, Receiving, and Traffic Clerks	9,058	8,475	-583	-0.66%	225
43-5081	Stock Clerks and Order Fillers	28,441	29,760	1,319	0.45%	787
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	345	309	-36	-1.10%	12
43-6011	Executive Secretaries and Administrative Assistants	39,921	44,835	4,914	1.17%	1,029
43-6012	Legal Secretaries	10,795	12,276	1,481	1.29%	293
43-6013	Medical Secretaries	6,329	7,742	1,413	2.04%	226
43-6014	Secretaries, Except Legal, Medical, and Executive	30,049	30,317	268	0.09%	432
43-9011	Computer Operators	3,165	2,764	-401	-1.35%	36
43-9021	Data Entry Keyers	4,989	4,593	-396	-0.82%	104
43-9022	Word Processors and Typists	6,163	5,364	-799	-1.38%	48
43-9031	Desktop Publishers	674	535	-139	-2.28%	11
43-9041	Insurance Claims and Policy Processing Clerks	2,570	2,343	-227	-0.92%	34
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	5,491	4,655	-836	-1.64%	99
43-9061	Office Clerks, General	78,324	87,389	9,065	1.10%	1,974
43-9071	Office Machine Operators, Except Computer	1,924	1,740	-184	-1.00%	64
43-9081	Proofreaders and Copy Markers	755	701	-54	-0.74%	13
43-9111	Statistical Assistants	400	411	11	0.27%	8
43-9199	Office and Administrative Support Workers, All Other	5,719	4,858	-861	-1.62%	131
<b>45-0000</b>	<b>Farming, Fishing, and Forestry Occupations</b>	<b>2,651</b>	<b>2,658</b>	<b>7</b>	<b>0.03%</b>	<b>80</b>
45-1011	First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers	330	354	24	0.70%	11
45-2011	Agricultural Inspectors	38	37	-1	-0.27%	1
45-2041	Graders and Sorters, Agricultural Products	3	3	0	0.00%	0
45-2091	Agricultural Equipment Operators	18	17	-1	-0.57%	1

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	791	839	48	0.59%	26
45-2093	Farmworkers, Farm and Ranch Animals	1,283	1,256	-27	-0.21%	35
45-2099	Agricultural Workers, All Other	1	1	0	0.00%	0
45-4011	Forest and Conservation Workers	21	22	1	0.47%	1
45-4021	Fallers	68	52	-16	-2.65%	2
45-4022	Logging Equipment Operators	95	74	-21	-2.47%	3
45-4023	Log Graders and Scalers	3	3	0	0.00%	0
<b>47-0000</b>	<b>Construction and Extraction Occupations</b>	<b>158,286</b>	<b>171,193</b>	<b>12,907</b>	<b>0.79%</b>	<b>4,036</b>
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	16,263	17,917	1,654	0.97%	479
47-2011	Boilermakers	255	310	55	1.97%	11
47-2021	Brickmasons and Blockmasons	3,171	3,337	166	0.51%	97
47-2022	Stonemasons	1,410	1,508	98	0.67%	46
47-2031	Carpenters	23,058	23,803	745	0.32%	362
47-2041	Carpet Installers	743	710	-33	-0.45%	19
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	334	318	-16	-0.49%	9
47-2043	Floor Sanders and Finishers	405	433	28	0.67%	14
47-2044	Tile and Marble Setters	1,564	1,697	133	0.82%	54
47-2051	Cement Masons and Concrete Finishers	4,461	4,773	312	0.68%	143
47-2053	Terrazzo Workers and Finishers	149	162	13	0.84%	5
47-2061	Construction Laborers	27,216	30,730	3,514	1.22%	533
47-2071	Paving, Surfacing, and Tamping Equipment Operators	1,014	1,114	100	0.94%	27
47-2072	Pile-Driver Operators	47	48	1	0.21%	1
47-2073	Operating Engineers and Other Construction Equipment Operators	6,191	6,683	492	0.77%	155
47-2081	Drywall and Ceiling Tile Installers	3,562	3,793	231	0.63%	62
47-2082	Tapers	429	458	29	0.66%	8
47-2111	Electricians	15,693	17,064	1,371	0.84%	516
47-2121	Glaziers	1,090	1,138	48	0.43%	45
47-2131	Insulation Workers, Floor, Ceiling, and Wall	134	148	14	1.00%	5
47-2132	Insulation Workers, Mechanical	745	850	105	1.33%	36
47-2141	Painters, Construction and Maintenance	8,794	8,909	115	0.13%	162
47-2142	Paperhangers	109	89	-20	-2.01%	0

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

47-2151	Pipelayers	998	1,144	146	1.37%	35
47-2152	Plumbers, Pipefitters, and Steamfitters	11,679	13,071	1,392	1.13%	374
47-2161	Plasterers and Stucco Masons	532	522	-10	-0.19%	9
47-2171	Reinforcing Iron and Rebar Workers	1,290	1,373	83	0.63%	29
47-2181	Roofers	2,461	2,409	-52	-0.21%	40
47-2211	Sheet Metal Workers	4,431	4,580	149	0.33%	120
47-2221	Structural Iron and Steel Workers	1,124	1,149	25	0.22%	22
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	1,804	1,990	186	0.99%	57
47-3012	Helpers--Carpenters	2,398	2,687	289	1.14%	79
47-3013	Helpers--Electricians	2,672	3,172	500	1.73%	106
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	271	249	-22	-0.84%	6
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	2,324	2,816	492	1.94%	97
47-3016	Helpers--Roofers	476	408	-68	-1.53%	10
47-3019	Helpers, Construction Trades, All Other	994	1,052	58	0.57%	27
47-4011	Construction and Building Inspectors	3,031	3,362	331	1.04%	95
47-4021	Elevator Installers and Repairers	585	599	14	0.24%	17
47-4031	Fence Erectors	858	940	82	0.92%	17
47-4041	Hazardous Materials Removal Workers	610	653	43	0.68%	21
47-4051	Highway Maintenance Workers	1,125	1,120	-5	-0.04%	31
47-4061	Rail-Track Laying and Maintenance Equipment Operators	15	17	2	1.26%	0
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	250	292	42	1.57%	11
47-4099	Construction and Related Workers, All Other	756	790	34	0.44%	28
47-5012	Rotary Drill Operators, Oil and Gas	6	4	-2	-3.97%	0
47-5013	Service Unit Operators, Oil, Gas, and Mining	10	9	-1	-1.05%	0
47-5021	Earth Drillers, Except Oil and Gas	286	320	34	1.13%	8
47-5031	Explosives Workers, Ordnance Handling Experts, and Blasters	147	150	3	0.20%	3
47-5042	Mine Cutting and Channeling Machine Operators	125	129	4	0.32%	2
47-5049	Mining Machine Operators, All Other	8	7	-1	-1.33%	0
47-5051	Rock Splitters, Quarry	93	97	4	0.42%	2
47-5071	Roustabouts, Oil and Gas	5	4	-1	-2.21%	0
47-5081	Helpers--Extraction Workers	75	76	1	0.13%	1

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

47-5099	Extraction Workers, All Other	10	10	0	0.00%	0
<b>49-0000</b>	<b>Installation, Maintenance, and Repair Occupations</b>	100,183	108,967	8,784	0.84%	2,918
49-1011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	8,751	9,299	548	0.61%	284
49-2011	Computer, Automated Teller, and Office Machine Repairers	4,587	4,506	-81	-0.18%	79
49-2021	Radio Mechanics	179	191	12	0.65%	4
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	2,593	2,478	-115	-0.45%	45
49-2091	Avionics Technicians	86	101	15	1.62%	4
49-2092	Electric Motor, Power Tool, and Related Repairers	199	227	28	1.33%	10
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	167	180	13	0.75%	4
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	945	1,012	67	0.69%	23
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	469	525	56	1.13%	14
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	183	178	-5	-0.28%	3
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	1,287	1,439	152	1.12%	37
49-2098	Security and Fire Alarm Systems Installers	1,823	2,338	515	2.52%	83
49-3011	Aircraft Mechanics and Service Technicians	1,577	1,638	61	0.38%	37
49-3021	Automotive Body and Related Repairers	3,056	3,339	283	0.89%	107
49-3022	Automotive Glass Installers and Repairers	172	190	18	1.00%	6
49-3023	Automotive Service Technicians and Mechanics	14,777	15,853	1,076	0.71%	390
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	3,163	3,436	273	0.83%	100
49-3041	Farm Equipment Mechanics	130	131	1	0.08%	3
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	1,283	1,339	56	0.43%	30
49-3043	Rail Car Repairers	335	349	14	0.41%	7
49-3051	Motorboat Mechanics	126	144	18	1.34%	5
49-3052	Motorcycle Mechanics	140	164	24	1.59%	5
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	440	492	52	1.12%	14
49-3091	Bicycle Repairers	122	135	13	1.02%	4
49-3092	Recreational Vehicle Service Technicians	97	109	12	1.17%	3
49-3093	Tire Repairers and Changers	1,577	1,676	99	0.61%	43
49-9011	Mechanical Door Repairers	354	385	31	0.84%	8
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	691	676	-15	-0.22%	11
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	6,463	7,919	1,456	2.05%	250

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

49-9031	Home Appliance Repairers	890	949	59	0.64%	20
49-9041	Industrial Machinery Mechanics	1,542	1,739	197	1.21%	42
49-9042	Maintenance and Repair Workers, General	25,974	29,382	3,408	1.24%	741
49-9043	Maintenance Workers, Machinery	404	442	38	0.90%	10
49-9044	Millwrights	251	266	15	0.58%	7
49-9051	Electrical Power-Line Installers and Repairers	1,481	1,542	61	0.40%	59
49-9052	Telecommunications Line Installers and Repairers	5,635	5,154	-481	-0.89%	87
49-9061	Camera and Photographic Equipment Repairers	89	83	-6	-0.70%	3
49-9062	Medical Equipment Repairers	520	657	137	2.37%	29
49-9063	Musical Instrument Repairers and Tuners	192	182	-10	-0.53%	6
49-9064	Watch Repairers	61	50	-11	-1.97%	2
49-9069	Precision Instrument and Equipment Repairers, All Other	111	110	-1	-0.09%	3
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	347	353	6	0.17%	13
49-9092	Commercial Divers	32	32	0	0.00%	1
49-9093	Fabric Menders, Except Garment	1	1	0	0.00%	0
49-9094	Locksmiths and Safe Repairers	547	669	122	2.03%	20
49-9095	Manufactured Building and Mobile Home Installers	548	610	62	1.08%	10
49-9096	Riggers	65	66	1	0.15%	1
49-9097	Signal and Track Switch Repairers	19	19	0	0.00%	0
49-9098	Helpers--Installation, Maintenance, and Repair Workers	3,441	3,762	321	0.90%	197
49-9099	Installation, Maintenance, and Repair Workers, All Other	2,261	2,450	189	0.81%	54
51-0000	Production Occupations	68,008	66,202	-1,806	-0.27%	1,474
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	5,133	4,945	-188	-0.37%	69
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	318	338	20	0.61%	9
51-2021	Coil Winders, Tapers, and Finishers	138	98	-40	-3.36%	2
51-2022	Electrical and Electronic Equipment Assemblers	1,876	1,675	-201	-1.13%	29
51-2023	Electromechanical Equipment Assemblers	140	130	-10	-0.74%	2
51-2031	Engine and Other Machine Assemblers	18	17	-1	-0.57%	0
51-2041	Structural Metal Fabricators and Fitters	1,109	1,105	-4	-0.04%	23
51-2091	Fiberglass Laminators and Fabricators	34	31	-3	-0.92%	1
51-2092	Team Assemblers	3,930	3,755	-175	-0.45%	89
51-2099	Assemblers and Fabricators, All Other	1,661	1,739	78	0.46%	45

**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

51-3011	Bakers	2,957	2,950	-7	-0.02%	76
51-3021	Butchers and Meat Cutters	1,739	1,785	46	0.26%	61
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	557	608	51	0.88%	23
51-3023	Slaughterers and Meat Packers	125	124	-1	-0.08%	4
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	91	92	1	0.11%	3
51-3092	Food Batchmakers	758	820	62	0.79%	24
51-3093	Food Cooking Machine Operators and Tenders	160	163	3	0.19%	5
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	347	354	7	0.20%	8
51-4012	Numerical Tool and Process Control Programmers	24	21	-3	-1.33%	1
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	13	12	-1	-0.80%	0
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	5	4	-1	-2.21%	0
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	21	22	1	0.47%	0
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	281	232	-49	-1.90%	6
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	132	114	-18	-1.46%	1
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	75	60	-15	-2.21%	1
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	56	39	-17	-3.55%	1
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	43	35	-8	-2.04%	1
51-4041	Machinists	993	955	-38	-0.39%	13
51-4052	Pourers and Casters, Metal	4	3	-1	-2.84%	0
51-4061	Model Makers, Metal and Plastic	61	63	2	0.32%	0
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	563	509	-54	-1.00%	12
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	186	150	-36	-2.13%	4
51-4111	Tool and Die Makers	67	60	-7	-1.10%	0
51-4121	Welders, Cutters, Solderers, and Brazers	2,237	2,260	23	0.10%	71

**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	87	75	-12	-1.47%	3
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	55	70	15	2.44%	5
51-4192	Lay-Out Workers, Metal and Plastic	7	6	-1	-1.53%	0
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	48	40	-8	-1.81%	1
51-4194	Tool Grinders, Filers, and Sharpeners	78	83	5	0.62%	3
51-4199	Metal Workers and Plastic Workers, All Other	19	18	-1	-0.54%	0
51-5011	Bindery Workers	1,712	1,320	-392	-2.57%	25
51-5012	Bookbinders	368	310	-58	-1.70%	5
51-5021	Job Printers	1,171	1,063	-108	-0.96%	4
51-5022	Prepress Technicians and Workers	1,806	1,524	-282	-1.68%	23
51-5023	Printing Machine Operators	3,401	3,094	-307	-0.94%	71
51-6011	Laundry and Dry-Cleaning Workers	4,758	4,799	41	0.09%	87
51-6021	Pressers, Textile, Garment, and Related Materials	1,205	1,087	-118	-1.03%	5
51-6031	Sewing Machine Operators	755	576	-179	-2.67%	4
51-6041	Shoe and Leather Workers and Repairers	104	102	-2	-0.19%	1
51-6042	Shoe Machine Operators and Tenders	5	3	-2	-4.98%	0
51-6051	Sewers, Hand	10	9	-1	-1.05%	0
51-6052	Tailors, Dressmakers, and Custom Sewers	1,797	1,766	-31	-0.17%	19
51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders	15	8	-7	-6.09%	0
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	95	57	-38	-4.98%	2
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	0	0	0	#####	0
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	20	20	0	0.00%	0
51-6092	Fabric and Apparel Patternmakers	34	21	-13	-4.70%	0
51-6093	Upholsterers	526	619	93	1.64%	12
51-6099	Textile, Apparel, and Furnishings Workers, All Other	422	495	73	1.61%	13
51-7011	Cabinetmakers and Bench Carpenters	1,200	1,254	54	0.44%	32
51-7021	Furniture Finishers	206	208	2	0.10%	5
51-7031	Model Makers, Wood	1	1	0	0.00%	0
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	111	112	1	0.09%	2
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	554	578	24	0.42%	13



## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

51-7099	Woodworkers, All Other	264	273	9	0.34%	7
51-8011	Nuclear Power Reactor Operators	137	157	20	1.37%	7
51-8012	Power Distributors and Dispatchers	139	135	-4	-0.29%	5
51-8013	Power Plant Operators	350	347	-3	-0.09%	12
51-8021	Stationary Engineers and Boiler Operators	1,272	1,350	78	0.60%	29
51-8031	Water and Liquid Waste Treatment Plant and System Operators	1,405	1,634	229	1.52%	53
51-8091	Chemical Plant and System Operators	17	14	-3	-1.92%	0
51-8092	Gas Plant Operators	262	281	19	0.70%	8
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	30	26	-4	-1.42%	1
51-8099	Plant and System Operators, All Other	347	342	-5	-0.15%	8
51-9011	Chemical Equipment Operators and Tenders	349	299	-50	-1.53%	3
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	306	357	51	1.55%	8
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	118	114	-4	-0.34%	2
51-9022	Grinding and Polishing Workers, Hand	198	206	8	0.40%	4
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	278	311	33	1.13%	8
51-9031	Cutters and Trimmers, Hand	171	180	9	0.51%	5
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	264	250	-14	-0.54%	6
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	229	257	28	1.16%	8
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	5	5	0	0.00%	0
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	3,764	4,101	337	0.86%	97
51-9071	Jewelers and Precious Stone and Metal Workers	612	569	-43	-0.73%	13
51-9081	Dental Laboratory Technicians	692	746	54	0.75%	18
51-9082	Medical Appliance Technicians	103	113	10	0.93%	3
51-9083	Ophthalmic Laboratory Technicians	434	460	26	0.58%	11
51-9111	Packaging and Filling Machine Operators and Tenders	1,816	1,669	-147	-0.84%	30
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	249	267	18	0.70%	9
51-9122	Painters, Transportation Equipment	899	1,081	182	1.86%	42
51-9123	Painting, Coating, and Decorating Workers	157	166	9	0.56%	5
51-9131	Photographic Process Workers	767	775	8	0.10%	20
51-9132	Photographic Processing Machine Operators	1,314	931	-383	-3.39%	32

## Washington Metropolitan Statistical Area Employment Projections By Industry and Occupation 2008-2018

51-9141	Semiconductor Processors	654	417	-237	-4.40%	14
51-9191	Cementing and Gluing Machine Operators and Tenders	7	6	-1	-1.53%	0
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	5	5	0	0.00%	0
51-9193	Cooling and Freezing Equipment Operators and Tenders	42	40	-2	-0.49%	1
51-9194	Etchers and Engravers	109	106	-3	-0.28%	1
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	276	270	-6	-0.22%	14
51-9196	Paper Goods Machine Setters, Operators, and Tenders	253	197	-56	-2.47%	5
51-9198	Helpers--Production Workers	2,103	1,959	-144	-0.71%	37
51-9199	Production Workers, All Other	1,189	1,200	11	0.09%	29
<b>53-0000</b>	<b>Transportation and Material Moving Occupations</b>	<b>131,168</b>	<b>139,216</b>	<b>8,048</b>	<b>0.60%</b>	<b>4,157</b>
53-1011	Aircraft Cargo Handling Supervisors	66	70	4	0.59%	1
53-1021	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	1,980	2,069	89	0.44%	43
53-1031	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	3,786	3,697	-89	-0.24%	66
53-2011	Airline Pilots, Copilots, and Flight Engineers	2,578	2,680	102	0.39%	98
53-2012	Commercial Pilots	436	514	78	1.66%	23
53-2021	Air Traffic Controllers	1,356	1,311	-45	-0.34%	46
53-2022	Airfield Operations Specialists	100	113	13	1.23%	4
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	74	76	2	0.27%	1
53-3021	Bus Drivers, Transit and Intercity	5,271	6,775	1,504	2.54%	242
53-3022	Bus Drivers, School	6,670	7,991	1,321	1.82%	249
53-3031	Driver/Sales Workers	5,560	5,796	236	0.42%	124
53-3032	Truck Drivers, Heavy and Tractor-Trailer	15,631	17,261	1,630	1.00%	443
53-3033	Truck Drivers, Light or Delivery Services	17,324	18,048	724	0.41%	382
53-3041	Taxi Drivers and Chauffeurs	5,398	7,426	2,028	3.24%	299
53-3099	Motor Vehicle Operators, All Other	3,953	3,888	-65	-0.17%	69
53-4013	Rail Yard Engineers, Dinkey Operators, and Hostlers	1	1	0	0.00%	0
53-4021	Railroad Brake, Signal, and Switch Operators	1	1	0	0.00%	0
53-4041	Subway and Streetcar Operators	598	665	67	1.07%	26
53-4099	Rail Transportation Workers, All Other	3	3	0	0.00%	0
53-5011	Sailors and Marine Oilers	118	130	12	0.97%	6

**Washington Metropolitan Statistical Area Employment Projections  
By Industry and Occupation 2008-2018**

53-5021	Captains, Mates, and Pilots of Water Vessels	94	99	5	0.52%	5
53-5022	Motorboat Operators	45	51	6	1.26%	3
53-5031	Ship Engineers	47	53	6	1.21%	3
53-6011	Bridge and Lock Tenders	180	174	-6	-0.34%	7
53-6021	Parking Lot Attendants	5,156	5,243	87	0.17%	195
53-6031	Service Station Attendants	1,001	1,109	108	1.03%	53
53-6041	Traffic Technicians	44	45	1	0.22%	2
53-6051	Transportation Inspectors	602	649	47	0.75%	19
53-6099	Transportation Workers, All Other	3,951	4,035	84	0.21%	150
53-7011	Conveyor Operators and Tenders	186	170	-16	-0.90%	5
53-7021	Crane and Tower Operators	508	500	-8	-0.16%	12
53-7031	Dredge Operators	109	128	19	1.62%	5
53-7032	Excavating and Loading Machine and Dragline Operators	1,158	1,226	68	0.57%	41
53-7041	Hoist and Winch Operators	12	13	1	0.80%	0
53-7051	Industrial Truck and Tractor Operators	4,375	4,671	296	0.66%	160
53-7061	Cleaners of Vehicles and Equipment	6,483	6,885	402	0.60%	271
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	27,200	26,735	-465	-0.17%	875
53-7063	Machine Feeders and Offbearers	478	347	-131	-3.15%	5
53-7064	Packers and Packagers, Hand	4,379	4,032	-347	-0.82%	73
53-7071	Gas Compressor and Gas Pumping Station Operators	25	21	-4	-1.73%	1
53-7072	Pump Operators, Except Wellhead Pumpers	50	40	-10	-2.21%	2
53-7081	Refuse and Recyclable Material Collectors	3,913	4,213	300	0.74%	144
53-7121	Tank Car, Truck, and Ship Loaders	16	15	-1	-0.64%	1
53-7199	Material Moving Workers, All Other	252	247	-5	-0.20%	3