JOBSEQ

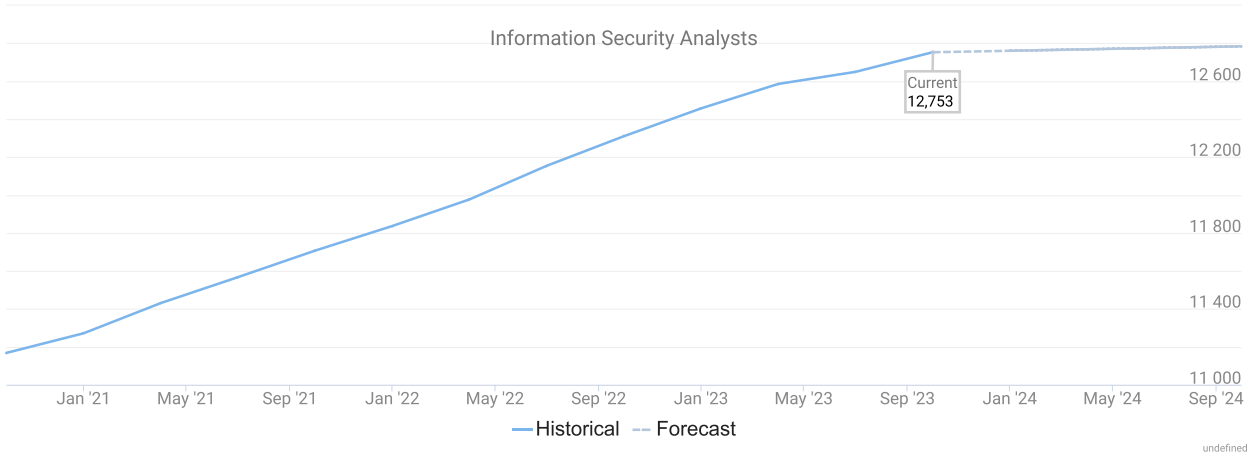
Occupation Report

Information Security Analysts

Washington-Arlington-Alexandria, DC-VA-MD-WV MSA

Occupation Snapshot

6-Digit Occupation	Empl	Avg Mean Wages	LQ	3-Year Empl Change	Annual Demand	Forecast Ann Growth
Information Security Analysts	**12,753**	**$148,000**	**3.65**	**1,584**	**1,135**	**2.5%**



"Annual Demand" is the projected need for new entrants into an occupation. New entrants are needed due to expected growth and to replace workers who left the occupation due to factors such as retirement or switching careers.

"Forecast Ann Growth" is the expected change in jobs due to national, long-term trend projections (per the BLS) as well as local factors such as industry mix and population growth (as computed and modeled by Chmura).

Source: JobsEQ®, http://www.chmuraecon.com/jobseq

Employment by Industry

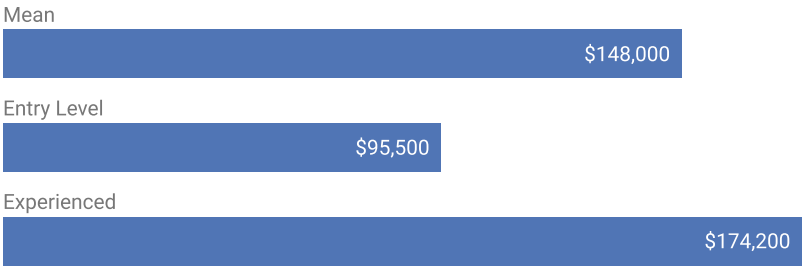
Industry Title	% of Occ Empl	Empl	10-Year Separations	10-Year Empl Growth	10-Year Total Demand
Computer Systems Design and Related Services	47.4%	6,050	4,144	2,270	6,414
Management, Scientific, and Technical Consulting Services	9.8%	1,244	805	286	1,091
Scientific Research and Development Services	5.9%	752	474	127	601
Management of Companies and Enterprises	4.9%	629	405	137	542
Architectural, Engineering, and Related Services	3.9%	499	314	83	397
Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services	3.8%	489	318	119	437
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	3.5%	448	276	51	327
Depository Credit Intermediation	2.0%	257	162	43	205
Web Search Portals, Libraries, Archives, and Other Information Services	1.8%	225	151	69	220
Other Professional, Scientific, and Technical Services	1.7%	215	142	60	202
Employment Services	1.2%	149	92	20	113
Wired and Wireless Telecommunications (except Satellite)	1.1%	143	86	9	96
Colleges, Universities, and Professional Schools	1.1%	134	84	22	106
Software Publishers	0.9%	110	72	28	100
Insurance Carriers	0.8%	102	65	22	87
Nondepository Credit Intermediation	0.8%	96	62	20	82
Activities Related to Credit Intermediation	0.7%	93	59	17	76
Office Administrative Services	0.6%	73	49	26	76
All Others	8.2%	1,047	648	133	781

The industry distribution indicates the industries in which workers in the occupation(s) are primarily found.

"10-Year Empl Growth" may show industries with positive as well as negative growth; this would indicate that the occupation(s) being examined are expected to expand within some industries while contracting in others.

Source: JobsEQ®, http://www.chmuraecon.com/jobseq

Wages



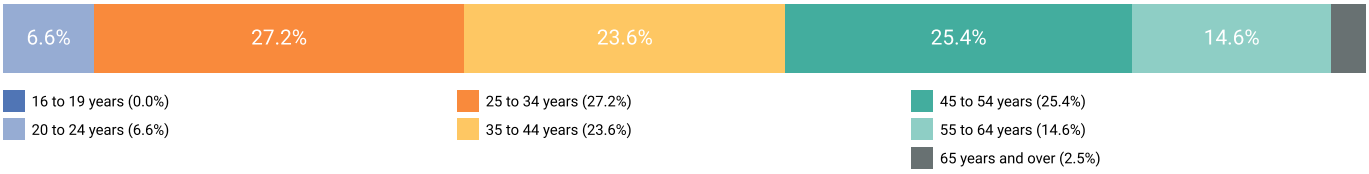
Occupation	Mean	Median	Entry Level	Experienced
Information Security Analysts	$148,000	$143,000	$95,500	$174,200

Occupation wages here utilize BLS OEWS data, imputed and brought forward by Chmura.

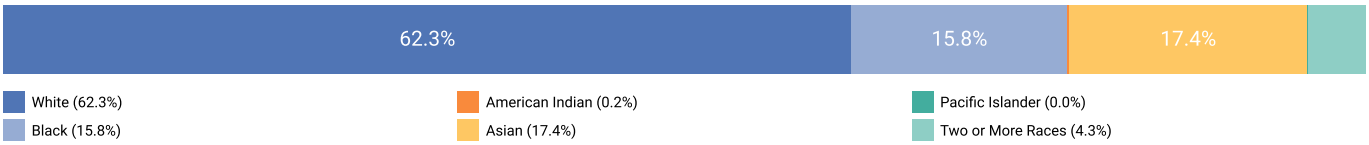
When this report is run for an occupation group, the table above displays up to the top ten detailed occupations which have the highest average wages within the occupation group.

Occupation Demographics

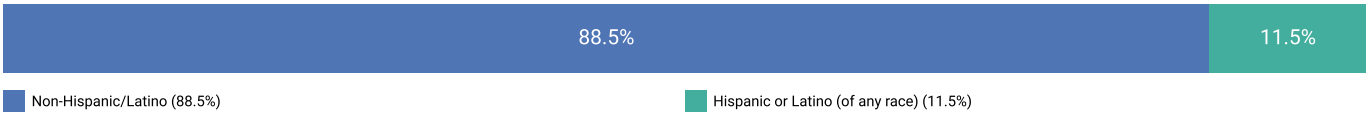
Age



Race

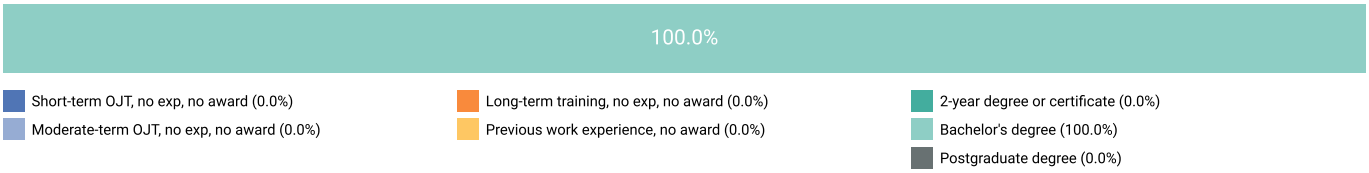


Ethnicity



Gender

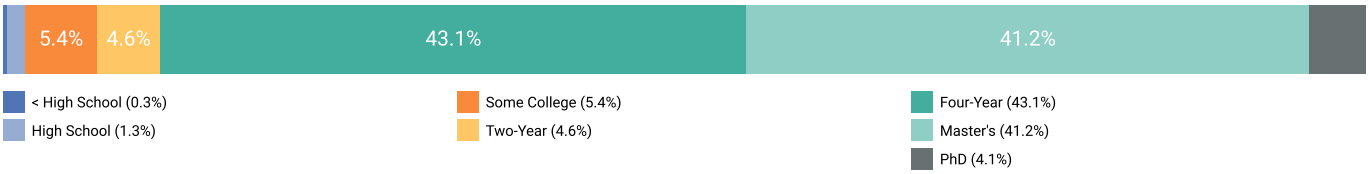
Education and Training Requirements



Source: JobsEQ®, http://www.chmuraecon.com/jobseq

Education Profile

Educational Attainment



Occupation	Typical Entry-Level Education	Previous Work Experience	Typical On-the-Job Training
Information Security Analysts	Bachelor's degree	Less than 5 years	None

The stacked bar chart here illustrates the estimated mix of educational attainment of the workers in this occupation(s) in aggregate.

The table indicates typical education and training requirements rather than the mix of attainment of workers in such positions.

Postsecondary Programs Linked to Information Security Analysts

Program	Awards
George Mason University	
Information Technology	451
George Washington University	
Computer and Information Systems Security/Auditing/Information Assurance	176
Georgetown University	
Information Technology Project Management	112
Northern Virginia Community College	
Computer and Information Systems Security/Auditing/Information Assurance	383
Computer Science	294
Information Technology	403
SANS Technology Institute	
Computer and Information Systems Security/Auditing/Information Assurance	304
University of Maryland Global Campus	
Computer and Information Systems Security/Auditing/Information Assurance	1,246
Cyber/Computer Forensics and Counterterrorism	95
University of Maryland-College Park	
Computer Science	1,055

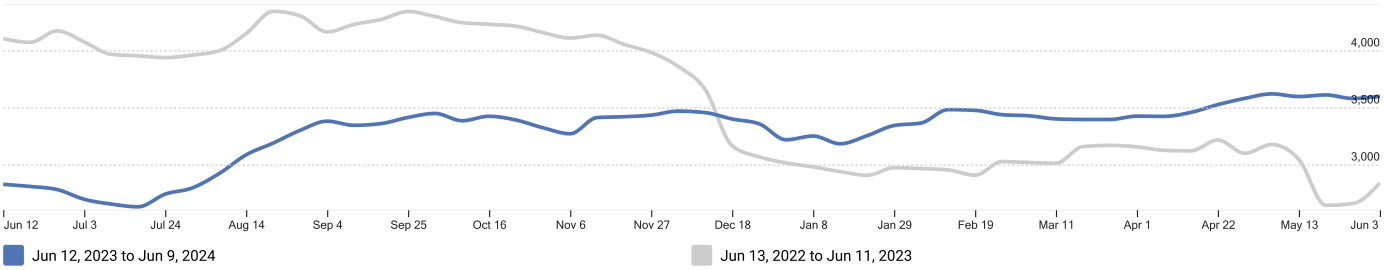
The number of graduates from postsecondary programs in the region identifies the pipeline of future workers as well as the training capacity to support industry demand.

Among postsecondary programs at schools located in the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA, the sampling above identifies those most linked to Information Security Analysts. For a complete list see JobsEQ®, http://www.chmuraecon.com/jobseq

Source: JobsEQ®, http://www.chmuraecon.com/jobseq

RTI (Job Postings)

Active Job Ads by Date



Online job ads are a timely indicator of local demand. Occupation assignments shown below are made by Chmura based upon analysis of job titles and job descriptions. Top employers and listed job requirements are shown on the following pages.

Occupations

SOC	Occupation	Active Job Ads	
15-1212.00	Information Security Analysts	15,569	

Locations

Location	Active Job Ads
Washington, District Of Columbia	2,903
Arlington, Virginia	1,149
Mclean, Virginia	681
Chantilly, Virginia	653
Herndon, Virginia	639
Reston, Virginia	628
Alexandria, Virginia	391
Springfield, Virginia	332
Washington, DC, 20001	307
Fort Belvoir, Virginia	255

Employers

Employer Name	Active Job Ads
Leidos	563
Booz Allen	536
ManTech International Corporation	465
General Dynamics Information Technology, Inc.,	398
Peraton	375
SAIC	358
Deloitte	293
CACI International Inc	198
Parsons Corporation	163
CAPITAL ONE	141

Hard Skills

Skill Name	Active Job Ads
Information Security	6,748
Risk Management Framework	3,400
Linux	2,520
Computer Networking	2,497
Amazon Web Services (AWS)	1,949
Network Security	1,944
Python	1,888
Microsoft Azure	1,654
Cyber Security	1,634
Information Assurance	1,563

Job Titles

Job Title	Active Job Ads
Cyber Security Analyst	291
Cyber Security Engineer	256
Security Specialist	133
Security Engineer	127
Cyber Security Specialist	89
Security Analyst	84
Information System Security Officer	83
Senior Cyber Security Engineer	80
Information Security Analyst	73
Information Systems Security Officer	71

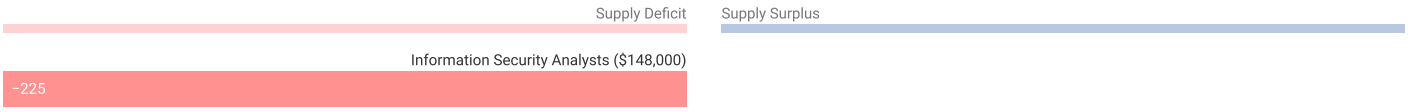
Education Levels

Minimum Education Level	Active Job Ads
Bachelor's degree	8,647
High school diploma or equivalent	869
Associate's degree	687
Master's degree	423
Doctoral or professional degree	29
Unspecified/other	4,914

Programs

Program Name	Active Job Ads
Computer Science	3,980
Information Technology	1,929
Engineering	1,376
Information Systems	829
Computer Engineering	579
Information Security	542
Technical	484
Mathematics	430
Cybersecurity	417
Science	330

Occupation Gaps

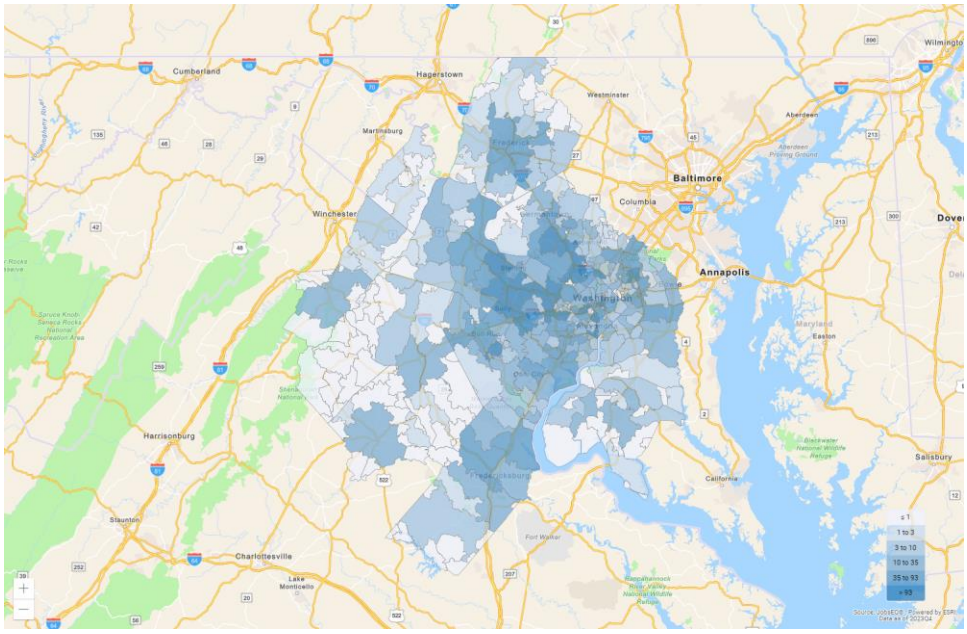


The above are the potential average annual gaps over 10 years. Many variables go into this analysis, but at its core it is based on a forecast comparing occupation demand growth to the local population growth and the projected educational attainment of those residents. When an area, for example, has an occupation expected to grow quickly but the educational requirement for the occupation does not match well with the educational attainment of its residents, there is a high potential for an occupation shortfall in the region. Alternatively, slow-growing or contracting occupations often represent potential supply surpluses.

The potential supply shortfall is an underlying force that the market needs to resolve one way or another, such as by employers recruiting from further distances for these occupations, wages going up to attract more candidates, and/or increased demand and wages enticing more local residents to get training for these occupations. While this an important analysis for determining local occupation needs, the occupation gap should be considered along with other regional data including growth and separation forecasts, unemployment rates, wage trends, and award and skill gap analyses.

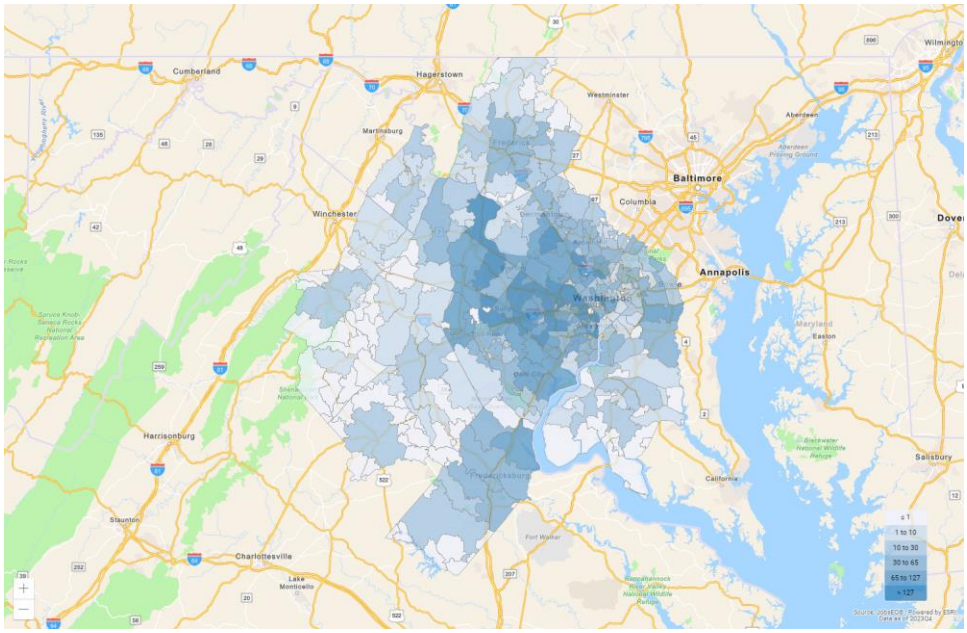
Source: JobsEQ®, http://www.chmuraecon.com/jobseq

Geographic Distribution



Top ZCTAs by Place of Work for Information Security Analysts, 2023Q4

Region	Employment
ZCTA 22102	864
ZCTA 20190	563
ZCTA 20151	556
ZCTA 22182	505
ZCTA 20171	459
ZCTA 22209	353
ZCTA 20850	340
ZCTA 20191	337
ZCTA 22201	295
ZCTA 22203 (Arlington County, Virginia portion)	277

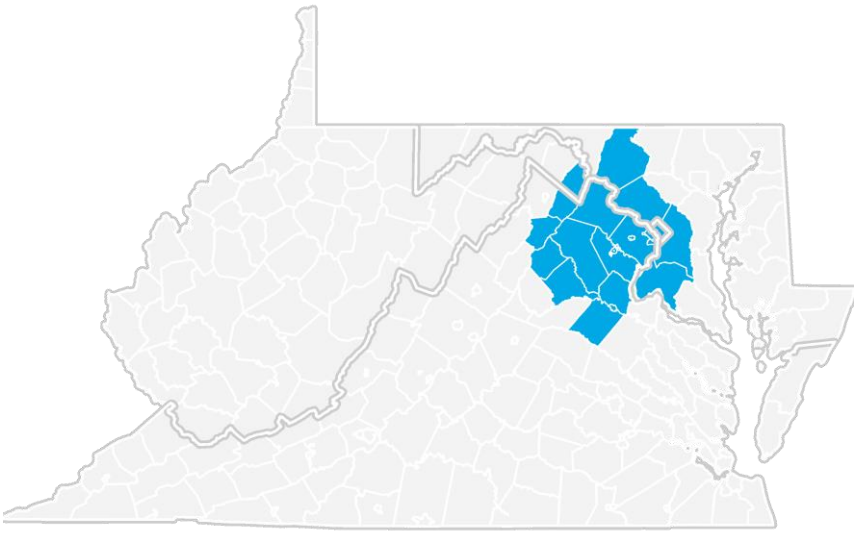


Top ZCTAs by Place of Residence for Information Security Analysts, 2023Q4

Region	Employment
ZCTA 20171	328
ZCTA 22201	280
ZCTA 20148	270
ZCTA 20147	231
ZCTA 22102	213
ZCTA 22033	209
ZCTA 22030 (Fairfax County, Virginia portion)	194
ZCTA 20170	192
ZCTA 22204	186
ZCTA 20120 (Fairfax County, Virginia portion)	180

"Place of work" employment is based upon the location of employers for these workers. "Place of residence" data refers to the home locations of the workforce, which is typically the preferred data set to use when calculating labor availability within a drive-time or radius of a potential worksite.

Washington-Arlington-Alexandria, DC-VA-MD-WV MSA Regional Map



Source: JobsEQ®, http://www.chmuraecon.com/jobseq

Data Notes

- Occupation employment by default indicates employment by place of work. Occupation employment is as of 2023Q4 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OEWS data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts. Wages by occupation are as of 2023Q4, utilizing BLS OEWS data, imputed and brought forward by Chmura. Entry-level and experienced wages are derived from these source data, computed by Chmura.
- Industry employment is as of 2023Q4 and is based upon BLS QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including Census ZBP data.
- Education and training requirements are from the BLS. Educational attainment mix and other occupation demographics data are modeled by Chmura for 2023Q4 using regional occupation employment from JobsEQ, ZCTA-level demographics data from the Census Bureau, and national occupation-demographics patterns from the BLS.
- Postsecondary awards are per the NCES and are for the 2021-2022 academic year. Any programs shown are linked with the occupation(s) being analyzed via the program-occupation crosswalk, which may not be comprehensive. Any programs shown reflect only data reported to the NCES; reporting is required of all Title IV schools. Training providers that do not report data to the NCES are not reflected.
- Job ads data are online job posts from the Real-Time Intelligence (RTI) data set, produced by Chmura and gleaned from over 40,000 websites. Data reflect ads active during the 12-month period ending 06/13/2024 and advertised for any Zip Code Tabulation Area in or intersecting with the region for which this report was produced. Historical ad volume is revised as additional data are made available and processed. Since many extraneous factors can affect short-term volume of online job postings, time-series data can be volatile and should be used with caution. All ad counts represent deduplicated figures and exclude ads from staffing companies.
- For skill and certification gaps, openings and candidates are based upon regional occupation demand (growth plus separations) and the percent of skill demand and supply. Skill demand mix data are per a one-year sample of RTI data; skill supply data are estimated using a five-year sample of resumes data; both data sets compiled as of July 2022. Data may be based, at least in part, on data from broader geographies; see the Skill Gaps analytic export for more details.
- Occupation gaps are modeled by Chmura, indicating long-term potential supply and demand mismatches in a region due, in part, to job demand and labor pool dyanamics, including educational attainment and projected growth.
- Occupation employment by place of residence is as of 2023Q4 and modeled by Chmura based upon occuaption employment by place of work and commuting patterns. Commuting patterns are derived from source data from the Census Bureau, occupation-specific commuting tendancies, and updated to reflect more recent population and employment estimates.
- Figures may not sum due to rounding.

Region Definition

Washington-Arlington-Alexandria, DC-VA-MD-WV MSA is defined as the following counties:

Arlington County, Virginia	Fairfax City, Virginia
Clarke County, Virginia	Falls Church City, Virginia
Culpeper County, Virginia	Fredericksburg City, Virginia
Fairfax County, Virginia	Manassas City, Virginia
Fauquier County, Virginia	Manassas Park City, Virginia
Loudoun County, Virginia	District of Columbia
Prince William County, Virginia	Charles County, Maryland
Rappahannock County, Virginia	Frederick County, Maryland
Spotsylvania County, Virginia	Montgomery County, Maryland
Stafford County, Virginia	Prince George's County, Maryland
Warren County, Virginia	Jefferson County, West Virginia
Alexandria City, Virginia	

FAQ

What is (LQ) location quotient?

Location quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

What is annual demand?

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.