

One Region Moving Forward

District of Columbia **Date:** October 1, 2015
*Bladensburg** **To:** Cooperative Forecasting Subcommittee
Bowie **From:** Nicole McCall
Charles County **From:** Robert Griffiths
College Park **Subject:** Suggested Approach for Preparing Baseline Employment Estimates
Frederick
Frederick County
Gaithersburg
Greenbelt
Montgomery County
Prince George's
County
Rockville
Takoma Park
Alexandria
Arlington County
Fairfax
Fairfax County
Falls Church
Loudoun County
Manassas
Manassas Park
Prince William County

This memo details a suggested approach for the development of Baseline Employment Estimates for the Round 9.0 Cooperative Forecasts. This approach describes how Baseline Employment Estimates can be developed using available wage and salary employment, self-employment, and military employment data series.

Note: This approach is tailored for jurisdictions where estimates from the Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) are available. While the QCEW is published for independent cities in Virginia, this data is not available for cities in Maryland. These jurisdictions should work with their surrounding county and use other existing resources to develop baseline employment estimates.

*Adjunct Member

Table 1 Baseline Employment Estimates based on Suggested Approach (Thousands)

Jurisdiction	2010	2011	2012	2013	2014
District Of Columbia	746.217	759.036	768.405	779.712	785.628
Arlington County	187.720	195.012	193.505	194.026	191.123
Alexandria City	105.984	104.559	106.196	106.169	106.315
Montgomery County	492.889	498.983	501.451	505.149	509.777
Prince George's County	333.942	332.910	333.049	333.860	338.064
Fairfax County	636.653	646.288	660.024	658.422	652.639
Fairfax City	21.956	21.570	21.919	21.733	22.012
Falls Church City	13.692	12.950	12.442	11.290	12.357
Loudoun County	146.183	151.954	156.914	163.204	166.293
Prince William County	122.344	126.299	132.925	137.990	140.940
Manassas City	26.227	26.777	26.936	25.609	25.719
Manassas Park City	3.119	3.209	3.036	3.059	3.183
Charles County	45.856	45.327	45.296	45.464	46.096
Frederick County	102.466	101.585	103.315	105.985	106.351
Region	2,985.248	3,026.459	3,065.413	3,091.672	3,106.500

Methodology

The below steps outline how to develop the baseline employment estimates. For the purposes of this example, data for 2014 is used.

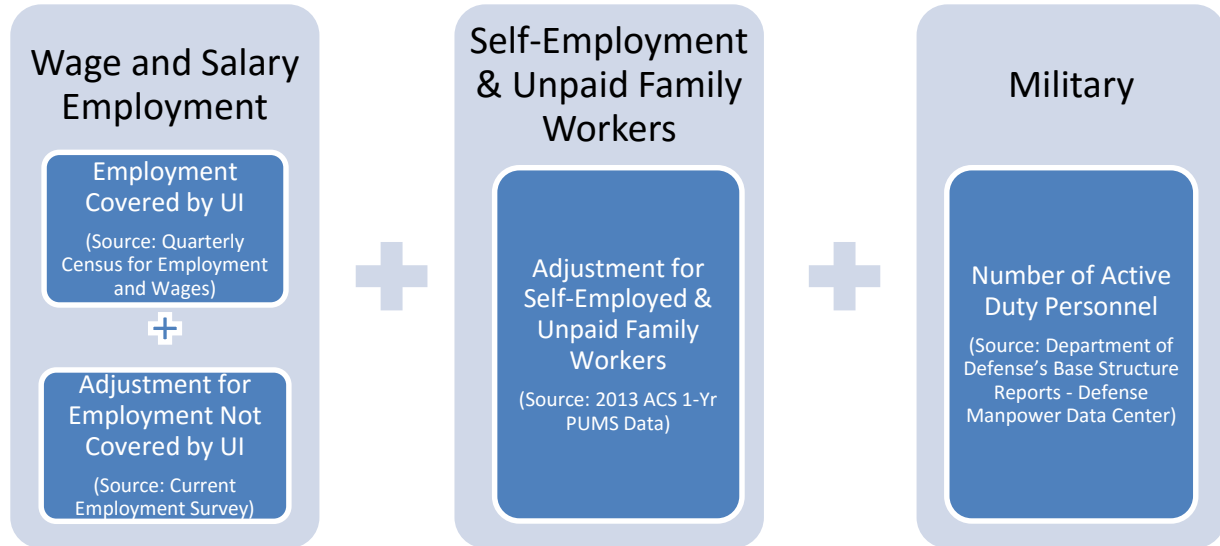


Figure 1 Baseline Employment

1. Wage and Salary Employment

a. Employment Covered by Unemployment Insurance (UI)

The QCEW program, also known as the ES-202 program, publishes a quarterly count of employment and wages of establishments which report to the UI programs of the United States. These estimates are shown, in thousands, in the below table.

Table 2 QCEW Average Annual Employment (Thousands)

Jurisdiction	2014
District Of Columbia	729.119
Arlington County	164.502
Alexandria City	94.955
Montgomery County	455.687
Prince George's County	302.929
Fairfax County	579.392
Fairfax City	19.666
Falls Church City	11.04
Loudoun County	148.569
Prince William County	119.249
Manassas City	22.978
Manassas Park City	2.844
Charles County	41.181
Frederick County	95.146
Region	2,787.257

Employment covered by the UI program represents about 97% of wage and salary civilian employment in the country. While there are slight differences in coverage between the District of Columbia (DC), Maryland (MD), and Virginia (VA) (see Appendix A), the following types of employment are typically excluded by Unemployment Insurance coverage:

- Self-employed workers
- Unpaid Family Workers
- Agricultural workers on small farms
- Religious Organizations
- Very small non-profit organizations
- Railroad Workers
- Service by Students and Spouses of Students in the employ of a school, college, or university by a student enrolled and regularly attending classes at such school; Spouse is excluded provided employment is under a program designed to give financial assistance to the student
- Domestic service in a private home, local college club, or local chapter of a college fraternity or sorority.
- Government Entities, service performed:
 - As an elected official;
 - As a members of legislative body or a member of the judiciary;
 - As a member of the state National Guard or Air National Guard;
 - As an employee serving on a temporary basis in case of fire, storm, snow, earthquake, flood, or similar declared emergency;
 - in a position which, under the state law, is designated as a major, non-tenured, policymaking or advisory position, or a part-time policymaking position which ordinarily requires 8 or fewer hours a week;
 - or as a member of the military
- U.S. Residents employed by Foreign Government (including embassies and consulates) or International Organization located

a. Employment Not Covered by UI

This step is performed to account for wage and salary civilian employment that is not covered by unemployment insurance and is obtained using data from BLS' Current Employment Statistics (CES) program. BLS constructs an annual benchmark for its CES program to (1) realign the sample-based employment totals with the unemployment insurance based counts for March, and (2) account for wage and salary civilian employment not covered by unemployment insurance¹. This means that the ratio of the CES to the QCEW (for the same geography) can be used to determine the portion of wage and salary employment not covered by unemployment insurance.

The CES is not published at the County level, the smallest scale of geography that it is available for metropolitan areas and divisions. For the National Capitol Region, the employment estimates for

¹ Records from the Railroad Retirement Board and County Business Patterns are used to cover the remaining wage and salary employment.

the following areas are used (1) District of Columbia, (2) 43524 – Silver Spring- Frederick-Rockville, MD Metropolitan Division, (3) 94781 – Calvert County, Charles County, Prince George’s County. In addition, an estimate for Northern Virginia is derived using existing estimates.

For Northern Virginia, the total employment for the District of Columbia and 94781 - Calvert County, Charles County, Prince George’s County is subtracted from 47894- Washington-Arlington-Alexandria, D.C.-Va.-Md.-W.Va. Metropolitan Division before obtaining the ratio of CES to QCEW. This leaves a CES value that covers Northern Virginia as well as Jefferson County, WV. (While BLS produces a separate estimate for the Non-standard CES Area, Northern Virginia, that area also covers Culpeper County and Rappahannock County. These adjustments, shown in Table 2, help the estimate better geographically match MWCOG’s planning area and TPB’s modeled region.

Table 3 Northern Virginia Employment (Thousands), CES

Metropolitan Area or Division	CES Employment (2014)
47894- Washington-Arlington-Alexandria, D.C.-Va.-Md.-W.Va. Metropolitan Division	2,536.1
District of Columbia	753.8
94781 - Calvert County, Charles County, Prince George’s County	383.8
Northern Virginia, Va.	1,398.5

The CES wage and salary adjustment factor is the ratio of CES to QCEW. These adjustment factors can vary over time because of cyclical and structural changes in the region’s economy.

Table 4 2014 CES Adjustment Factors

Jurisdictions	CES State or Metro Area	QCEW	CES	Adjustment factor
District of Columbia	District of Columbia	729.119	753.8	1.034
Montgomery, Frederick	43524 - Silver Spring-Frederick-Rockville, MD Metropolitan Division	550.833	575.5	1.045
Calvert, Charles, Prince George's	94781 - Calvert County, Charles County, Prince George’s County	365.804	383.8	1.049
Arlington, Clarke, Fairfax, Fauquier, Loudoun, Prince William, Spotsylvania, Stafford, Warren, Alexandria City, Fairfax City, Falls Church City, Fredericksburg City, Manassas City, Manassas Park City, Jefferson County, WV	47894 - Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Division minus sum (District of Columbia and 94781 - Calvert County, Charles County, Prince George's County)	1,312.425	1,398.5	1.066
Region		2,958.181	3,111.6	1.052

Self-Employment and Unpaid Family Workers

Self-employed as well as unpaid family workers must also be included in the employment estimate. Census’s American Community Survey provides data on the class of worker including wage and salary,

self-employed not incorporated, and unpaid family worker. The latest data is from 2013 and this factor is developed using the ratio of the sum self-employed not incorporated and unpaid family worker to total employment. This self-employment factor should be applied to the CES adjusted wage and salary employment.

Table 5 Self-Employment Adjustment Factor

Jurisdiction of Work	Wage and Salary Employment	Self-Employed Not Incorporated & Unpaid Family	Total Workers	Self-Employment Factor
District Of Columbia	773.434	26.978	800.412	1.03
Arlington County	188.531	5.718	194.249	1.03
Alexandria City	92.010	4.994	97.004	1.05
Montgomery County	474.672	30.108	504.780	1.06
Prince George's County	309.353	16.771	326.124	1.05
Fairfax County	641.958	33.077	675.035	1.05
Loudoun County	146.653	7.004	153.657	1.05
Prince William County	159.138	8.273	167.411	1.05
Charles County	40.576	1.913	42.489	1.05
Frederick County	100.554	5.645	106.199	1.06
Region	2,926.879	140.481	3,067.360	1.05

2. Military

Military employment is added using data from the Department of Defense's annual Base Structure Reports. These reports include an appendix with Personnel Data from the Defense Manpower Data Center. The below table shows the Active Duty Total by County reported in September 2014. Appendix B (Spreadsheet) provides this information, as well as the number of National Guard/Reserve and Civilian Employees, by state and military base. The FY2015 Base Structure Report can be viewed at <http://www.acq.osd.mil/ie/download/bsr/CompletedBSR2015-Final.pdf>.

Table 6 Military, September 2014 (Thousands)

County	Active Duty Total
District Of Columbia	9.102
Arlington County	10.503
Alexandria City	0.032
Montgomery County	5.013
Prince George's County	4.403
Prince William County	7.465
Fairfax County	4.126
Falls Church City	0
Charles County	0.737
Frederick County	0.958
Region	42.399

Results

To obtain the baseline employment, the QCEW is multiplied by the CES Adjustment Factor to obtain the total wage and salary employment. Next, the total wage and salary employment is multiplied by the Self-Employment Adjustment Factor to obtain total Civilian Employment. Finally, the military is added to obtain total employment.

Table 7 Baseline Employment (Thousands), 2014

County	QCEW	CES Adjustment Factor	Self- Employment Adjustment Factor	Military Employment	Baseline Employment
District Of Columbia	729.119	1.034	1.03	9.102	785.628
Arlington County	164.502	1.066	1.03	10.503	191.123
Alexandria City	94.955	1.066	1.05	0.032	106.315
Montgomery County	455.687	1.045	1.06	5.013	509.777
Prince George's County	302.929	1.049	1.05	4.403	338.064
Fairfax County	579.392	1.066	1.05	4.126	652.639
Fairfax City	19.666	1.066	1.05	0	22.012
Falls Church City	11.04	1.066	1.05	0	12.357
Loudoun County	148.569	1.066	1.05	0	166.293
Prince William County	119.249	1.066	1.05	7.465	140.940
Manassas City	22.978	1.066	1.05	0	25.719
Manassas Park City	2.844	1.066	1.05	0	3.183
Charles County	41.181	1.049	1.05	0.737	46.096
Frederick County	95.146	1.045	1.06	0.958	106.351
Region	2787.257			42.339	3,106.500

Recommendation

For consistency purposes, it is recommended that the suggested methodology described in this memo be used to develop Baseline Employment Estimates for the Round 9.0 Cooperative Forecasts. If jurisdictions have access to additional data to inform these baseline employment estimates or choose to utilize a different methodology, a description should be included in the transmittal letter.

Sources:

<http://workforcesecurity.doleta.gov/unemploy/pdf/uilawcompar/2015/coverage.pdf>

<http://www.irs.gov/Individuals/International-Taxpayers/Persons-Employed-by-a-Foreign-Government-or-International-Organization---FUTA>

<http://www.bls.gov/cew/cewfaq.htm#Q14>

<http://www.acq.osd.mil/ie/download/bsr/CompletedBSR2015-Final.pdf>

Appendix A

Not Covered by QCEW		District of Columbia	Maryland	Virginia
Self-Employment		X	X	X
Unpaid Family Workers		X	X	X
Religious Organizations	A church, convention, or association of churches	X	X	X
	An organization operated primarily for religious purposes, which is operated, supervised, controlled, or principally supported by a church, convention, or association of churches	X	X	X
	An elementary or secondary school operated primarily for religious purposes, regardless of affiliation with a church, convention, or association of churches	X	X	X
Non Profit Organizations with 4 or fewer Employees		Expanded coverage provisions beyond Federal Requirements, States cover organizations with 1 or more employees	Expanded coverage provisions beyond Federal Requirements, States cover organizations with 1 or more employees	X
Railroad Workers		X	X	X
Insurance Agents on Commission		X	X	X
Real Estate Agents on Commission			X	X
Part-time Service for Nonprofit Organizations Exempt from Federal Income Tax		X	X	X

Not Covered by QCEW		District of Columbia	Maryland	Virginia
Service by Students and Spouses of Students in the employ of a school, college, or university by a student enrolled and regularly attending classes at such school; Spouse is excluded provided employment is under a program designed to give financial assistance to the student	Student Nurses and Interns in Employ of a Hospital	X	X	X
	Students Working for Schools	X (Do not exclude service by the spouse of a student in the employ of the school)	X	X (Do not exclude service by the spouse of a student in the employ of the school)
Domestic service in a private home, local college club, or local chapter of a college fraternity or sorority.		Quarterly payroll less than \$500	Quarterly payroll less than \$1,000	Exclude: (1) Medical services performed by an individual employed to perform those services in a private residence or medical institution if the employing unit is the person receiving the services; and (2) services performed under agreement with a Public Human Service Agency in the home of the recipient of the service or the provider of the service

Not Covered by QCEW	District of Columbia	Maryland	Virginia
Government Entities, service performed: <ul style="list-style-type: none"> • As an elected official; • As a members of legislative body or a member of the judiciary; • As a member of the state National Guard or Air National Guard; • As an employee serving on a temporary basis in case of fire, storm, snow, earthquake, flood, or similar declared emergency; • in a position which, under the state law, is designated as a major, non-tenured, policymaking or advisory position, or a part-time policymaking position which ordinarily requires 8 or fewer hours a week • Military 	X	X	X
U.S. Residents employed by Foreign Government (including embassies and consulates) or International Organization located within the U.S.	X	X	X

X=Not covered by Unemployment Insurance (not represented in QCEW)