



## MEMORANDUM

**TO:** Cooperative Forecasting and Data Subcommittee  
**FROM:** Greg Goodwin and John Kent, COG/DCPS  
**SUBJECT:** Update to Suggested Baseline Employment Estimates  
**DATE:** July 8, 2025

This memo provides an update to the suggested baseline employment estimates for the Metropolitan Washington Council of Government's Cooperative Forecasting program.

The baseline employment estimates are updated to reflect new and revised federal employment estimates, including: (1) revised 2010-2022 and new 2023 Bureau of Labor Statistics estimates, (2) 2023 Census Public Use Microdata Sample (PUMS) 1-Year files, and (3) military estimates. The only change to this year's suggested approach for baseline employment estimates is a new military data source. In Table 1 below, the data includes revisions in civilian employment for the years 2010 through 2022 but the military employment counts remain unchanged from the estimates in each year's original memo.

*Table 1 Suggested Baseline Employment Estimates (Thousands), 2010, 2015, 2019-2023*

Jurisdiction	2010	2015	2019	2020	2021	2022	2023
District of Columbia	756.02	802.93	833.02	777.57	777.28	806.17	809.42
Arlington County	183.34	196.93	209.75	202.53	204.75	205.80	211.94
Alexandria City	105.16	106.58	100.69	93.57	95.08	97.53	92.91
Montgomery County	496.21	516.37	530.75	495.00	506.86	524.62	525.30
Prince George's County	345.50	351.00	375.68	347.02	350.31	368.08	373.36
Fairfax County	633.79	650.26	703.28	673.47	696.05	720.39	729.61
City of Fairfax	21.73	21.54	22.09	20.38	21.48	24.88	26.73
City of Falls Church	13.55	12.71	13.76	12.32	13.03	13.22	13.93
Loudoun County	144.15	172.37	198.29	187.90	193.52	208.58	217.15
Prince William County	119.87	138.37	155.06	146.94	150.48	161.84	170.30
City of Manassas	25.97	25.01	26.44	25.71	26.26	27.21	28.56
City of Manassas Park	3.09	3.28	4.26	4.29	4.50	5.02	5.00
Charles County	45.29	48.44	48.32	45.04	45.78	48.14	47.60
Frederick County	102.67	109.80	117.88	109.06	111.80	116.97	120.94
<b>Region</b>	<b>2,996.33</b>	<b>3,155.58</b>	<b>3,339.25</b>	<b>3,140.79</b>	<b>3,197.19</b>	<b>3,328.45</b>	<b>3,372.73</b>

METHODOLOGY

Below is an overview of how the baseline employment estimates are developed using the latest available data from the following sources:

- Quarterly Census for Employment and Wages (QCEW)
- Current Employment Statistics (CES)
- American Community Survey (ACS)
- Local government Source, Bureau of Economic Analysis (BEA), or S&P Global.

The baseline employment estimate for 2023 includes latest data from specified sources. The BLS data is subject to post hoc revision, though any changes are typically small.

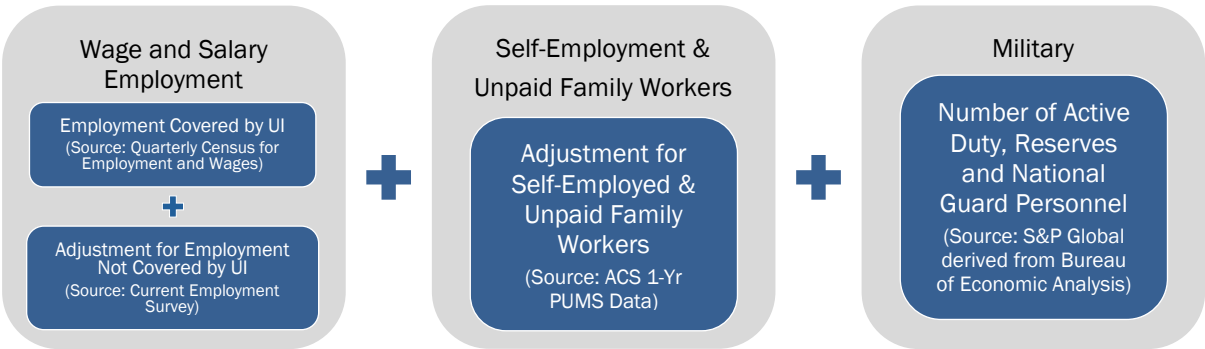


Figure 1 Baseline Employment Method Overview

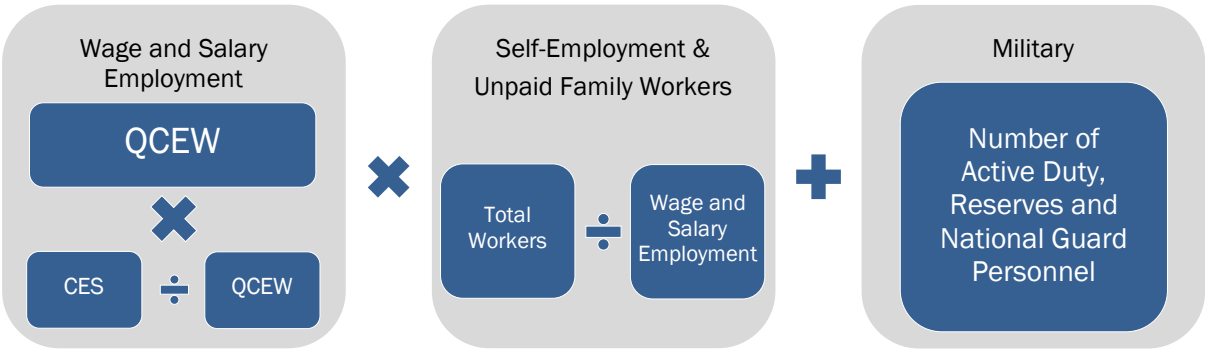


Figure 2 Baseline Employment Method Detailed

Ultimately, to obtain the baseline employment, as outlined in Figure 2, the QCEW is multiplied by the CES Adjustment Factor to produce the total wage and salary employment. Next, the total wage and salary employment is multiplied by the Self-Employment (and Unpaid Family Workers) Adjustment Factor to produce total civilian employment. Finally, military employment is added to obtain total employment.

## 1. Wage and Salary Employment

The Wage and Salary Employment component entails data from the Bureau of Labor Statistics' (BLS) Quarterly Census for Employment and Wages (QCEW) program and the Current Employment Survey (CES).

### Employment Covered by Unemployment Insurance (UI)

The Wage and Salary Employment component entails data from the Bureau of Labor Statistics' (BLS) Quarterly Census for Employment and Wages (QCEW) program.<sup>1</sup> These estimates are shown, in thousands, in the below table.

*Table 2 Employment Covered by Unemployment Insurance, 2023 (Thousands)*

<b>Jurisdiction</b>	<b>Employment</b>
District of Columbia	757.75
Arlington County	179.26
Alexandria City	81.32
Montgomery County	458.93
Prince George's County	318.51
Fairfax County	629.47
City of Fairfax	23.38
City of Falls Church	12.19
Loudoun County	189.02
Prince William County	139.62
City of Manassas	24.77
City of Manassas Park	4.33
Charles County	41.39
Frederick County	106.33
<b>Region</b>	<b>2,966.28</b>

Source: BLS QCEW

Employment covered by the UI programs represents about 95% 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 UI coverage:

- Unincorporated self-employed workers
- Unpaid family workers
- Agricultural workers on small farms
- Religious organizations
- Very small non-profit organizations
- Railroad workers

<sup>1</sup> QCEW, also known as the ES-202 program, publishes a quarterly count of employment and wages of establishments which report to the unemployment insurance (UI) programs of the United States.

- 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.
- Service performed for government entities:
  - As an elected official;
  - As a member of a 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
- Military and certain national security agencies
- Commissioned Corps of the National Oceanic and Atmospheric Administration
- Individuals serving on a temporary basis in case of fire, storm, earthquake, or other similar emergency
- Individuals employed under a Federal relief program to relieve them from unemployment

### **Employment Not Covered by UI**

Data from BLS' Current Employment Statistics (CES) program is used to account for wage and salary civilian employment that is not covered by UI.<sup>2</sup> The CES has a broader definition of employment than the QCEW and includes persons on establishment payrolls who worked or received pay for any part of the pay period that includes the 12th day of the month. BLS constructs an annual benchmark for its CES program to (1) realign the sample-based employment totals with the UI based counts for March, and (2) account for wage and salary civilian employment not covered by UI<sup>3</sup>.

However, unlike QCEW, the CES is not published at the County level. The lowest level of geography at which the CES is available is the metropolitan areas and divisions. As shown in Table 3 and 4, estimates for the National Capital Region and Northern Virginia were derived respectively in order to:

- adjust and help better geographically match MWCOG's planning area and TPB's modeled region

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<sup>2</sup> CES accounts for industry estimates of nonfarm employment, hours, and earnings of workers on payrolls.

<sup>3</sup> Sources of data used to account for noncovered employment include: Railroad Retirement Board, Census Bureau's County Business Patterns and Annual Survey of Public Employment and Payroll (ASPEP), and Labor Market Information Agencies (LMI).

- derive and apportion relative non-covered employment for COG jurisdictions aligned with CES metro designations

For the National Capital Region, the employment estimates for the following areas are used

- District of Columbia
- 43524 – Silver Spring- Frederick-Rockville, MD Metropolitan Division,
- 94781 – Calvert County, Charles County, Prince George’s County.

For Northern Virginia, employment was derived by subtracting the total employment of the following areas from the CES designated 47894- Washington-Arlington-Alexandria, D.C.-Va.-Md.-W.Va. Metropolitan Division<sup>4</sup>

- District of Columbia
- 94781 - Calvert County, Charles County, Prince George’s County

*Table 3 Wage and Salary Civilian Employment for Northern Virginia (Thousands), 2023*

<b>Metropolitan Area or Division</b>	<b>Employment</b>
47894- Washington-Arlington-Alexandria, D.C.-Va.-Md.-W.Va. Metropolitan Division	2,587.81
District of Columbia	757.75
94781 - Calvert County, Charles County, Prince George’s County	381.96
<b>Northern Virginia</b>	<b>1,448.10</b>
Source: BLS CES	

After identifying and assigning the appropriate relative CES values for COG jurisdictions, a CES Wage and Salary Adjustment Factor, the ratio of CES to QCEW, is derived and makes the following assumption:

- COG jurisdictions within a given CES designation, the ratio of covered employment to non-covered employment is constant.

As shown in Table 4 on the following page, in order to arrive at this ratio, QCEW values were aggregated as appropriate for all jurisdictions aligned with a given CES designation (to establish the same geographic basis for comparison). It should be noted that these adjustment factors vary over time due to cyclical and structural changes in the region’s economy.

<sup>4</sup>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.

Table 4 CES Adjustment Factors, 2023

Jurisdiction	CES State or Metro Area	QCEW (Thousands)	CES (Thousands)	Adjustment factor
District of Columbia	District of Columbia	757.75	766.60	1.01
Montgomery, Frederick	43524 - Silver Spring-Frederick-Rockville, MD Metropolitan Division	565.26	598.40	1.06
Calvert, Charles, Prince George's	94781 - Calvert County, Charles County, Prince George's County	381.96	412.50	1.08
Arlington, Clarke, Fairfax, Fauquier, Loudoun, Prince William, Spotsylvania, Stafford, Warren, City of Alexandria, City of Fairfax, City of Falls Church, City of Fredericksburg, City of Manassas, City of Manassas Park, Jefferson County, WV	47894 - Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Division <b>minus sum</b> (District of Columbia and 94781 - Calvert County, Charles County, Prince George's County)	1,448.10	1,575.10	1.09
<b>Region</b>		<b>3,153.07</b>	<b>3,352.60</b>	<b>1.06</b>

Source: BLS CES and QCEW

## 2. Self-Employment and Unpaid Family Workers

Self-employed as well as unpaid family workers should also be included in the employment estimate. The Census Bureau's American Community Survey (ACS) provides data on the class of worker including wage and salary, self-employed not incorporated, and unpaid family worker. The Public Use Microdata Sample (PUMS) 1-Year files are used to summarize the data by place of work.

For the baseline employment estimates shown in Table 1, the 2013 Self-Employment (and Unpaid Family Workers) Adjustment Factor is applied to the CES adjusted wage and salary employment for years prior to 2015 (in 2010), and the 2015 through 2023 Self-Employment Adjustment factors are applied to the CES adjusted wage and salary employment for 2015 through 2023.

Table 5 Self-Employment (and Unpaid Family Workers) Adjustment Factor, 2023

Jurisdiction	Wage and Salary Employment (Thousands)	Self-Employed Not Incorporated & Unpaid Family (Thousands)	Total Workers (Thousands)	Self-Employment Factor
District of Columbia	710.95	26.55	737.50	1.04
Arlington County	192.11	7.74	199.84	1.04
City of Alexandria	92.09	4.14	96.23	1.04
Montgomery County	504.08	32.84	536.92	1.07
Prince George's County	369.53	23.38	392.91	1.06
Fairfax County / City of Fairfax / City of Falls Church	684.21	34.81	719.02	1.05
Loudoun County	227.70	1.37	239.07	1.05
Prince William County/ City of Manassas / City of Manassas Park	196.00	11.77	207.78	1.06
Charles County	54.20	2.18	56.39	1.04
Frederick County	129.7	7.27	136.34	1.06
<b>Region</b>	<b>3,159.95</b>	<b>162.05</b>	<b>3,322.00</b>	<b>1.05</b>

Source: Census ACS PUMS 1-Year Files

### 3. Military

The military employment data for 2023 comes from S&P Global, which estimates military employment data that was previously available from the Bureau of Economic Analysis' (BEA). The BEA definition of military employment (Table CAEMP25N) included both full-time active-duty members, as well as part-time reserves and National Guard members of the US Armed Forces, including the Coast Guard. Each branch of the armed forces reported employment to the BEA based on monthly counts, which were averaged to produce the annualized employment count. The counts for full-time and part-time military service were not broken out separately. The BEA discontinued Table CAEMP25N for the year 2023 and thereafter on July 25, 2024, but this datapoint is estimated in figures provided by S&P Global.

Prior to the 2022 memo, the military employment data came from the from the Department of Defense's (DOD) Base Structure report, which has not been updated since 2018, and the Defense Manpower Data Center (DMDC). COG staff also reached out to Cooperative Forecasting and Data Subcommittee members to solicit input on a military employment estimate. These Department of Defense sources delineated active-duty and reserve employment separately, enabling the previous reports to only include active-duty military employment. This year's memo differs from earlier versions in that the military employment figure includes activity duty, reserves and National Guard personnel. Table 1 on page 1 shows suggested baseline employment estimates with military employment using the best available data for each year. In the table, the final estimate for years through 2021 includes military data from the DOD Base Structure report, DMDC, or from local staff. The final estimate for 2022 includes military employment data from the BEA, and the final estimate for 2023 includes estimated military employment data from S&P Global.

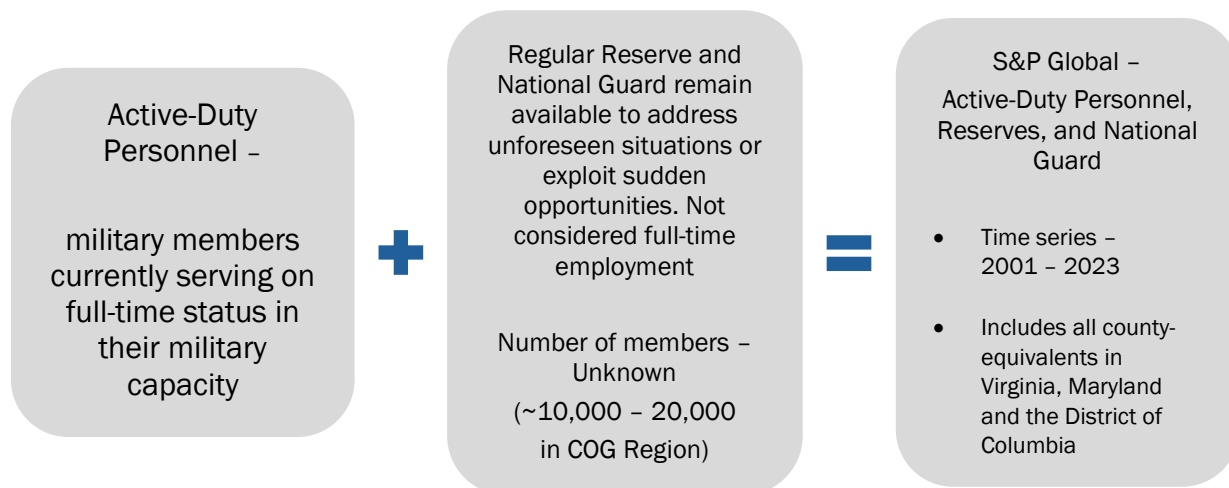


Figure 3 Military Employment Method Detailed, 2023

The below table shows annualized active duty and reserve duty count of military personnel in each jurisdiction from the BEA and S&P Global. The BEA reports independent city employment aggregated with the city's adjoining county.

Table 6 Military Employment Estimate (Thousands), 2019 through 2023

Jurisdiction	2019	2020	2021	2022	2023
District of Columbia	14.07	14.04	14.34	14.25	14.19
Arlington County	9.41	9.43	9.33	9.25	9.10
City of Alexandria	0.54	0.52	0.51	0.49	0.48
Montgomery County	8.27	8.20	8.21	7.99	7.81
Prince George's County	7.48	7.62	7.80	7.73	7.62
Fairfax County	11.21	10.84	10.67	10.26	10.10
City of Fairfax	0.00	0.00	0.00	0.00	0.00
City of Falls Church	0.00	0.00	0.00	0.00	0.00
Loudoun County	1.30	1.30	1.32	1.31	1.29
Prince William County	9.76	9.51	9.43	9.46	9.31
City of Manassas	0.00	0.00	0.00	0.00	0.00
City of Manassas Park	0.00	0.00	0.00	0.00	0.00
Charles County	1.12	1.13	1.15	1.12	1.10
Frederick County	2.11	2.16	2.20	2.09	2.04
<b>Region</b>	<b>65.27</b>	<b>64.75</b>	<b>64.96</b>	<b>63.94</b>	<b>63.04</b>

Source: Bureau of Economic Analysis and S&P Global estimate for Year 2023



## RESULTS

To obtain the baseline employment, as outlined in Figure 2, the QCEW is multiplied by the CES Adjustment Factor to produce the total wage and salary employment. Next, the total wage and salary employment is multiplied by the Self-Employment (and Unpaid Family Workers) Adjustment Factor to produce total civilian employment. Finally, military employment is added to obtain total employment.

*Table 7 Baseline Employment, 2023*

Jurisdiction	QCEW (Thousands)	CES Adjustment Factor	Self- Employment Adjustment Factor	Military Employment (Thousands)	Baseline Employment (Thousands)
District of Columbia	757.75	1.01	1.04	14.19	809.42
Arlington County	179.26	1.09	1.04	9.10	211.94
City of Alexandria	81.32	1.09	1.04	0.48	92.91
Montgomery County	458.93	1.06	1.07	7.81	525.30
Prince George's County	318.51	1.08	1.06	7.62	373.36
Fairfax County	629.47	1.09	1.05	10.10	729.61
City of Fairfax	23.38	1.09	1.05	0.00	26.73
City of Falls Church	12.19	1.09	1.05	0.00	13.93
Loudoun County	189.02	1.09	1.05	1.29	217.15
Prince William County	139.62	1.09	1.06	9.31	170.30
City of Manassas	24.77	1.09	1.06	0.00	28.56
City of Manassas Park	4.33	1.09	1.06	0.00	5.00
Charles County	41.39	1.08	1.04	1.10	47.60
Frederick County	106.33	1.06	1.06	2.04	120.94
<b>Region</b>	<b>2,966.28</b>	<b>1.07</b>	<b>1.05</b>	<b>63.04</b>	<b>3,372.73</b>

## RECOMMENDATION

For consistency purposes, COG suggests the method described in this memo be used to develop baseline employment estimates for the Cooperative Forecasting Program. If jurisdictions have access to additional data to inform these baseline employment estimates or choose to utilize a different methodology, please share it with the Committee and include a description as a part of the transmittal package.

## 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. It is recommended that cities in Maryland should work with their surrounding county and use other existing resources to develop Baseline Employment Estimates.

## SOURCES

<https://www.bls.gov/cew/downloadable-data-files.htm>

<https://download.bls.gov/pub/time.series/sm/>

<https://oui.doleta.gov/unemploy/pdf/uilawcompar/2023/coverage.pdf>

<https://www.irs.gov/individuals/international-taxpayers/employees-of-a-foreign-government-or-international-organization-futa>

<https://www.bls.gov/cew/questions-and-answers.htm>

## CREATE CUSTOMIZED TABLES – BLS WEBSITE

Employment, Hours, and Earnings – State and Metro Areas  
(Current Employment Statistics – CES)

<https://data.bls.gov/cgi-bin/dsrv?sm>

State and County Employment and Wages  
(Quarterly Census of Employment & Wages – QCEW)

<https://data.bls.gov/PDQWeb/en>

S&P Global is a subscription service. For more information, contact COG Staff

## ATTACHMENTS

Appendix A. Employment Not Covered by QCEW



Employment Not Covered by Unemployment Insurance (UI)		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"> <li>• As an elected official;</li> <li>• As a member of a legislative body or a member of the judiciary;</li> <li>• As a member of the state National Guard or Air National Guard;</li> <li>• As an employee serving on a temporary basis in case of fire, storm, snow, earthquake, flood, or similar declared emergency;</li> <li>• 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</li> <li>• Military</li> </ul>	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 UI (not represented in QCEW)