

# PEOPLE

## With Employment Barriers



# 2019

## ANNUAL ESTIMATES



Workforce Training & Education  
Coordinating Board

June 2019



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The Workforce Training and Education Coordinating Board is a state agency in Washington. It is a Governor-appointed partnership of nine voting members from business, labor, and government. Non-voting members also participate. The Workforce Board: •Advises the Governor and Legislature on workforce development policy. •Ensures the state's workforce services and programs work together. •Evaluates the performance of Washington's key workforce programs

## INFORMATION ABOUT THIS REPORT

**Title:** People with Employment Barriers, 2019 Annual Estimates

**Abstract:** This report contains valid, reliable, rigorous and repeatable annual estimates of the number of Washington state residents who face thirteen barriers to employment, as described in Section 3(24) of the Workforce Innovation and Opportunity Act (WIOA) of 2016. The estimates are presented for the state as a whole and for the twelve Workforce Development Council regions. These estimates include people who: have low incomes; are homeless; are displaced homemakers; have disabilities; are of American Indian, Alaska Native, Hawaiian or other indigenous ancestry; are unemployed long-term, are English language learners, are older; are seasonal farmworkers; are veterans and their spouses; are single parents or unmarried pregnant women; are youth in or recently aged out of foster care; or are on the Temporary Aid to Needy Families (TANF) program and are within two years of their five-year lifetime TANF limit.

**Geography:** Washington State and twelve Workforce Development Council regions

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## Introduction: Employment Barriers

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This report contains reliable and rigorous estimates of the number of people who face various barriers to employment, as described in Section 3(24) of the Workforce Innovation and Opportunity Act (WIOA) of 2016.

*“The term ‘individual with a barrier to employment’ ... encompasses the following groups of people: individuals with disabilities, including youth with disabilities; displaced homemakers; low-income individuals; Indians, Alaska Natives, and Native Hawaiians; older individuals; ex-offenders; homeless individuals, or homeless children and youths; youth who are in or have aged out of the foster care system; individuals who are English language learners, individuals who have low levels of literacy, and individuals facing substantial cultural barriers; farmworkers; ... individuals within 2 years of exhausting lifetime eligibility under the TANF program; single parents (including single pregnant women); and long-term unemployed individuals.” (WIOA August 2016, p 55801)*

People who face these employment barriers, and who are not in school or employed at a good salary, are potential users of workforce training programs and services. It is useful to have consistent, valid, reliable, and repeatable estimates of these potential user populations when planning for workforce training. So, the Washington State Workforce Training Board is reporting the following thirteen estimates for the state as a whole and for the 12 Workforce Development Council regions.

- People who have Low Incomes
- People who are Homeless
- People who are Displaced homemakers
- People who have Disabilities
- People with American Indian, Alaska Native, Native Hawaiian or other Pacific Islander ancestry
- People who are Unemployed Long Term
- People who are English Language Learners
- People who are Older
- People who are Seasonal Farmworkers
- People who are Veterans and their Spouses
- People who are Single Parents or Unmarried Pregnant Women
- People in Foster Care or Aged Out of Foster Care
- People on the TANF Program within Two Years of the Five Year Lifetime TANF Limit

## People who have Low Incomes

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This group includes all adults between the ages of 18 and 66 who are:

- not in school, and
- in the workforce but unemployed, or
- employed but earning less than 200% of the Federal Poverty Level for one person.

Workforce Region	Estimate	90% Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>992,271</b>	<b>958,421</b>	<b>1,026,120</b>	<b>7,310,300</b>
Benton-Franklin	40,881	38,884	42,918	283,830
Central	116,434	112,964	119,904	859,400
Eastern Partnership	28,498	27,181	30,715	214,950
North Central	43,368	41,237	45,500	275,860
Northwest	64,404	61,862	66,946	439,700
Olympic	51,902	48,832	53,351	369,900
Pacific Mountain	74,440	71,689	77,190	511,750
Seattle-King	267,003	261,590	272,416	2,153,700
Snohomish	98,861	95,595	102,126	789,400
South Central	57,199	54,805	59,594	331,080
Southwest	79,809	76,661	82,957	580,930
Spokane	69,833	67,162	72,504	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People who are Homeless

This group includes adults known to DSHS or the Department of Commerce who were between the ages of 18 and 66, and who at some point during State Fiscal Year 2017 were flagged as:

- living on the street, or
- living in an emergency or battered spouse shelter, or
- served in a rapid-rehousing program, or
- noted by a DSHS caseworker as homeless without housing.

These counts are people whose homelessness has come to the attention of local agencies and offices either because they are using homelessness services or because other services they receive are influenced by their homeless condition. Therefore, these counts do not include everyone who is homeless, especially if that homelessness is of short duration.

Many of these homeless people also had other barriers to employment. For example:

- All were low-income.
- Twenty percent (16,400) were older, aged 50 to 66.
- Fifteen percent (11,873) were all or in part American Indian, Alaska Native or Pacific Islander/Hawaiian.
- Nine percent (7,599) were receiving “Disabled” medical coverage

Workforce Region	Count	OFM Population
<b>State</b>	<b>80,011</b>	<b>7,310,300</b>
Benton-Franklin	1,869	283,830
Central	11,876	859,400
Eastern Partnership	1,773	214,950
North Central	2,016	275,860
Northwest	4,188	439,700
Olympic	4,292	369,900
Pacific Mountain	7,641	511,750
Seattle-King	23,013	2,153,700
Snohomish	7,046	789,400
South Central	3,453	331,080
Southwest	5,748	580,930
Spokane	6,840	499,800
Unknown County	256	

**Source:** Unduplicated count of persons in the DSHS Research and Data Analysis Division who were recorded in HMIS from the Department of Commerce as using shelters or rapid rehousing services, or recorded as homeless without housing or using shelters in ACES from the DSHS Economic Services Administration, and 2017 OFM Population Estimates.

## People who are Displaced Homemakers

This group includes all adults between the ages of 34 and 66 who:

- were currently divorced, separated or widowed, or
- were divorced or widowed in the last 12 months, and
- were not in school, and
- were not in the labor force, or
- were in the workforce but unemployed, or
- worked 26 or fewer weeks during the past year.

Workforce Region	Estimate	90% Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>10,644</b>	<b>6,830</b>	<b>14,457</b>	<b>7,310,300</b>
Benton-Franklin	513	266	760	283,830
Central	1,185	809	1,561	859,400
Eastern Partnership	422	199	645	214,950
North Central	605	326	885	275,860
Northwest	716	424	1,008	439,700
Olympic	540	288	793	369,900
Pacific Mountain	1,108	747	1,469	511,750
Seattle-King	2,143	1,649	2,637	2,153,700
Snohomish	1,006	659	1,353	789,400
South Central	440	201	679	331,080
Southwest	788	455	1,122	580,930
Spokane	1,176	807	1,545	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People who have Disabilities

This group includes adults between the ages of 18 and 66 who:

- had health conditions affecting their daily lives and activities (including any veteran services connected disability, or difficulties in cognition, self-care, hearing, vision, independent living, and ambulation), and
- were not in school, and
- were in the workforce but unemployed, or
- were employed but earning less than 200% of the Federal Poverty Level for one person.

Workforce Region	Estimate	90 % Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>95,070</b>	<b>83,255</b>	<b>106,885</b>	<b>7,310,300</b>
Benton-Franklin	3,677	2,985	4,369	283,830
Central	12,219	10,967	13,471	859,400
Eastern Partnership	3,067	2,426	3,708	214,950
North Central	3,802	3,073	4,531	275,860
Northwest	6,898	5,959	7,837	439,700
Olympic	5,743	4,892	6,593	369,900
Pacific Mountain	8,345	7,307	9,383	511,750
Seattle-King	22,800	21,067	24,534	2,153,700
Snohomish	9,255	8,155	10,355	789,400
South Central	4,663	3,859	5,467	331,080
Southwest	8,081	6,959	9,202	580,930
Spokane	6,520	5,606	7,435	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.



## People with American Indian, Alaska Native, Hawaiian, or Other Pacific Islander Ancestry

This group includes adults between the ages of 18 and 66 who were

- All or part descended from ancestors who were Native American, Hawaiian, Alaska Native, Polynesian, Samoan, Tongan, Micronesian, Guamanian, Chamorro, Marshallese, Fijian, Pacific Islander, Indian, Cherokee, American Indian, Eskimo, Central American Indian, or South American Indian, and
- were not in school, and
- were in the workforce but unemployed, or
- were employed but earning less than 200% of the Federal Poverty Level for one person.

Workforce Region	Estimate	90 % Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>236,727</b>	<b>224,867</b>	<b>248,588</b>	<b>7,310,300</b>
Benton-Franklin	1,951	1,673	2,230	283,830
Central	39,293	37,719	40,866	859,400
Eastern Partnership	7,546	6,935	8,156	214,950
North Central	3,249	2,911	3,588	275,860
Northwest	13,084	12,261	13,907	439,700
Olympic	17,279	16,374	18,184	369,900
Pacific Mountain	23,282	22,273	24,290	511,750
Seattle-King	64,070	61,608	66,532	2,153,700
Snohomish	26,703	25,227	28,178	789,400
South Central	8,554	7,987	9,122	331,080
Southwest	14,859	13,844	15,873	580,930
Spokane	16,858	16,054	17,662	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People who are Unemployed Long-Term

This group includes adults between the ages of 19 and 66 who:

- were in the workforce but unemployed, or
- were employed for 26 weeks or less during the past year, and
- did not work the previous week, and
- were not in school.

Workforce Region	Estimate	90 % Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>113,824</b>	<b>103,509</b>	<b>124,140</b>	<b>7,310,300</b>
Benton-Franklin	3,979	3,395	4,564	283,830
Central	15,237	14,105	16,369	859,400
Eastern Partnership	2,791	2,295	3,268	214,950
North Central	3,051	2,518	3,584	275,860
Northwest	6,754	6,000	7,509	439,700
Olympic	6,342	5,615	7,068	369,900
Pacific Mountain	10,734	9,783	11,686	511,750
Seattle-King	30,321	28,701	31,941	2,153,700
Snohomish	11,484	10,490	12,479	789,400
South Central	6,025	5,286	6,763	331,080
Southwest	9,532	8,544	10,519	580,930
Spokane	7,574	6,776	8,372	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People who are English Language Learners

This group includes adults between the ages of 18 and 66 who:

- spoke English with difficulty or not at all, and
- were not in school, and
- were in the workforce but unemployed, or
- were employed but earning less than 200% of the Federal Poverty Level for one person.

Workforce Region	Estimate	90 % Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>75,917</b>	<b>66,005</b>	<b>85,828</b>	<b>7,310,300</b>
Benton-Franklin	6,539	5,624	7,454	283,830
Central	4,957	4,154	5,759	859,400
Eastern Partnership	1,208	802	1,613	214,950
North Central	9,114	8,004	10,223	275,860
Northwest	3,125	2,489	3,762	439,700
Olympic	574	302	846	369,900
Pacific Mountain	2,523	1,947	3,099	511,750
Seattle-King	24,450	22,656	26,245	2,153,700
Snohomish	5,881	5,001	6,761	789,400
South Central	11,890	10,631	13,149	331,080
Southwest	3,911	3,126	4,696	580,930
Spokane	1,746	1,269	2,223	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People who are Older

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This group includes adults who were:

- between the ages of 50 to 66, and
- were not in school, and
- were in the workforce but unemployed, or
- were employed but earning less than 200% of the Federal Poverty Level for one person.

Workforce Region	Estimate	90 % Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>251,397</b>	<b>233,364</b>	<b>269,431</b>	<b>7,310,300</b>
Benton-Franklin	9,422	8,384	10,460	283,830
Central	27,638	25,829	29,447	859,400
Eastern Partnership	8,205	7,236	9,175	214,950
North Central	11,565	10,392	12,739	275,860
Northwest	18,580	17,123	20,037	439,700
Olympic	14,142	12,859	15,426	369,900
Pacific Mountain	19,025	17,553	20,497	511,750
Seattle-King	63,494	60,845	66,142	2,153,700
Snohomish	25,869	24,123	27,615	789,400
South Central	14,312	13,015	15,608	331,080
Southwest	21,389	19,688	23,109	580,930
Spokane	17,756	16,338	19,175	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People who are Seasonal Farmworkers

This group includes adults between the ages of 18 to 66 who:

- worked for all or part of the year as agricultural Inspectors, graders and sorters, agricultural products, or as miscellaneous agricultural workers, or
- worked in the industry of crop production, and
- were not in school, and
- were in the workforce but unemployed, or
- were employed but earned less than 200% of the Federal Poverty Level for one person.

This estimate is likely to be an underestimate of the people who work seasonally in this industry, particularly those who come to work temporarily and then return to their home country, or who remain here but are in this country illegally and therefore will not answer American Community Survey questions.

Workforce Region	Estimate	90 % Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>40,357</b>	<b>33,392</b>	<b>47,321</b>	<b>7,310,300</b>
Benton-Franklin	5,702	4,846	6,559	283,830
Central	1,191	796	1,586	859,400
Eastern Partnership	1,724	1,241	2,207	214,950
North Central	9,921	8,766	11,075	275,860
Northwest	1,887	1,391	2,383	439,700
Olympic	384	161	606	369,900
Pacific Mountain	2,196	1,658	2,733	511,750
Seattle-King	2,066	1,540	2,591	2,153,700
Snohomish	857	519	1,194	789,400
South Central	12,969	11,658	14,280	331,080
Southwest	621	307	936	580,930
Spokane	839	508	1,170	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People who are Veterans and their Spouses

This group includes adults between the ages of 18 to 66 who:

- were veterans or were married to veterans, and
- were not in school, and
- were in the workforce but unemployed, or
- were employed but, excluding their military income, earned less than 200% of the Federal Poverty Level for one person.

Workforce Region	Estimate	90 % Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>124,204</b>	<b>111,230</b>	<b>137,178</b>	<b>7,310,300</b>
Benton-Franklin	2,137	1,607	2,667	283,830
Central	29,218	27,313	31,123	859,400
Eastern Partnership	2,754	2,146	3,363	214,950
North Central	3,141	2,477	3,805	275,860
Northwest	11,000	9,823	12,177	439,700
Olympic	18,814	17,321	20,307	369,900
Pacific Mountain	12,197	10,950	13,455	511,750
Seattle-King	15,361	13,934	16,787	2,153,700
Snohomish	10,514	9,343	11,686	789,400
South Central	2,653	2,043	3,206	331,080
Southwest	7,235	6,173	8,298	580,930
Spokane	9,180	8,099	10,260	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People who are Single Parents or Unmarried Pregnant Woman

This group includes people between the ages of 15 to 66 who:

- lived in a household with one or more of their own children and no other parent of those children, or
- were unmarried woman aged 15 to 50, who gave birth to a first child in the previous year (used as an estimate of those giving birth in the current year), and
- were not in school, and
- were in the workforce but unemployed, or
- were employed but earned less than 200% of the Federal Poverty Level for a family of their size.

Workforce Region	Estimate	90 % Confidence Interval		OFM Population
		Lower Bound	Upper Bound	
<b>State</b>	<b>175,188</b>	<b>153,846</b>	<b>196,529</b>	<b>7,310,300</b>
Benton-Franklin	9,643	8,151	11,135	283,830
Central	22,462	20,244	24,679	859,400
Eastern Partnership	4,898	3,818	5,978	214,950
North Central	8,586	7,140	10,032	275,860
Northwest	9,919	8,412	11,427	439,700
Olympic	8,968	7,586	10,349	369,900
Pacific Mountain	14,277	12,486	16,068	511,750
Seattle-King	39,001	35,934	42,068	2,153,700
Snohomish	15,080	13,247	16,914	789,400
South Central	15,273	13,385	17,160	331,080
Southwest	12,408	10,578	14,239	580,930
Spokane	14,674	12,867	16,480	499,800

**Source:** Public Use Micro Sample 2013-2017 and 2017 OFM Population Estimates

Confidence Interval calculated using Census-derived design effects from U.S. Census Bureau October 2018b.

## People in Foster Care or Aged Out of Foster Care

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This group includes all youth and young adults aged 16 through 24 as of July 1, 2016 who were:

- in foster care in Washington state on July 1, 2016, or
- formerly in foster care in Washington state and had “aged out” of the foster care program.

County of residence was defined as the county the child was living in their last month of out-of-home placement or the month after aging out of foster care.

These counts do not include youth who were in foster care in other states, and aged out of the program in those states, and then moved to Washington.

<b>Workforce Region</b>	<b>Count</b>	<b>OFM Population</b>
<b>State</b>	<b>4,330</b>	<b>7,310,300</b>
Benton-Franklin	152	283,830
Central	551	859,400
Eastern Partnership	144	214,950
North Central	138	275,860
Northwest	247	439,700
Olympic	282	369,900
Pacific Mountain	474	511,750
Seattle-King	823	2,153,700
Snohomish	355	789,400
South Central	325	331,080
Southwest	397	580,930
Spokane	442	499,800

**Source:** Foster Care Service information maintained by RDA, and 2017 OFM Population Estimates



## People on the TANF/SFA Program within Two Years of the Federal Time Limit

This group includes all the adults in Washington State who:

- were receiving aid from the Temporary Aid to Needy Families (TANF) and State Family Assistance (SFA) program in May 2019, and
- were within two years of reaching their Federal five-year TANF time limit on eligibility.

Workforce Region	TANF/SFA Adults within 24 months of the Federal Time Limit in May 2019	Total TANF/SFA Adults in May 2019	OFM Population 2017
<b>State</b>	<b>2,423</b>	<b>14,753</b>	<b>7,310,300</b>
Benton-Franklin	67	522	283,830
Central	364	2,109	859,400
Eastern Partnership	78	466	214,950
North Central	69	463	275,860
Northwest	81	625	439,700
Olympic	119	586	369,900
Pacific Mountain	258	1,433	511,750
Seattle-King	428	2,961	2,153,700
Snohomish	188	1,137	789,400
South Central	161	1,010	331,080
Southwest	260	1,524	580,930
Spokane	350	1,910	499,800
Unknown County	-	7	

**Source:** DSHS Economic Services Administration EMAPS Assignment #4735, using the ACES Data Warehouse as of the June 2019 Load (produced on June 6, 2019) and 2017 OFM Population Estimates.

## APPENDIX A: METHODOLOGY DETAILS

### Distributing PUMS Estimates to Workforce Council Regions

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Ten of the survey estimates were developed from the five-year (2013-2017) database called the Public Use Micro Sample (PUMS), produced by the U.S. Census Bureau from the ongoing American Community Survey (ACS). PUMS is an individual-level probability sample of people who answer the American Community Survey questions.

To protect individual privacy, PUMS data are distributed by Public Use Micro Sample Areas known as PUMAs. PUMAs are combinations of census tracts that define areas containing approximately 100,000 people.

Six Workforce Development Council regions are perfectly represented by combinations of PUMAs. These are the Olympic, Northwest, Snohomish, Seattle, Central and Spokane Council regions. The other six Council regions are split between PUMAs, as Table 2 below shows.

- The Pacific Mountain Region has a base of respondents from Grays Harbor, Mason, Lewis, Pacific and Thurston counties, but Klickitat, Skamania, Cowlitz and Wahkiakum county respondents are also included in the PUMAs that encompass it.
- The Southwest Region has its base of respondents from Clark, Cowlitz and Wahkiakum counties, but it also has respondents from Pacific County included in its PUMAs.
- The North Central Region has its base of respondents from Chelan, Douglas, Grant Adams, and Okanogan counties, but the PUMAs also bring in respondents from Kittitas, Whitman, Asotin, Lincoln, Columbia, Garfield, Stevens, Pend Oreille and Ferry counties.
- The South Central Region has its base of Kittitas, Klickitat, Skamania and Yakima Counties, but the PUMAs bring in respondents from Grant and Lewis counties as well.
- The Eastern Partnership Region has its base in Ferry, Pend Oreille, Garfield, Stevens, Columbia, Lincoln, Whitman, Asotin and Walla Walla counties, but the PUMAs bring in respondents from Okanogan, Adam, and outer Benton and Franklin counties as well.
- The Benton Franklin Region has its base in Benton and Franklin counties but the PUMAs bring in respondents from Walla Walla county as well.

To estimate the barrier populations for these six Council regions that are split across PUMAs, each estimate produced from PUMAs was “allocated” across the Workforce Council regions. To guide the allocation, we used county tabulations of variables from the American Community Survey (ACS) that were similar but less detailed than the estimates we were creating from PUMS. We call these ACS variables “proxy” measures.

There were several possible American Community Survey variables that could be used as proxies for each estimated barrier population. In choosing, we searched for allocation variables that would likely be distributed geographically in a similar manner to the PUMA estimate. The measures themselves and their ACS geographic proxy populations are shown in Table 1 below.

**Table 1: PUMS Conceptual Estimates and ACS Geographic Proxy Populations**

<b>Barrier Population</b>	<b>Conceptual Definition of the Barrier Population, Estimated using PUMS</b>	<b>ACS Proxy Population, Used to Allocate PUMA Estimates</b>
<b>Low-Income People</b> (ages 18 to 66)	People 18 to 66 who are not in school and are either unemployed or earn less than 200% of the Federal Poverty Level (FPL) for a single person.	People aged 18 – 64 with family income below 200% of the FPL.
<b>Displaced Homemakers</b> (ages 35 to 66)	Widowed or divorced people between 35 and 66 who have been unemployed for a period of 27 weeks or more, and who have lost the income that supports them through the death or divorce.	Widowed & Divorced age 35 – 64.
<b>Persons with Disabilities</b> (ages 18 to 66)	People 18-66 with health conditions affecting their daily activities, who are not in school, and are either unemployed or earn less than 200% of the Federal Poverty Level for a single person.	People with disabilities, aged 18 – 64, with family income below the Federal Poverty Level.
<b>Persons of Native American, Alaska Native, Hawaiian or other PI Ancestry</b> (Ages 18 to 66)	People 18 to 66 who are all or part descended from Native American, Hawaiian, Alaska Native or Other Pacific Islander peoples, and who are not in school and are unemployed or earn less than 200% of the Federal Poverty Level for a single person.	Population age 18 – 64 with family income below the Federal Poverty Level, in the following races: American Indian and Alaska Native Alone, and Native Hawaiian and Other Pacific Islander alone.
<b>Long-Term Unemployed</b> (Ages 19 to 66)	People aged 19-66 who have not been employed for six months or more, and are not in school.	Population age 16 – 64, who did not work in the past 12 months, or worked fewer 26 or fewer weeks.
<b>Seasonal and Migrant Farmworkers</b>	People who work in low-wage agriculture and crop production for all or part of the year, and who are not in school and are unemployed or earn less than 200% of the Federal Poverty Level for a single person.	Population age 16 and over with occupation of Natural resources, construction, and maintenance occupations: Farming, fishing, and forestry occupations.
<b>English Language Learners</b> (Ages 18 to 66)	People who speak English with difficulty or not at all, and who are who are not in school and are unemployed or earn less than 200% of the Federal Poverty Level for a single person.	Population age 5 or over, who speak English "not well" or "not at all".
<b>Single Parents and Pregnant Single Women)</b>	Single parents or pregnant women, who are not in school and are unemployed or earn less than 200% of the FPL for their family size.	Single Parent – Householders with children under 18 with no spouse present & subfamily single parents in parent-child subfamilies. Newly Pregnant: Women aged 15 thru 50 who gave birth in the past twelve months and had family incomes less than 200% FPL.
<b>Older Persons</b> (ages 50 to 66)	People aged 50 to 66 who are not in school and are unemployed or earn less than 200% of the Federal Poverty Level (FPL) for a single person.	Population age 55 – 64 with family income below the federal poverty level.
<b>Veterans and their Spouses</b> (ages 18 to 66)	Conceptually, all veterans and their spouses are included if their family income is below 200% of the FPL. Military income is not counted.	Veterans age 18 to 64 with family income below the federal poverty level.

**Table 2: Workforce Regions Compared with PUMS Areas (PUMAS)**

Work Force Region	Counties in WF Region	PUMS Area (Counties in <b>Bold</b> are not in work force region)
Olympic	Clallam Jefferson Kitsap	11900-Clallam & Jefferson 11801-Kitsap N 11802-Kitsap S
Pacific Mountain	Grays Harbor Lewis Mason Pacific Thurston	11300-Grays Harbor & Mason 11000-Lewis, <b>Klickitat &amp; Skamania</b> 11200- <b>Cowlitz</b> , Pacific & <b>Wahkiakum</b> 11401-Thurston Central 11402-Thurston Outer
Northwest	Whatcom Skagit Island San Juan	10100-Whatcom & Bellingham 10200-Skagit, Island & San Juan
Snohomish	Snohomish	11701-11706 - All 6 Snohomish County PUMAs
Seattle-King	King	11601-11616 - All 16 King County PUMAs
Central	Pierce	11501-11507-All 7 Pierce PUMAs
Southwest	Clark Cowlitz Wahkiakum	1101-1104-All 4 Clark County PUMAs 11200-Cowlitz, <b>Pacific</b> & Wahkiakum
North Central	Chelan Douglas Grant Adams Okanogan	10300-Chelan & Douglas 10800-Grant & <b>Kittitas</b> 10600- <b>Whitman, Asotin, Adams, Lincoln, Columbia &amp; Garfield</b> 10400- <b>Stevens, Okanogan, Pend Oreille &amp; Ferry</b>
South Central	Kittitas Klickitat Skamania Yakima	10800- <b>Grant</b> & Kittitas 11000- <b>Lewis</b> , Klickitat & Skamania 10901-Yakima Central 10902-Yakima Outer
Eastern Partnership	Ferry Pend Oreille Garfield Stevens Columbia Lincoln Whitman Asotin Walla Walla	10400-Stevens, <b>Okanogan</b> , Pend Oreille & Ferry. 10600-Whitman, Asotin, <b>Adams</b> , Lincoln, Columbia & Garfield. 10703-Walla Walla, <b>Benton (Outer) &amp; Franklin (Outer)</b> .
Benton and Franklin	Benton Franklin	10702-Benton County E Central 10701-Pasco, Richland N, W Richland 10703- <b>Walla Walla</b> , Benton (Outer) & Franklin (Outer)
Spokane	Spokane	10501-10504 - All 4 Spokane County PUMAs

## Applying OFM Populations to the PUMS Estimates

PUMS weights are based on the Census’s inter-censal population estimates. Washington State’s Office of Financial Management (OFM) publishes its own inter-censal estimates that do not agree with the Census estimates. We needed to adjust the PUMS results to match the OFM population data. OFM publishes county level data by age, race, and gender, but has no other demography. Therefore, we created rates in PUMS data, using our estimates as numerators and population data matching the OFM demography as denominators. Those rates were then applied to the same demographic groups in the OFM data. This resulted in the final measures.

## Equation Combining PUMA Allocations with OFM Adjustments

$$\text{Barrier Population for each Workforce Region} = \frac{\sum_{\left( \begin{smallmatrix} \text{PUMAs} \\ \text{intersecting} \\ \text{the WDCR} \end{smallmatrix} \right)} \left( \begin{smallmatrix} \text{Measure} \\ \text{by} \\ \text{PUMA} \end{smallmatrix} \right) * \left( \frac{\begin{smallmatrix} \text{Measure} \\ \text{ACS Proxy} \\ \text{for PUMA} \end{smallmatrix}}{\begin{smallmatrix} \text{Measure} \\ \text{ACS Proxy for} \\ \text{PUMA / WDCR} \\ \text{Intersection} \end{smallmatrix}} \right)}{\sum_{\left( \begin{smallmatrix} \text{PUMAs} \\ \text{intersecting} \\ \text{the WDCR} \end{smallmatrix} \right)} \left( \begin{smallmatrix} \text{Base} \\ \text{Population} \\ \text{by} \\ \text{PUMA} \end{smallmatrix} \right) * \left( \frac{\begin{smallmatrix} \text{Base Population} \\ \text{ACS Proxy} \\ \text{for PUMA} \end{smallmatrix}}{\begin{smallmatrix} \text{Base Population} \\ \text{ACS Proxy for} \\ \text{PUMA / WDCR} \\ \text{Intersection} \end{smallmatrix}} \right)}$$

## Sampling Errors of the Survey Estimates and Other Error Sources

The 90% confidence intervals presented in the tables drawn from PUMS reflect statistical sampling error, which is calculated using the largest design effect for the variables used in the analysis (design effects are provided in PUMS documentation).

Non-sampling error cannot be calculated statistically. Some non-sampling error could result from the allocation process described above, which allocates split PUMAs across their Workforce regions. Other non-sampling error results from under-representation, where some groups of people are difficult to reach or refuse to answer survey questions. For example, while there are efforts to count homeless people living on the street and the ACS does make efforts to reach them, they are usually under-represented in surveys. Non-citizens who are in the country illegally are probably under-represented in these data.

The data from state agencies – the Departments of Social and Health Services, Commerce and Children, Youth and Families -- does not have sampling error, because these data are counts of those receiving services rather than estimates based on surveys. There may, however, be persons who “need” those services but do not receive them, and hence are not counted – people who are homeless, for example, but who never use shelters or DSHS services.

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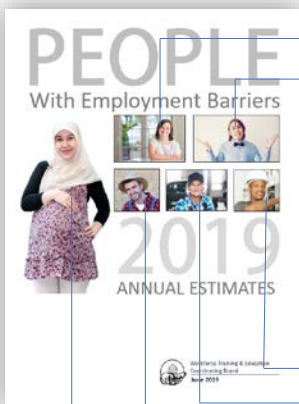
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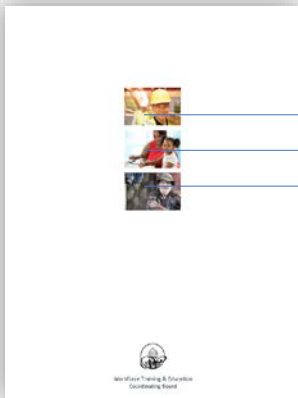
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