2017 Growth Management Act Population Projections Update

Office of Financial Management September 2017

General Discussion: In May of 2012 the Office of Financial Management (OFM) released its 2012 Growth Management Act (GMA) county population projections. Per RCW 43.62.035, OFM is required to update these projections in 2017. As the first step of the update process, OFM has compared the medium, high and low series of the 2012 GMA projections against the April 1 population estimates for the years 2011 to 2017. The comparison assumes that the April 1 population estimates are likely to be more accurate than the projected values. Such a comparison can help us determine which of the population projection model assumptions need updating. The percentage difference between OFM's April 1, 2017 population estimates and the 2012 GMA medium series projections for 2017 is shown in Figure 1 below.

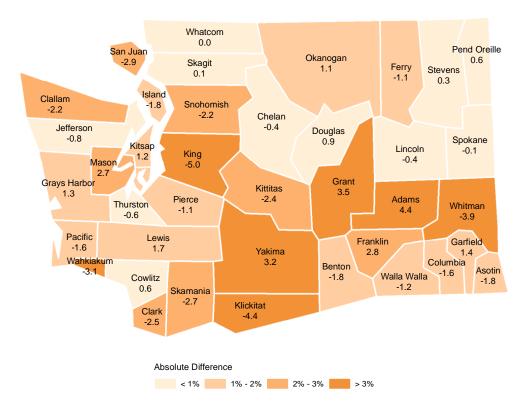


Figure 1: Comparison of April 1, 2017 Population Estimates with 2012 GMA 2017 Projections

In absolute terms, the projections for 11 counties (28 percent) are tracking closely with a difference within 1 percent. Thirteen counties (33 percent) have a difference between 1 and 2 percent. Eight counties (21 percent) have a difference between 2 and 3 percent. Seven counties (18 percent) have a difference of more than 3 percent. The largest differences are for King, Adams and Klickitat counties where the absolute differences are 5.0 percent for King and 4.4 percent for Adams and Klickitat. See Table A1 in the Appendix for more detail.

The comparison also indicates that no county's April 1, 2017 population estimate has gone beyond the 2012 GMA projected high or low bands. However, some counties are approaching the upper and lower bands. For example, the range between 2012 GMA medium and high series for King County is 138,024 persons, but the range between April 1, 2017 estimate and the high series is only 35,707. This means that the distance between the medium series projection and the upper bound has shrunk by 74 percent. See Table A2 in the Appendix for the high series comparison for all counties.

Adams County is another area of concern. The April 1, 2017 population estimate for Adams County is lower than the projected medium series population. The range between 2012 GMA medium and low series is 1,459 persons, but the range between the April 1, 2017 estimate and the low series is only 535. This means that the distance between the medium series projection and the lower bound has shrunk by 63 percent. See Table A3 in the Appendix for the low series comparison for all counties.

Components of Change: The GMA projections are produced with a component model, which projects births, deaths and net migration based on a set of validated assumptions about fertility, mortality and net migration. For the 2017 GMA update, the state and county data will be updated with the most current information available.

Fertility: In the GMA forecast model, births are projected using the total fertility rate (TFR). The TFR is the total number of children born per woman between ages 10 and 49 in her lifetime. The 2012 GMA forecast assumed that the state level TFR would remain constant at 1.98 from 2010 thru 2015. The actual TFR calculated using 2015 birth data from the Department of Health shows that the state TFR dropped to 1.89.

At the county level, the 2012 GMA forecast categorized counties into one of four fertility groups:

- 1. High fertility counties that have large Hispanic populations and 40% of that population is foreign-born.
- 2. Average fertility counties that track closely with the state TFR.
- 3. Low fertility counties that have a high proportion of college age population or women pursuing a professional career.
- 4. Diverse counties with varying characteristics that make categorization difficult.

Two patterns have emerged since the 2012 GMA update. First, there has been a decline in the foreign-born, Hispanic population. Second, the slower economic recovery in rural and non-metropolitan counties seems to have influenced women and/or their families' willingness to have children.

Table A4 in the Appendix compares the 2012 GMA projected TFRs for 2015 to actual TFRs. Within each category, some counties performed as expected while others did not. For the high fertility counties, 7 out of 9 counties have higher projected TFRs than the actual rates. The counties with TFRs near the state average performed reasonably well, except for Clark, where the projected TFR was 0.14 higher than actual. For counties that have historically had low fertility rates, Kittitas and Walla Walla counties' projected TFRs are 0.24 and 0.19 points lower respectively than actual. Nineteen counties fall into the diverse characteristics category. When compared to actual TFRs, 12 counties are over-projected and 7 are under-projected.

Because TFRs often fluctuate from year to year, some 2015 TFR's may be out of line with the historical trend. In certain cases, OFM plans to replace the 2015 single year value with the 2014-2016 three-year average value to project future TFRs. Historical TFRs for each county along with the proposed rates for 2015 can be found in a set of related charts available <u>here</u>.

Mortality: In the GMA forecast model, deaths are projected based on an adjustment of U.S. life expectancy at birth (i.e. the average number of years a person is expected to live). The 2012 GMA model used the U.S. 2010 life expectancy of 78.7 as the base and applied the following adjustments to produce the state and county-level life expectancies:

- 1. Add 0.1 year to every county because Washington's life expectancy has historically been higher than the nation.
- 2. Add 1.2 years to counties where the Hispanic population is at least 25 percent of the county total population.
- 3. Add 0.75 year to counties where at least 31 percent of the population has a bachelor's degree or higher.
- 4. Subtract 0.75 year from counties where no more than 18 percent of the population has a bachelor's degree or higher.

See Table A5 in the Appendix for the 2012 GMA forecast life expectancy assumptions for each county. See Table A6 in the Appendix for a comparison of the number of deaths projected by the 2012 GMA forecast to actual deaths reported by the Department of Health. In 22 counties, the actual number of deaths is within ± 5 percent of the projected number of deaths. Deaths were under-projected by more than 5 percent for 5 counties and over-projected by more than 5 percent for 12 counties.

The National Center for Health Statistics¹ recently released the national life expectancy tables for 2014. U.S. life expectancy increased from 78.7 in 2010 to 78.9 in 2014. OFM will adjust life expectancies to account for this change in the 2017 GMA projection update.

Migration: Migration is the most difficult component of population change to predict. The 2012 GMA projections were controlled to the 2011 state population forecast, which was produced during a period of slow growth following a severe recession. Based on the decline in observed migration at the time, OFM assumed that it would take about 5 years for migration to recover

¹ Arias, E., Heron, M., Xu, J. (2017). *United State Life Tables, 2014, National Vital Statistics Report, 66(4)*. Hyattsville, MD: National Center for Health Statistics.

and that it would eventually reach the 30 year average of 45,500 by 2025. In actuality, certain large metropolitan counties recovered faster than expected. The following chart compares the 2011 state forecasted migration to the 2016 state forecasted migration that has been updated to include the migration estimate used in OFM's April 1, 2017 population estimate.

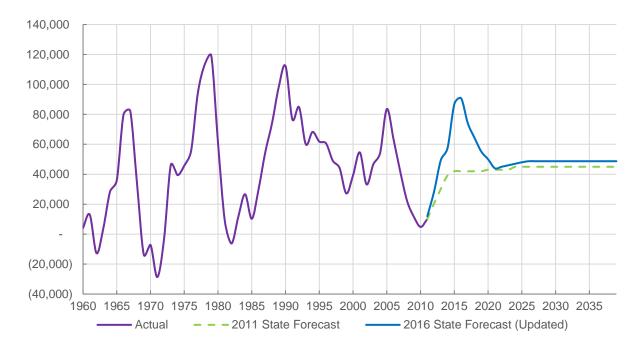


Figure 2: Net Migration Comparison between 2011 State Forecast and Updated 2016 State Forecast

A comparison of the net migration assumptions between the two state forecasts by five-year period is shown in Table 1. Between 2010 and 2015, the 2011 state forecast underestimated net migration by 48,400 persons (46.1 percent) and by 161,000 persons (76.7 percent) for the 2015-2020 period. OFM's long-range migration expectation was adjusted upward between the two forecasts, from 45,000 in 2011 to 48,700 in 2016. Therefore, from 2025 onwards, the percentage difference between the two forecasts is around 8 percent.

	2016	2011		
	State Forecast	State Forecast	Numeric	Percentage
Period	Migration	Migration	Difference	Difference
2010-15	153,283	104,909	(48,374)	-46.1
2015-20	370,988	210,000	(160,988)	-76.7
2020-25	232,000	217,000	(15,000)	-7.9
2025-30	242,800	225,000	(17,800)	-8.9
2030-35	243,500	225,000	(18,500)	-8.2
2035-40	243,500	225,000	(18,500)	-8.2

Table 1: Net Migration Comparison between State Forecasts by 5-year Period

The underestimation of net migration is concentrated in the five largest metropolitan counties in Western Washington. The following table illustrates the percentage share of state total net migration difference by region. Clark, King, Kitsap, Pierce and Snohomish counties account for 95 percent of the total difference. Eighty six percent of the difference is in the Puget Sound counties, with King County accounting for 69 percent alone. See Table A7 in the Appendix for a detailed comparison of net migration for all counties and Table A8 for additional information regarding the regional analysis.

Region	2010-2015	2016-2017	2010-2017
PSRC Plus Clark	97.7	93.9	95.2
PSRC	86.3	85.7	85.9
King County	81.5	62.2	68.8
State Minus PSRC	13.7	14.3	14.1
State Minus PSRC and Clark	2.3	6.1	4.8

Table 2: Percentage Share of State Total Net Migration Difference by Region

This geographically concentrated underestimation of net migration is primarily due to the unexpected speed of the economic recovery in King County, largely due to Seattle's rise as a technology-driven growth hub. Seattle has experienced unprecedented population growth of 17 percent in the past 7 years per OFM's 2017 April 1 population estimate. Unlike other economic recoveries throughout Washington's history, population growth has been slow to spread to outlying areas. It was not until 2015 that other suburban areas along the I-5 corridor also shared in the growth.

In the next couple of months, OFM intends to work closely with local planning experts and stakeholders to assess changes in the population growth pattern and to review the fertility, mortality and net migration assumptions. OFM will incorporate the results of this effort into the 2017 GMA projections.

Appendix

	Medium Series					
	Projected 2017	weululli S				
	Population:	Estimated 2017	Numeric	Percentage		
	Medium Series	Population	Difference	Difference		
State Total	7,100,451	7,310,300	209,849	3.0		
State Total	7,100,431	7,510,500	209,849	5.0		
Adams	20,794	19,870	924	4.4		
Asotin	21,905	22,290	(385)	(1.8)		
Benton	190,054	193,500	(3,446)	(1.8)		
Chelan	76,550	76,830	(280)	(0.4)		
Clallam	72,617	74,240	(1,623)	(2.2)		
Clark	459,548	471,000	(11,452)	(2.5)		
Columbia	4,034	4,100	(66)	(1.6)		
Cowlitz	106,534	105,900	634	0.6		
Douglas	41,812	41,420	392	0.9		
Ferry	7,655	7,740	(85)	(1.1)		
, Franklin	92,902	90,330	2,572	2.8		
Garfield	2,231	2,200	31	1.4		
Grant	99,090	95,630	3,460	3.5		
Grays Harbor	73,898	72,970	928	1.3		
Island	81,307	82,790	(1,483)	(1.8)		
Jefferson	31,108	31,360	(252)	(0.8)		
King	2,051,383	2,153,700	(102,317)	(5.0)		
Kitsap	267,433	264,300	3,133	1.2		
Kittitas	43,671	44,730	(1,059)	(2.4)		
Klickitat	20,743	21,660	(917)	(4.4)		
Lewis	78,741	77,440	1,301	1.7		
Lincoln	10,654	10,700	(46)	(0.4)		
Mason	64,968	63,190	1,778	2.7		
Okanogan	42,597	42,110	487	1.1		
Pacific	20,913	21,250	(337)	(1.6)		
Pend Oreille	13,457	13,370	87	0.6		
Pierce	849,678	859,400	(9,722)	(1.1)		
San Juan	16,052	16,510	(458)	(2.9)		
Skagit	124,246	124,100	146	0.1		
Skamania	11,383	11,690	(307)	(2.7)		
Snohomish	772,428	789,400	(16,972)	(2.2)		
Spokane	499,348	499,800	(452)	(0.1)		
Stevens	44,636	44,510	126	0.3		
Thurston	275,194	276,900	(1,706)	(0.6)		
Wahkiakum	3,909	4,030	(121)	(3.1)		
Walla Walla	60,690	61,400	(710)	(1.2)		
Whatcom	216,228	216,300	(72)	(0.0)		
Whitman	46,822	48,640	(1,818)	(3.9)		
Yakima	261,462	253,000	8,462	3.2		

Table A1: Comparison of 2012 Projected Medium Series to 2017 OFM April 1 Population Estimate

			High S	Series		
	Projected	Projected		Range	Range	Percentage
	2017	2017	2017	Between High	-	Difference
	Population:	Population:	Population	and Medium	Estimate and	from High
	Medium Series	High Series	Estimate		High Projection	Series
State Total	7,178,675	7,927,837	7,310,300	749,162	617,537	(17.6)
Adams	20,794	21,881	19,870	1,087	2,011	85.0
Asotin	21,905	25,118	22,290	3,213	2,828	(12.0)
Benton	190,054	210,565	193,500	20,511	17,065	(16.8)
Chelan	76,550	83,687	76,830	7,137	6,857	(3.9)
Clallam	72,617	79,111	74,240	6,494	4,871	(25.0)
Clark	459,548	515,446	471,000	55,898	44,446	(20.5)
Columbia	4,034	4,258	4,100	224	158	(29.5)
Cowlitz	106,534	112,604	105,900	6,070	6,704	10.4
Douglas	41,812	46,668	41,420	4,856	5,248	8.1
Ferry	7,655	8,789	7,740	1,134	1,049	(7.5)
Franklin	92,902	113,195	90,330	20,293	22,865	12.7
Garfield	2,231	2,444	2,200	213	244	14.6
Grant	99,090	106,803	95,630	7,713	11,173	44.9
Grays Harbor	73,898	78,671	72,970	4,773	5,701	19.4
Island	81,307	94,756	82,790	13,449	11,966	(11.0)
Jefferson	31,108	35,701	31,360	4,593	4,341	(5.5)
King	2,051,383	2,189,407	2,153,700	138,024	35,707	(74.1)
Kitsap	267,433	308,054	264,300	40,621	43,754	7.7
Kittitas	43,671	49,473	44,730	5,802	4,743	(18.3)
Klickitat	20,743	23,263	21,660	2,520	1,603	(36.4)
Lewis	78,741	88,425	77,440	9,684	10,985	13.4
Lincoln	10,654	11,293	10,700	639	593	(7.2)
Mason	64,968	72,257	63,190	7,289	9,067	24.4
Okanogan	42,597	47,902	42,110	5,305	5,792	9.2
Pacific	20,913	22,222	21,250	1,309	972	(25.7)
Pend Oreille	13,457	15,063	13,370	1,606	1,693	5.4
Pierce	849,678	927,750	859,400	78,072	68,350	(12.5)
San Juan	16,052	18,801	16,510	2,749	2,291	(16.7)
Skagit	124,246	141,920	124,100	17,674	17,820	0.8
Skamania	11,383	12,585	11,690	1,202	895	(25.5)
Snohomish	772,428	867,735	789,400	95,307	78,335	(17.8)
Spokane	499,348	566,018	499,800	66,670	66,218	(0.7)
Stevens	44,636	52,147	44,510	7,511	7,637	1.7
Thurston	275,194	306,173	276,900	30,979	29,273	(5.5)
Wahkiakum	3,909	4,256	4,030	347	226	(34.9)
Walla Walla	60,690	63,796	61,400	3,106	2,396	(22.9)
Whatcom	216,228	240,231	216,300	24,003	23,931	(0.3)
Whitman	46,822	52,185	48,640	5,363	3,545	(33.9)
Yakima	261,462	307,184	253,000	45,722	54,184	18.5

Table A2: Distance Change Between 2012 Projected High Series and 2017 OFM April 1 Population Estimate

			Low S	eries		
	Projected	Projected		Range	Range	
	2017	2017	2017	Between Low	Between 2017	Percentage
	Population:	Population:	Population	and Medium	Estimate and	Change from
	Medium Series	Low Series	Estimate		Low Projection	Low Series
State Total	7,178,675	6,545,400	7,310,300	633,275	764,900	20.8
Adams	20,794	19,335	19,870	1,459	535	(63.3)
Asotin	21,905	19,875	22,290	2,030	2,415	19.0
Benton	190,054	166,180	193,500	23,874	27,320	14.4
Chelan	76,550	69,372	76,830	7,178	7,458	3.9
Clallam	72,617	67,413	74,240	5,204	6,827	31.2
Clark	459,548	425,570	471,000	33,978	45,430	33.7
Columbia	4,034	3,864	4,100	170	236	38.8
Cowlitz	106,534	99,806	105,900	6,728	6,094	(9.4)
Douglas	41,812	36,172	41,420	5,640	5,248	(7.0)
Ferry	7,655	6,925	7,740	730	815	11.6
Franklin	92,902	78,752	90,330	14,150	11,578	(18.2)
Garfield	2,231	2,041	2,200	190	159	(16.3)
Grant	99,090	91,955	95,630	7,135	3,675	(48.5)
Grays Harbor	73,898	69,639	72,970	4,259	3,331	(21.8)
Island	81,307	71,095	82,790	10,212	11,695	14.5
Jefferson	31,108	27,320	31,360	3,788	4,040	6.7
King	2,051,383	1,920,717	2,153,700	130,666	232,983	78.3
Kitsap	267,433	235,016	264,300	32,417	29,284	(9.7)
Kittitas	43,671	40,324	44,730	3,347	4,406	31.6
Klickitat	20,743	18,402	21,660	2,341	3,258	39.2
Lewis	78,741	73,128	77,440	5,613	4,312	(23.2)
Lincoln	10,654	9,998	10,700	656	702	7.0
Mason	64,968	57,576	63,190	7,392	5,614	(24.1)
Okanogan	42,597	38,002	42,110	4,595	4,108	(10.6)
Pacific	20,913	20,020	21,250	893	1,230	37.7
Pend Oreille	13,457	12,069	13,370	1,388	1,301	(6.3)
Pierce	849,678	762,208	859,400	87,470	97,192	11.1
San Juan	16,052	14,066	16,510	1,986	2,444	23.1
Skagit	124,246	110,631	124,100	13,615	13,469	(1.1)
Skamania	11,383	10,700	11,690	683	990	44.9
Snohomish	772,428	691,427	789,400	81,001	97,973	21.0
Spokane	499,348	457,434	499,800	41,914	42,366	1.1
Stevens	44,636	39,154	44,510	5,482	5,356	(2.3)
Thurston	275,194	245,256	276,900	29,938	31,644	5.7
Wahkiakum	3,909	3,582	4,030	327	448	37.0
Walla Walla	60,690	57,004	61,400	3,686	4,396	19.3
Whatcom	216,228	197,121	216,300	19,107	19,179	0.4
Whitman	46,822	43,428	48,640	3,394	5,212	53.6
	261,462	•				

Table A3: Distance Change Between 2012 Projected Low Series and 2017 OFM April 1 Population Estimate

				2015	
	2010	2015	2015	Numeric	
	Actual TFR	Projected TFR	Actual TFR	Difference	Category
State Total	1.98	1.98	1.89	0.09	000080.7
Adams	3.56	3.45	3.11	0.34	High Fertility
Asotin	1.77	1.80	2.15	(0.35)	Diverse
Benton	2.22	2.20	2.24	(0.04)	High Fertility
Chelan	2.45	2.40	2.28	0.12	High Fertility
Clallam	1.99	1.95	1.98	(0.03)	Diverse
Clark	2.03	2.10	1.96	0.14	Average
Columbia	2.19	2.10	2.58	(0.48)	Diverse
Cowlitz	2.13	2.15	1.91	0.24	Diverse
Douglas	2.36	2.35	2.20	0.15	High Fertility
Ferry	1.87	1.80	2.28	(0.48)	Diverse
Franklin	2.93	3.00	2.71	0.29	High Fertility
Garfield	2.28	2.20	3.14	(0.94)	Diverse
Grant	2.84	2.80	2.49	0.31	High Fertility
Grays Harbor	2.16	2.10	1.92	0.18	Diverse
Island	2.07	2.05	1.98	0.07	Diverse
Jefferson	1.81	1.80	1.59	0.21	Diverse
King	1.70	1.64	1.61	0.03	Low Fertility
Kitsap	2.00	2.07	2.13	(0.06)	Average
Kittitas	1.51	1.50	1.74	(0.24)	Low Fertility
Klickitat	2.20	2.20	2.26	(0.06)	Diverse
Lewis	2.28	2.27	2.03	0.24	Diverse
Lincoln	2.28	2.20	2.05	0.15	Diverse
Mason	2.15	2.15	1.86	0.29	Diverse
Okanogan	2.73	2.70	2.45	0.25	High Fertility
Pacific	2.11	2.10	2.38	(0.28)	Diverse
Pend Oreille	2.38	2.30	2.14	0.16	Diverse
Pierce	2.01	2.03	2.03	0.00	Average
San Juan	1.50	1.55	1.23	0.32	Diverse
Skagit	2.23	2.22	1.98	0.24	High Fertility
Skamania	1.85	1.85	1.44	0.41	Diverse
Snohomish	1.95	2.01	1.95	0.06	Average
Spokane	1.85	1.85	1.84	0.01	Average
Stevens	2.23	2.20	2.15	0.05	Diverse
Thurston	1.81	1.80	1.82	(0.02)	Average
Wahkiakum	2.22	2.10	1.53	0.57	Diverse
Walla Walla	1.88	1.85	2.04	(0.19)	Low Fertility
Whatcom	1.63	1.67	1.71	(0.04)	Low Fertility
Whitman	1.42	1.40	1.45	(0.05)	Low Fertility
Yakima	2.73	2.70	2.70	-	High Fertility

Table A4: Comparison of 2012 Projected Total Fertility Rates to Actual Rates for 2015

Table A5: Adjusted Life Expectancy Used in 2012 GMA Projections	
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Chelan 80.0 81.5 83.0 84.5 1 Clalam 78.8 80.3 81.8 83.3 Clark 78.8 80.3 81.8 83.3 Columbia 78.8 80.3 81.8 83.3 Cowlitz 78.8 80.3 81.8 83.3 .1 Douglas 80.0 81.5 83.0 84.5 .1 1 Ferry 78.8 80.3 81.8 83.3 .1 Garfield 78.8 80.3 81.8 83.3 .1 1 Grant 79.3 80.8 82.3 83.8 .1 1 Grays Harbor 78.1 79.6 81.1 82.6 .1 1 Kitag 79.6 81.1 82.6 84.1 1 Kittap 78.8 80.3 81.8 83.3 .1 Kittap 78.8 80.3 81.8 83.3 .1 Lewis 78.1	Asotin	78.8	80.3	81.8	83.3		
Clallam 78.8 80.3 81.8 83.3 Clark 78.8 80.3 81.8 83.3 Cowlitz 78.8 80.3 81.8 83.3 Cowlitz 78.8 80.3 81.8 83.3 -1 Douglas 80.0 81.5 83.0 84.5 -1 1 Ferry 78.8 80.3 81.8 83.3 -1 1 Garlield 78.8 80.3 81.8 83.3 -1 1 Garat 79.3 80.8 82.3 83.8 -1 1 Garat 79.3 80.8 82.3 83.8 -1 1 Garat 79.6 81.1 82.6 -1 1 Island 78.8 80.3 81.8 83.3 -1 1 Kitap 79.6 81.1 82.6 84.1 1 1 Kitap 78.8 80.3 81.8 83.3 -1 1 Kitap 78.8 80.3 81.8 83.3 -1 1 <	Benton	78.8	80.3	81.8	83.3		
Clark 78.8 80.3 81.8 83.3 Columbia 78.8 80.3 81.8 83.3 Cowiltz 78.8 80.3 81.8 83.3 -1 Douglas 80.0 81.5 83.0 84.5 -1 1 Ferry 78.8 80.3 81.8 83.3 -1 -1 Garfield 78.8 80.3 81.8 83.3 -1 1 Garfield 78.8 80.3 81.8 83.3 -1 1 Grant 79.3 80.8 82.3 83.8 -1 1 Grant 79.3 80.8 82.3 83.8 -1 1 Grant 79.3 80.8 82.3 83.8 -1 1 Stand 78.8 80.3 81.8 83.3 -1 1 Jefferson 79.6 81.1 82.6 84.1 1 1 Kittias 79.6 81.1 82.6 </td <td>Chelan</td> <td>80.0</td> <td>81.5</td> <td>83.0</td> <td>84.5</td> <td></td> <td>1</td>	Chelan	80.0	81.5	83.0	84.5		1
Columbia 78.8 80.3 81.8 83.3 -1 Douglas 80.0 81.5 83.0 84.5 -1 1 Ferry 78.8 80.3 81.8 83.3 -1 1 Faranklin 79.3 80.8 82.3 83.8 -1 1 Garfield 78.8 80.3 81.8 83.3 -1 1 Grant 79.3 80.8 82.3 83.8 -1 1 Grays Harbor 78.1 79.6 81.1 82.6 -1 1 Island 78.8 80.3 81.8 83.3 -1 1 Kitsap 79.6 81.1 82.6 84.1 1 1 Kitsap 78.8 80.3 81.8 83.3 -1 1 Kittas 79.6 81.1 82.6 84.1 1 1 Kittas 78.8 80.3 81.8 83.3 -1 1	Clallam	78.8	80.3	81.8	83.3		
Cowlitz78.880.381.883.3-1Douglas80.081.583.084.5-11Ferry78.880.381.883.3-11Garfield78.880.381.883.3-11Garafield78.880.381.883.3-11Grant79.380.882.383.8-11Grant79.380.882.383.8-11Grays Harbor78.179.681.182.6-11Island78.880.381.883.3-11Kitgg79.681.182.684.111Kitsap78.880.381.883.3-11Kittas79.681.182.684.111Kittas79.681.182.684.111Kittas78.880.381.883.3-11Lewis78.179.681.182.6-11Lincoln78.880.381.883.3-11Okanogan78.880.381.883.3-11Pacific78.880.381.883.3-11Pierce78.880.381.883.3-11Skagit78.880.381.883.3-11Skagit78.880.381.883.3-11 <t< td=""><td>Clark</td><td>78.8</td><td>80.3</td><td>81.8</td><td>83.3</td><td></td><td></td></t<>	Clark	78.8	80.3	81.8	83.3		
Douglas80.081.583.084.5-11Ferry78.880.381.883.3-1Franklin79.380.882.383.8-11Garifield78.880.381.883.3-11Grant79.380.882.383.8-11Gray Harbor78.179.681.182.6-11Island78.880.381.883.3-1-1Jefferson79.681.182.684.11-1King79.681.182.684.11-1Kitsap78.880.381.883.3-1-1Kittat78.880.381.883.3-1-1Lewis78.179.681.182.684.11-1Lincoln78.880.381.883.3-1-1Okanogan78.880.381.883.3-1-1Pacific78.880.381.883.3-1-1Pierce78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Pierce78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Nanon79.681.182.684.11-1Skagit78.880.381.883.3 <t< td=""><td>Columbia</td><td>78.8</td><td>80.3</td><td>81.8</td><td>83.3</td><td></td><td></td></t<>	Columbia	78.8	80.3	81.8	83.3		
Ferry78.880.381.883.3-1Franklin79.380.882.383.8-11Garfield78.880.381.883.3-11Grant79.380.882.383.8-11Grays Harbor78.179.681.182.6-11Island78.880.381.883.3-11Jefferson79.681.182.684.111King79.681.182.684.111Kitsap78.880.381.883.3-1-1Kitsap78.880.381.883.3-1-1Lewis78.179.681.182.684.11Lincoln78.880.381.883.3-1-1Dkanogan78.880.381.883.3-1-1Pacific78.880.381.883.3-1-1Pend Oreille78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1 </td <td>Cowlitz</td> <td>78.8</td> <td>80.3</td> <td>81.8</td> <td>83.3</td> <td>-1</td> <td></td>	Cowlitz	78.8	80.3	81.8	83.3	-1	
Franklin79.380.882.383.8-11Garfield78.880.381.883.3-11Grant79.380.882.383.8-11Grays Harbor78.179.681.182.6-11Island78.880.381.883.3-11Jefferson79.681.182.684.111King79.681.182.684.111Kitap78.880.381.883.3-11Kitsap78.880.381.883.3-11Kitata78.880.381.883.3-1-1Lewis78.179.681.182.6-1-1Lincoln78.880.381.883.3-1-1Dkanogan78.880.381.883.3-1-1Pacific78.880.381.883.3-1-1Pend Oreille78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3-1-1Skagit78.880.381.883.3	Douglas	80.0	81.5	83.0	84.5	-1	1
Garfield78.880.381.883.3-1Grant79.380.882.383.8-11Grays Harbor78.179.681.182.6-1Island78.880.381.883.3-Jefferson79.681.182.684.11King79.681.182.684.11Kitsap78.880.381.883.3-Kittats79.681.182.684.11Kitsap78.880.381.883.3-1Kittats79.681.182.684.11Lewis78.179.681.182.6-1Lincoln78.880.381.883.3-1Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit	Ferry	78.8	80.3	81.8	83.3	-1	
Grant79.380.882.383.8-11Grays Harbor78.179.681.182.6-1Island78.880.381.883.3	Franklin	79.3	80.8	82.3	83.8	-1	1
Grays Harbor78.179.681.182.6-1Island78.880.381.883.3Jefferson79.681.182.684.11King79.681.182.684.11Kitsap78.880.381.883.3Kittitas79.681.182.684.11Kitsap78.880.381.883.3Kittitas79.681.182.684.11Lewis78.179.681.182.6Lincoln78.880.381.883.3Mason78.880.381.883.3Pacific78.880.381.883.3Pend Oreille78.880.381.883.3Pierce78.880.381.883.3San Juan79.681.182.684.11Skagit78.880.381.883.3Spokane78.880.381.883.3Spokane78.880.381.883.3Stevens78.880.381.883.3Makiakum78.880.381.883.3Spokane78.880.381.883.3Stevens78.880.381.883.3Makiakum78.681.182.6.411	Garfield	78.8	80.3	81.8	83.3	-1	
Island78.880.381.883.3Jefferson79.681.182.684.11King79.681.182.684.11Kitsap78.880.381.883.3.Kittitas79.681.182.684.11Kitsap78.880.381.883.3.Kittitas79.681.182.684.11Kikitat78.880.381.883.3.1Lewis78.179.681.182.6.1Lincoln78.880.381.883.3.1Okanogan78.880.381.883.3.1Pacific78.880.381.883.3.1Pend Oreille78.880.381.883.3.1Pierce78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Shohomish78.880.381.883.3.1Stevens78.880.381.883.3.1Wahkiakum78.1	Grant	79.3	80.8	82.3	83.8	-1	1
Jefferson79.681.182.684.11King79.681.182.684.11Kitsap78.880.381.883.3Kittitas79.681.182.684.11Klickitat78.880.381.883.3-1Lewis78.179.681.182.6-1Lincoln78.880.381.883.3-1Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Shania78.880.381.883.3-1Shania78.880.381.883.3-1Shania78.880.381.883.3-1Shania78.880.381.883.3-1Shania78.880.381.883.3-1Shania78.8	Grays Harbor	78.1	79.6	81.1	82.6	-1	
King79.681.182.684.11Kitsap78.880.381.883.3.Kittitas79.681.182.684.11Klickitat78.880.381.883.3.1Lewis78.179.681.182.6.1Lincoln78.880.381.883.3.1Okanogan78.880.381.883.3.1Pacific78.880.381.883.3.1Pend Oreille78.880.381.883.3.1Pierce78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Skagit78.880.381.883.3.1Shannia79.681.182.684.11Skagit78.880.381.883.3.1Shannia78.880.381.883.3.1Shannia78.880.381.883.3.1Stevens78.880.381.883.3.1Walkakum78.179.681.182.6.1Walla Walla78.880.381.883.3.1Whitcom79.681.182.684.11Whitman79.681.182.684.11	Island	78.8	80.3	81.8	83.3		
Kitsap78.880.381.883.3Kittitas79.681.182.684.11Klickitat78.880.381.883.3-1Lewis78.179.681.182.6-1Lincoln78.880.381.883.3-1Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Shannia79.681.182.684.11Skagit78.880.381.883.3-1Shannia78.880.381.883.3-1Spokane78.880.381.883.3-1Walkakum78.179.681.182.684.11Walkakum78.179.681.182.6-1Walla Walla78.880.381.883.3-1Whatcom79.681.182.684.11Whatcom79.681.182.684.11 <td>Jefferson</td> <td>79.6</td> <td>81.1</td> <td>82.6</td> <td>84.1</td> <td>1</td> <td></td>	Jefferson	79.6	81.1	82.6	84.1	1	
Kittitas79.681.182.684.11Klickitat78.880.381.883.3-1Lewis78.179.681.182.6-1Lincoln78.880.381.883.3-1Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1San Juan79.681.182.684.11Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Shanania79.681.182.684.11Skagit78.880.381.883.3-1Shanania78.880.381.883.3-1Shanania78.880.381.883.3-1Shanania78.880.381.883.3-1Shanania78.880.381.883.3-1Shanania78.880.381.883.3-1Walkakum78.179.681.182.6-1Walla Walla78.880.381.883.3-1Whatcom79.681.182.684.11Whatcom79.681.182.684.11	King	79.6	81.1	82.6	84.1	1	
Klickitat78.880.381.883.3-1Lewis78.179.681.182.6-1Lincoln78.880.381.883.3-1Mason78.880.381.883.3-1Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1San Juan79.681.182.684.11Skagit78.880.381.883.3-Spokane78.880.381.883.3-Spokane78.880.381.883.3-Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.3-Whatcom79.681.182.684.11Whitman79.681.182.684.11	Kitsap	78.8	80.3	81.8	83.3		
Lewis78.179.681.182.6-1Lincoln78.880.381.883.3-1Mason78.880.381.883.3-1Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1San Juan79.681.182.684.11Skagit78.880.381.883.3-Sohomish78.880.381.883.3-Stevens78.880.381.883.3-Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.3-Whatcom79.681.182.684.11Whitman79.681.182.684.11	Kittitas	79.6	81.1	82.6	84.1	1	
Lincoln78.880.381.883.3Mason78.880.381.883.3-1Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1San Juan79.681.182.684.11Skagit78.880.381.883.3-Shohomish78.880.381.883.3-Stevens78.880.381.883.3-Stevens78.880.381.883.3-Thurston79.681.182.684.11Wahkiakum78.179.681.182.684.11Walla Walla78.880.381.883.3-Whatcom79.681.182.684.11Whatcom79.681.182.684.11	Klickitat	78.8	80.3	81.8	83.3	-1	
Mason78.880.381.883.3-1Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1San Juan79.681.182.684.11Skagit78.880.381.883.3-Shohomish78.880.381.883.3-Spokane78.880.381.883.3-Stevens78.880.381.883.3-Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.3-Whatcom79.681.182.684.11Whatcom79.681.182.684.11	Lewis	78.1	79.6	81.1	82.6	-1	
Okanogan78.880.381.883.3-1Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1San Juan79.681.182.684.11Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skagit78.880.381.883.3-1Skamania78.880.381.883.3-1Spokane78.880.381.883.3-1Stevens78.880.381.883.3-1Thurston79.681.182.684.11Walkakum78.179.681.182.6-1Walla Walla78.880.381.883.3-1Whatcom79.681.182.684.11Whatcom79.681.182.684.11	Lincoln	78.8	80.3	81.8	83.3		
Pacific78.880.381.883.3-1Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1San Juan79.681.182.684.11Skagit78.880.381.883.3-Skamania78.880.381.883.3-Spokane78.880.381.883.3-Spokane78.880.381.883.3-Stevens78.880.381.883.3-Thurston79.681.182.684.11Walkakum78.179.681.182.6-1Walla Walla78.880.381.883.3-Whatcom79.681.182.684.11Whatcom79.681.182.684.11Whatcom79.681.182.684.11	Mason	78.8	80.3	81.8	83.3	-1	
Pend Oreille78.880.381.883.3-1Pierce78.880.381.883.3-1San Juan79.681.182.684.11Skagit78.880.381.883.3-Skamania78.880.381.883.3-Snohomish78.880.381.883.3-Spokane78.880.381.883.3-Stevens78.880.381.883.3-Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.3-Whatcom79.681.182.684.11Whitman79.681.182.684.11	Okanogan	78.8	80.3	81.8	83.3	-1	
Pierce78.880.381.883.3San Juan79.681.182.684.11Skagit78.880.381.883.3Skamania78.880.381.883.3Snohomish78.880.381.883.3Spokane78.880.381.883.3Stevens78.880.381.883.3Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Whatcom79.681.182.684.11Whatcom79.681.182.684.11Whitman79.681.182.684.11	Pacific	78.8	80.3	81.8	83.3	-1	
San Juan79.681.182.684.11Skagit78.880.381.883.3Skamania78.880.381.883.3Snohomish78.880.381.883.3Spokane78.880.381.883.3Stevens78.880.381.883.3Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.31Whatcom79.681.182.684.11Whitman79.681.182.684.11	Pend Oreille	78.8	80.3	81.8	83.3	-1	
Skagit78.880.381.883.3Skamania78.880.381.883.3Snohomish78.880.381.883.3Spokane78.880.381.883.3Stevens78.880.381.883.3Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.31Whatcom79.681.182.684.11Whatcom79.681.182.684.11Whitman79.681.182.684.11	Pierce	78.8	80.3	81.8	83.3		
Skamania78.880.381.883.3Snohomish78.880.381.883.3Spokane78.880.381.883.3Stevens78.880.381.883.3Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.3Whatcom79.681.182.684.11Whitman79.681.182.684.11	San Juan	79.6	81.1	82.6	84.1	1	
Snohomish78.880.381.883.3Spokane78.880.381.883.3Stevens78.880.381.883.3Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.31Whatcom79.681.182.684.11Whitman79.681.182.684.11	Skagit	78.8	80.3	81.8	83.3		
Spokane78.880.381.883.3Stevens78.880.381.883.3Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.31Whatcom79.681.182.684.11Whitman79.681.182.684.11	Skamania	78.8	80.3	81.8	83.3		
Stevens78.880.381.883.3Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.3Whatcom79.681.182.684.11Whitman79.681.182.684.11	Snohomish	78.8	80.3	81.8	83.3		
Thurston79.681.182.684.11Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.3	Spokane	78.8	80.3	81.8	83.3		
Wahkiakum78.179.681.182.6-1Walla Walla78.880.381.883.3Whatcom79.681.182.684.11Whitman79.681.182.684.11	Stevens	78.8	80.3	81.8	83.3		
Walla Walla78.880.381.883.3Whatcom79.681.182.684.11Whitman79.681.182.684.11	Thurston	79.6	81.1	82.6	84.1	1	
Whatcom79.681.182.684.11Whitman79.681.182.684.11	Wahkiakum	78.1	79.6	81.1	82.6	-1	
Whitman 79.6 81.1 82.6 84.1 1	Walla Walla			81.8	83.3		
	Whatcom	79.6	81.1	82.6	84.1	1	
Yakima 80.0 81.5 83.0 84.5 -1 1	Whitman	79.6	81.1	82.6	84.1		
	Yakima	80.0	81.5	83.0	84.5	-1	1

Notes:

isEduc: 1= add 0.75 years to the base; -1 = subtract 0.75 years from the base isHisp: 1= add 1.25 years to the base

Table A6: Comparison of 2012 Projected Deaths to Actual Deaths

	Projected	Actual		
	Deaths	Deaths	Numeric	Percentage
	2010-2017	2010-2017	Difference	Difference
State Total	366,086	362,663	3,423	0.94
Adams	844	870	(26)	(3.11)
Asotin	1,671	1,724	(53)	(3.17)
Benton	9,164	9,382		(2.38)
Chelan	4,797	4,703	94	1.96
Clallam	6,742	6,498	244	3.62
Clark	23,016	22,309	707	3.07
Columbia	369	382	(13)	(3.64)
Cowlitz	6,990	7,555	(565)	(8.09)
Douglas	2,272	2,117	155	6.84
Ferry	559	576	(17)	(3.04)
Franklin	2,761	2,548	213	7.71
Garfield	217	206	11	5.07
Grant	4,522	4,681	(159)	(3.51)
Grays Harbor	5,342	5,560	(218)	(4.08)
Island	5,512	4,771	741	13.45
Jefferson	2,810	2,468	342	12.18
King	89,599	87,028	2,571	2.87
Kitsap	14,606	14,416	190	1.30
Kittitas	2,183	1,995	188	8.63
Klickitat	1,440	1,197	243	16.86
Lewis	5,504	5,875	(371)	(6.73)
Lincoln	841	777	64	7.59
Mason	4,408	4,464	(56)	(1.28)
Okanogan	2,867	3,005	(138)	(4.82)
Pacific	1,951	2,150	(199)	(10.21)
Pend Oreille	988	1,009	(21)	(2.17)
Pierce	43,034	42,695	339	0.79
San Juan	1,193	986	207	17.37
Skagit	7,957	7,913	44	0.56
Skamania	673	584	89	13.28
Snohomish	36,352	34,637	1,715	4.72
Spokane	27,887	29,947	(2,060)	(7.39)
Stevens	2,986	3,072	(86)	(2.88)
Thurston	14,231	14,331	(100)	(0.70)
Wahkiakum	373	345	28	7.46
Walla Walla	3,893	3,927	(34)	(0.86)
Whatcom	11,550	10,881	669	5.79
Whitman	1,765	1,828	(63)	(3.56)
Yakima	12,215	13,251	(1,036)	(8.48)

Table A7: Comparison of 2012 Projected Migration to April 1 Estimated Migration

	Projected	Estimated	Numeric
	Migration	Migration	Difference
	2010-2017	2010-2017	2010-2017
State Total	189,473	331,150	(141,677)
A	(222)	(745)	422
Adams	(322)	(745)	423
Asotin	440	695	(255)
Benton	5,883	9,385	(3,502)
Chelan	1,523	2,538	(1,015)
Clallam	3,356	4,627	(1,271)
Clark	16,409	29,542	(13,133)
Columbia	48	156	(108)
Cowlitz	1,895	2,478	(583)
Douglas	1,647	1,443	204
Ferry	214	282	(68)
Franklin	5,013	3,099	1,914
Garfield	30	(29)	59
Grant	2,843	455	2,388
Grays Harbor	682	206	476
Island	1,754	2,588	(834)
Jefferson	2,605	2,597	8
King	35,643	133,114	(97,471)
Kitsap	8,748	6,488	2,260
Kittitas	1,893	2,946	(1,053)
Klickitat	361	1,085	(724)
Lewis	1,873	1,569	304
Lincoln	182	203	(21)
Mason	4,090	2,476	1,614
Okanogan	197	342	(145)
Pacific	624	1,115	(491)
Pend Oreille	474	571	(97)
Pierce	17,253	27,386	(10,133)
San Juan	782	1,113	(331)
Skagit	4,354	4,821	(467)
Skamania	257	500	(243)
Snohomish	27,973	44,376	(16,403)
Spokane	13,258	16,571	(3,313)
Stevens	1,187	982	205
Thurston	15,421	17,279	(1,858)
Wahkiakum	108	197	(89)
Walla Walla	804	1,886	(1,082)
Whatcom	10,114	9,999	115
Whitman	617	2,626	(2,009)
Yakima	(760)	(5,812)	5,052
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Table A8: Regional Comparison of 2012 Projected Migration to April 1 Estimated Migration

				Percentage of	Percentage of	Percentage of
				State Total	State Total	State Total
	Projected	Estimated	Numeric	Projected	Estimated	Migration
	Migration	Migration	Difference	Migration	Migration	Difference
	2010-2017	2010-2017	2010-2017	2010-2017	2010-2017	2010-2017
State Total	189,473	331,150	(141,677)			
PSRC Plus Clark County	106,026	240,906	(134,880)	56.0	72.7	95.2
PSRC	89,617	211,364	(121,747)	47.3	63.8	85.9
King County	35,643	133,114	(97,471)	18.8	40.2	68.8
State Minus PSRC	99,856	119,786	(19,930)	52.7	36.2	14.1
State Minus PSRC and Clark	83,447	90,244	(6,797)	44.0	27.3	4.8

Note: PSRC consists of King, Kitsap, Pierce and Snohomish Counties.