

## POPULATION ESTIMATES & PROJECTIONS

Research Brief No. 14  
December 2001

## Findings From the Census 2000 Supplementary Survey (C2SS) for Washington State

*Contributor: Yi Zhao*

In 2000, the U.S. Census Bureau conducted the Census 2000 Supplementary Survey (C2SS) using the American Community Survey (ACS) methodology and questionnaire. C2SS is designed as a test of ACS against the Census 2000 long form data. The Census Bureau plans to conduct the ACS nationwide beginning in 2003 if Congress approves funding. ACS could replace the long form in the 2010 decennial census. Results about basic demographic characteristics from C2SS were first released in August 2001 by state. Data for jurisdictions with 250,000 people or more were released on November 16<sup>th</sup>, 2001. Another 700 tables from this supplementary survey, which include versions by race for the nation, states, District of Columbia, and nearly all cities and counties of 250,000 or more, are scheduled for release this winter.

**I. C2SS provides a preview of decennial census long form data that will not be released until after June 2002. However, users of C2SS information should be aware of some major survey limitations and the way it differs from decennial census data.**

- C2SS is a sample survey, not data from Census 2000. Though it is a large survey, approximately 16,800 households for Washington and 700,000 from 1,203 counties nationwide, it is based on a sample. To reflect this, the Census Bureau has provided a range of estimates. Users should cite the range of estimates rather than just use the midpoint.
- C2SS sampled only people who lived in households. Census 2000 shows about 2.3 percent of Washington State population living in-group quarters such as college dormitories and nursing homes. This population cohort is obviously underrepresented.
- The census data reflects a single point of time---April 1 of year 2000---whereas C2SS is a rolling, continuous survey lasting for 12 months. This may affect certain data items such as occupancy rate and income.
- Census 2000 enumerated people in only one place, and only once. C2SS counted people where they were staying at the time of the survey as long as they were there for more than two months. A person who spent the summer in Port Angeles, Washington and the winter in Las Vegas, Nevada, might be counted in both places. Thus, in contrast to the census data that records the characteristics of year-round residents---the C2SS survey data presents different age, income, education, and other population characteristics for areas that have seasonal populations. Such areas include summer and winter seasonal resort communities and agricultural areas that have seasonal agricultural workers.
- There are subtle differences in the way some variables are measured and the questions are asked. For example, income in census 2000 is asked for the previous calendar year, while C2SS asks for the 12 months preceding the survey. The concept is different and the question may elicit different answers.

## II. 2000 Census Tabulation Compared to 2000 C2SS

When compared, many of the numbers in the census and the C2SS are very close, but some differences are noteworthy. The majority of the differences are reasonable and within the range of sampling variation. However, some are hard to explain. For example, census 2000 enumerated 93,301 American Indian and Alaska Natives state wide. (Single race only) C2SS shows a range between 42,798 and 77,544. Besides, the sample range for some small ethnic groups is too large to make any meaningful uses. Native Hawaiian for example, C2SS gives a range between 472 and 10,612.

Because group quarter population is excluded in C2SS, the survey selects fewer people in 18 -19 and 85 plus age cohorts, since a large number of people of these age groups are likely to live in college dormitories or nursing homes. Census 2000 indicates that Washington has 169,176 people between age 18 and 19. C2SS gives a range of this group between 128,543 and 159,747. Census 2000 counts 84,085 people who are 85 and older. C2SS shows a range between 61,461 and 73,027. As it is expected that the statistical margin of error will be relatively large for smaller areas, the range for those age groups may be even larger for geographical areas below the state level.

## III. 1990 Census Tabulations Compared to 2000 C2SS

### 1) Household characteristics:

Number of people who are married stays almost constant over the decade. While 1990 census showed 56.6 percent of Washingtonians are married, C2SS presents a range between 55.2 and 57.2 percent. Percent of people who are divorced has edged up approximately half to one percent, from less than 10.6 percent in 1990 to between 11.1 and 12.4 percent in 2000.

People who live alone show an increase from 476,320 in 1990 to between 584,387 and 662,377 in 2000, which represents a range of 0.1 to 1.5 percent increase. Families with own children under 18 have increased from 632,667 to between 681,753 and 776,285, indicating an increase between 6 to 10 percent.

### 2) Household income and poverty:

As expected, the medium household income for Washington State has increased over the decade. Compared to \$31,183 in 1990, C2SS estimates the medium household income is between \$43,158 and \$47,434 for year 2000. The increase is between 38 and 52 percent. Medium family income in 1990 was \$36,795, whereas the 2000 range is between \$52,551 and \$56,865.

The overall poverty population for the state has shown a numerical increase. 1990 Census found 517,933 people living below federal poverty level. C2SS estimate is between 543,354 and 823,451. Compared to the 10.9 of population living in poverty in 1990, C2SS indicates a probability range between 9.5 to 14.3 percent. The poverty rate for the elderly is likely to have declined from 9.1 percent to somewhere between 5.8 and 8.5 percent.

The poverty rate among children is estimated between 14.3 and 18.7 percent for 2000. Compared to the 14.7 percent rate in 1990, it is uncertain if Washington children are economically better off or not. Users must remember that C2SS is not census and the information collected is subject to sampling and non-sampling errors.

3) Foreign born population:

C2SS confirms the belief that Washington State has a large increase of foreign-born population. As of 1990, our state has a total of 322,144 people who were foreign born. C2SS estimates a range between 546,037 and 636,615, indicating an increase between 70 to 98 percent. While 128,643 foreign born, or 40 percent, settled in Washington between 1980 and 1990, Washington received an estimated range between 247,314 and 310,470 immigrants--- between 45 and 49 percent of all foreign born population--- over the 1990's decade.

The increase of foreign-born population has a direct positive impact on language spoken at home. 1990 Census shows 403,173 people who speak a language other than English at home and 17,096 persons who speak no English at all. C2SS estimates that people who use language other than English at home have increased to some where between 628,345 and 824,356 and the number for those who have no ability to speak English at all has climbed to a range between 27,190 and 72,732. Users should notice here even at the state level when sample size gets small for such group as who could not speak English, the uncertainty increases, and results in a wider estimating range.

4) Educational attainment:

More Washingtonians are likely to be better educated than a decade ago. The number of persons 25 years or older population without a high school diploma has decreased from 505,748 in 1990 to somewhere between 331,750 and 487,788, a 3 to 7 percent drop between 1990 and 2000.

On the other hand, compared to the 23 percent of persons who had received a bachelors or higher degree in 1990, C2SS indicates that there may be 27 to 34 percent of Washingtonians have completed college or higher education in year 2000.

5) Labor force:

The labor force has grown by about 500,000 if the low and high C2SS numbers are averaged. The female labor force participation rate is likely to have increased. While the lower bound estimate of 58 percent women 16 years and over are in the labor force, which is the same as in 1990, the upper bound estimate goes up to 64 percent. It is uncertain if there are more working elderly in 2000 than in 1990 because the labor force participation rate among elderly population in 2000 is between 9 and 11 percent as compared to 10 percent in 1990.

## 6) Housing value:

Housing value has grown dramatically over the decade. The median value for owner occupied homes has gone from \$93,300 to somewhere between \$166,911 and \$171,901, an average increase of 82 percent. The median gross rent has increased from \$383 in 1990 to between \$653 and \$678 for year 2000. The increase is between 71 and 77 percent. Both the housing value and the rents have grown more than the inflation rate, which is at 32 percent between 1990 and 2000.

**Link to C2SS data through Census Bureau's American FactFinder:**

<http://factfinder.census.gov/home/en/c2ss.html>

**To obtain this publication in an alternative format, contact the Washington State Office of Financial Management at (360) 902-0599**

## Appendix

**Table 1. Detailed Race from Census 2000 and C2SS**

RACE	C2SS			Census 2000
	Estimate	Lower Bound	Upper Bound	ST1 File
One race	5,529,138	5,479,503	5,578,773	5,680,602
White	4,711,094	4,653,196	4,768,993	4,821,823
Black or African American	173,936	148,135	199,737	190,267
American Indian and Alaska Native	<b>60,171</b>	<b>42,798</b>	<b>77,544</b>	<b>93,301</b>
Asian	347,001	313,447	380,555	322,335
Asian Indian	23,507	13,985	33,029	23,992
Chinese (except Taiwanese)	56,489	46,150	66,828	59,914
Filipino	67,922	50,237	85,607	65,373
Japanese	32,022	26,491	37,553	35,985
Korean	41,641	28,004	55,278	46,880
Vietnamese	64,528	47,779	81,277	46,149
Other Asian	49,073	35,206	62,940	44,042
Native Hawaiian and Other Pacific Islander	31,887	19,529	44,246	23,953
Native Hawaiian	<b>5,542</b>	<b>472</b>	<b>10,612</b>	<b>4,883</b>
Guamanian or Chamorro	9,323	3,687	14,959	5,823
Samoan	13,892	6,424	21,360	8,049
Other Pacific Islander	2,910	684	5,136	5,198
Some other race	205,049	171,909	238,189	228,923
Two or more races	228,601	178,966	278,236	213,519

**Table 2. Comparison of Population by Age between Census 2000 and C2SS**

Age	C2SS			Census 2000
	Estimate	Lower Bound	Upper Bound	ST1 File
0-17	1,515,484	1,478,048	1,552,920	1,513,843
18 to 19	<b>144,145</b>	<b>128,543</b>	<b>159,747</b>	<b>169,176</b>
20 to 24	354,864	340,725	369,003	390,185
25-64	3,113,564	3,054,859	3,172,269	3,158,769
65 to 74	334,930	322,784	347,076	337,166
75 to 84	<b>227,508</b>	<b>217,067</b>	<b>237,949</b>	<b>240,897</b>
85 and over	<b>67,244</b>	<b>61,461</b>	<b>73,027</b>	<b>84,085</b>
Median age	35.4	35.2	35.6	35.3

**Table 3a. Comparison of Population by Marital Status between 1990 Census and C2SS**

	C2SS			1990 Census
	Estimate	Lower Bound	Upper Bound	
Population 15 and over	4,508,590	4,498,751	4,518,429	3,791,157
Never married	1,198,803	1,160,328	1,237,278	942,004
Now married:	2,535,187	2,485,344	2,585,030	2,147,036
Separated	78,361	66,478	90,244	71,269
Widowed	246,173	231,247	261,099	229,431
Divorced	528,427	498,792	558,063	401,417
<b>Percent</b>				
Never married	26.6	25.8	27.4	24.8
Now married:	56.2	55.2	57.2	56.6
Separated	1.7	1.5	2.0	1.9
Widowed	5.5	5.1	5.8	6.1
Divorced	11.7	11.1	12.4	10.6

**Table 3b. Comparison of People Who Live Alone between 1990 Census and C2SS**

	C2SS			1990 Census
	Estimate	Lower Bound	Upper Bound	
Household Population	5,757,739	5,757,739	5,757,739	4,746,161
Live alone in household	623,382	584,387	662,377	476,320
<b>Percent</b>	10.8	10.1	11.5	10.0

**Table 3c. Comparison of Families with Own Children under 18 between 1990 Census and C2SS**

	C2SS			1990 Census
	Estimate	Lower Bound	Upper Bound	
Families	1,265,208	1,221,338	1,309,078	1,276,227
Families with own children under 18	729,019	681,753	776,285	632,667
<b>Percent</b>	57.6	55.8	59.3	49.6

**Table 4a. Comparison of Median Household and Family Income between 1990 Census and C2SS**

	C2SS			1990 census
	Estimate	Lower Bound	Upper Bound	
Median household income (dollars)	45,296	43,158	47,434	31,183
Median family income (dollars)	54,708	52,551	56,865	36,795
<b>Percent increase between 1990 - 2000</b>				
Median household income	45.3	38.4	52.1	
Median family income	48.7	42.8	54.5	

**Table 4b. Comparison of Poverty Status between 1990 Census and C2SS**

	C2SS			1990 census
	Estimate	Lower Bound	Upper Bound	
0-17 for whom poverty status is determined	1,499,334	1,353,178	1,645,491	1,223,467
0-17 below poverty	250,589	193,770	307,408	179,272
<b>Percent</b>	16.7	14.3	18.7	14.7
65+ for whom poverty status is determined	629,682	591,391	667,974	545,755
65+ below poverty	45,497	34,253	56,742	49,509
<b>Percent</b>	7.2	5.8	8.5	9.1
18+ for whom poverty status is determined	4,242,255	4,033,527	4,450,985	3,508,444
18 + below poverty	432,813	349,584	516,043	338,661
<b>Percent</b>	10.2	8.7	11.6	9.7
Total persons for whom poverty status is determined	5,741,589	5,734,413	5,748,765	4,741,003
Total below poverty	683,402	543,354	823,451	517,933
<b>Percent</b>	11.9	9.5	14.3	10.9

**Table 5a. Comparison of Foreign Born Population between 1990 Census and C2SS**

	C2SS			1990 census
	Estimate	Lower Bound	Upper Bound	
Foreign born	591,326	546,037	636,615	322,144
Entered 1980 to 1990				128,643
Entered 1990 to 2000	278,892	247,314	310,470	
Percent increase of foreign born	83.6	69.5	97.6	
Percent of persons entered between 1980 and 1990				39.9
Percent of persons entered between 1990 and 2000	47.2	45.3	48.8	

**Table 5b. Comparison of Language Spoken at Home between 1990 Census and C2SS**

	C2SS			1990 census
	Estimate	Lower Bound	Upper Bound	
Speak a language other than English	735,350	628,345	842,356	403,173
Speak no English at all	48,725	27,190	72,732	17,096
Percent increase of persons speaking a language other than English	82.4	55.8	108.9	
Percent increase of persons speaking no English	185.0	59.0	325.4	

**Table 6. Comparison of People 25 + for Education Attainment between 1990 census and C2SS**

	C2SS			1990 census
	Estimate	Lower Bound	Upper Bound	
Population 25+	3,743,246	3,751,663	3,734,829	3,126,390
25 + with no high school diploma	409,769	331,750	487,788	505,748
<b>Percent</b>	10.95	8.84	13.06	16
25+ with Bachelor's degree	1,108,647	1,030,796	1,270,993	716,969
<b>Percent</b>	29.6	27.5	34.0	22.9

**Table 7. Comparison of Labor Force Status of Population 16+ between 1990 Census and C2SS**

	C2SS			C2SS			1990 census	
	Estimate	Lower Bound	Upper Bound	Percent	Percent	Percent	Number	Percent
Male 16+	2,173,987	2,167,215	2,180,759				1,830,031	
In labor force	1,577,239	1,487,871	1,666,608	72.55	68.65	76.42	1,338,132	73.12
Employed	1,487,629	1,397,644	1,577,615	68.43	64.49	72.34	1,262,149	68.97
Unemployed	89,610	61,399	117,935	4.12	2.83	5.41	75,983	4.15
Not in labor force	566,409	499,455	633,364	26.05	23.05	29.04	442,707	24.19
Female 16+	2,248,365	2,239,061	2,257,669				1,900,954	
In labor force	1,366,542	1,286,653	1,446,432	60.78	57.46	64.07	1,095,045	57.61
Employed	1,294,017	1,214,120	1,373,914	57.55	54.22	60.86	1,031,812	54.28
Unemployed	72,525	49,099	96,318	3.23	2.19	4.27	63,233	3.33
Not in labor force	876,782	793,437	960,127	39.00	35.44	42.53	801,205	42.15
Total 65+	629,682	592,685	666,679				575,573	
In labor force	68,752	52,960	84,544	10.92	8.94	12.68	59,276	10.30
Not in labor force	560,930	526,961	594,899	89.08	88.91	89.23	516,297	89.70
Total 16+	4,422,352	4,406,276	4,438,428				3,730,985	
In labor force	2,943,781	2,774,524	3,113,040	66.57	62.97	70.14	2,433,177	65.22
Employed	2,781,646	2,611,764	2,951,529	62.90	59.27	66.50	2,293,961	61.48
Unemployed	162,135	110,498	214,253	3.67	2.51	4.83	139,216	3.73
Not in labor force	1,443,191	1,292,892	1,593,491	32.63	29.34	35.90	1,243,912	33.34

**Table 8. Comparison of Owner Occupied Housing Value between 1990 Census and C2SS**

	C2SS			1990 census
	Estimate	Lower Bound	Upper Bound	
Washington				
Median value (dollars)	169,406	166,911	171,901	93,300
Median gross rent (dollars)	665	653	678	383