

APPENDIX C: POPULATION FORECASTS BY AGE AND SEX

STATE OF OREGON

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OREGON'S POPULATION FORECASTS BY AGE AND SEX

Procedure and Assumptions

Population forecasts by age and sex are developed using the cohort-component projection procedure. The population by single year of age and sex is projected based on the assumption of specific assumptions of vital events and migrations. Oregon's population as of July 1, 2000 is the base population for the forecasting model. The total base population by age-sex detail is derived from the U.S. Census Bureau.

To explain the cohort-component projection procedure very briefly, the forecasting model "survives" the initial population distribution by age and sex to the next age-sex category in the following year, and then applies age-sex-specific birth and migration rates to the mid-year population. Further iterations subject the in-and-out migrants to the same vital rates.

Total populations for the years 2001 through 2007 in the following tables are annual estimates from Center for Population Research, Portland State University. The numbers of births and deaths through 2006-07 are from Oregon's Center for Health Statistics. The total populations for the period 2008 to 2015 are generated as part of the economic and revenue forecast of OEA. The numbers of births and deaths are projected based on the assumptions of fertility and mortality rates derived from historical trend and forecast for the United States..

Age-specific fertility rates are projected based on Oregon's past trends and past and projected national trends. Oregon's total fertility rate is assumed to remain slightly below 2.0 children per woman during the forecast period, tracking at slightly lower than the national rate.

Life Table survival rates are developed for the year 2000. Male and female life expectancies for the 2000-2015 period are projected based on the past three decades of trends and national projected life expectancies. Gradual improvements in life expectancies are expected over the forecast period. At the same time, the difference between the male and female life expectancies will continue to shrink. The male life expectancy of 75.7 and the female life expectancy of 80.2 in 2000 are projected to improve to 78.8 years for males and 83.0 years for females by the year 2015.

Estimates and forecasts of the number of net migrations are based on the residuals from the difference between population change and natural increase (births minus deaths) in a given forecast period. The annual net migration between 2007 and 2015 is expected to remain in the range of 30,900 to 34,500, averaging 32,800 persons annually. When Oregon's economy slowed down during the early years of this decade so did the net migration component of population change. Population growth and net migration rates in 2000 through 2004 were the lowest in over a decade. However, improving Oregon's economy has led to higher levels of net migration and population growth.

Table C. 1

STATE OF OREGON POPULATION FORECASTS COMPONENTS OF CHANGE 1980 -2015										
Year (July 1)	Population	Population Change		Births		Deaths		Natural Increase	Net Migration	
		Number	Percent	Number	Rate/1000	Number	Rate/1000		Number	Rate/1000
1980	2,641,200	---	---	---	---	---	---	---	---	---
1981	2,668,000	26,800	1.01	43,196	16.27	21,870	8.24	21,326	5,474	2.06
1982	2,664,900	-3,100	-0.12	42,261	15.85	21,548	8.08	20,713	-23,813	-8.93
1983	2,653,100	-11,800	-0.44	40,378	15.19	22,039	8.29	18,339	-30,139	-11.33
1984	2,666,600	13,500	0.51	39,611	14.89	22,702	8.54	16,909	-3,409	-1.28
1985	2,672,600	6,000	0.23	39,296	14.72	23,531	8.81	15,765	-9,765	-3.66
1980-1985		31,400		204,742		111,690		93,052	-61,652	
1986	2,683,500	10,900	0.41	39,332	14.69	23,403	8.74	15,929	-5,029	-1.88
1987	2,701,000	17,500	0.65	38,702	14.38	23,695	8.80	15,007	2,493	0.93
1988	2,741,300	40,300	1.49	39,120	14.38	24,752	9.10	14,368	25,932	9.53
1989	2,790,600	49,300	1.80	40,648	14.70	24,705	8.93	15,943	33,357	12.06
1990	2,860,400	69,800	2.50	42,008	14.87	24,763	8.76	17,245	52,555	18.60
1985-1990		187,800		199,810		121,318		78,492	109,308	
1991	2,928,500	68,100	2.38	42,682	14.75	24,944	8.62	17,738	50,362	17.40
1992	2,991,800	63,300	2.16	42,427	14.33	25,166	8.50	17,261	46,039	15.55
1993	3,060,400	68,600	2.29	41,442	13.69	26,543	8.77	14,899	53,701	17.75
1994	3,121,300	60,900	1.99	41,487	13.42	27,564	8.92	13,923	46,977	15.20
1995	3,184,400	63,100	2.02	42,426	13.46	27,552	8.74	14,874	48,226	15.30
1990-1995		324,000		210,464		131,769		78,695	245,305	
1996	3,247,100	62,700	1.97	43,196	13.43	28,768	8.95	14,428	48,272	15.01
1997	3,304,300	57,200	1.76	43,625	13.32	29,201	8.91	14,424	42,776	13.06
1998	3,352,400	48,100	1.46	44,696	13.43	28,705	8.62	15,991	32,109	9.65
1999	3,393,900	41,500	1.24	45,188	13.40	29,848	8.85	15,340	26,160	7.76
2000	3,431,530	37,630	1.11	45,534	13.34	28,909	8.47	16,625	21,005	6.15
1995-2000		247,130		222,239		145,431		76,808	170,322	
2001	3,471,700	40,170	1.17	45,536	13.19	29,934	8.67	15,602	24,568	7.12
2002	3,504,700	33,000	0.95	44,995	12.90	30,828	8.84	14,167	18,833	5.40
2003	3,541,500	36,800	1.05	45,686	12.97	30,604	8.69	15,082	21,718	6.16
2004	3,582,600	41,099	1.16	45,599	12.80	30,721	8.62	14,878	26,221	7.36
2005	3,631,440	48,841	1.36	45,892	12.72	30,723	8.52	15,169	33,672	9.33
2000-2005		199,910		227,708		152,810		74,898	125,012	
2006	3,690,505	59,065	1.63	46,471	12.69	30,328	8.28	16,143	42,922	11.72
2007	3,745,500	54,995	1.49	48,503	13.05	30,471	8.20	18,032	36,963	9.94
2008	3,798,000	52,500	1.40	49,039	13.00	30,508	8.09	18,531	33,969	9.01
2009	3,850,300	52,300	1.38	49,555	12.96	30,790	8.05	18,765	33,535	8.77
2010	3,904,000	53,700	1.39	50,321	12.98	31,079	8.02	19,242	34,458	8.89
2005-2010		272,560		243,889		153,175		90,713	181,847	
2011	3,957,000	53,000	1.36	50,902	12.95	31,380	7.98	19,522	33,478	8.52
2012	4,010,100	53,100	1.34	51,627	12.96	31,703	7.96	19,924	33,175	8.33
2013	4,062,200	52,101	1.30	52,256	12.95	32,053	7.94	20,203	31,897	7.90
2014	4,113,700	51,500	1.27	52,809	12.92	32,419	7.93	20,391	31,109	7.61
2015	4,165,100	51,400	1.25	53,296	12.88	32,803	7.92	20,494	30,906	7.47
2010-2015		261,100		260,891		160,357		100,534	160,566	
1980-1990		219,200		404,552		233,008		171,544	47,656	
1990-2000		571,130		432,703		277,200		155,503	415,627	
2000-2010		472,470		471,597		305,985		165,611	306,859	

Sources: 1980-2000 population - U.S. Bureau of the Census; 2001-2007 population - Population Research Center, PSU;
2008-2015 - Office of Economic Analysis; 1980-07 births, and 1980-06 deaths: vital statistics - Oregon Center for Health Statistics.

Table C. 2

Oregon's Population Forecasts by Age and Sex: 2000-2015 (July 1 population)												
Age	2000			2001			2002			2003		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	114,089	109,109	223,198	114,659	109,885	224,544	115,065	109,830	224,895	115,889	110,479	226,368
5-9	119,728	114,005	233,733	118,993	113,315	232,307	118,103	112,750	230,853	117,869	112,700	230,570
10-14	124,731	118,373	243,104	125,947	119,558	245,505	126,463	120,499	246,963	126,988	120,635	247,622
15-19	125,941	119,230	245,171	126,971	119,674	246,644	126,631	119,486	246,117	125,593	119,690	245,282
20-24	119,362	113,342	232,704	121,099	115,890	236,989	123,441	118,175	241,616	126,189	120,175	246,364
25-29	120,609	112,253	232,862	119,719	111,704	231,423	119,730	112,740	232,470	121,438	114,557	235,995
30-34	122,510	114,776	237,286	126,215	117,835	244,050	128,438	119,539	247,977	129,262	120,677	249,940
35-39	128,828	126,293	255,121	126,068	123,161	249,229	124,081	119,818	243,899	122,730	117,464	240,194
40-44	134,552	137,191	271,743	135,208	136,998	272,207	134,206	135,536	269,742	133,448	134,053	267,501
45-49	135,715	137,448	273,163	136,538	139,007	275,545	137,569	140,403	277,971	137,161	140,481	277,642
50-54	118,674	119,617	238,291	125,869	127,223	253,092	126,620	128,221	254,840	129,646	132,014	261,660
55-59	85,986	88,165	174,151	89,402	91,625	181,028	98,401	100,700	199,101	104,124	106,201	210,325
60-64	64,549	67,444	131,993	67,398	70,444	137,842	70,683	73,992	144,675	75,518	78,824	154,342
65-69	53,078	59,230	112,308	53,720	59,268	112,988	54,735	59,983	114,718	56,496	61,615	118,111
70-74	48,503	58,073	106,576	48,093	57,134	105,227	47,509	56,256	103,766	47,046	55,542	102,588
75-79	40,447	54,757	95,204	40,355	54,200	94,555	40,241	53,341	93,582	40,238	52,409	92,647
80-84	26,452	40,414	66,866	27,369	41,320	68,689	28,218	42,149	70,366	28,535	42,794	71,329
85+	18,528	39,528	58,056	19,345	40,489	59,834	19,947	41,200	61,147	20,866	42,152	63,018
Total	1,702,282	1,729,248	3,431,530	1,722,970	1,748,729	3,471,700	1,740,082	1,764,618	3,504,700	1,759,037	1,782,463	3,541,500
Mdn. Age	35.2	37.6	36.4	35.3	37.8	36.6	35.5	38.0	36.8	35.7	38.2	36.9
Age	2004			2005			2006			2007		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	116,733	111,248	227,981	117,472	112,080	229,552	118,367	112,937	231,304	120,283	114,759	235,042
5-9	118,416	113,224	231,640	119,188	114,155	233,343	120,469	115,652	236,121	121,513	116,201	237,714
10-14	126,151	120,031	246,182	124,709	118,975	243,685	124,345	118,656	243,001	123,948	118,614	242,562
15-19	126,310	120,509	246,819	128,176	122,094	250,270	129,889	123,801	253,690	130,921	125,284	256,205
20-24	127,998	122,284	250,283	129,345	123,196	252,541	131,104	124,340	255,444	131,198	124,593	255,791
25-29	123,787	117,101	240,888	126,462	120,639	247,102	129,613	124,601	254,214	133,227	128,134	261,361
30-34	128,821	120,228	249,049	127,601	119,645	247,247	127,671	120,105	247,776	128,809	122,335	251,144
35-39	123,467	117,324	240,791	127,326	120,259	247,585	131,883	124,208	256,091	135,067	126,883	261,950
40-44	133,141	132,773	265,914	131,886	130,347	262,233	129,607	127,711	257,317	128,213	124,934	253,147
45-49	139,935	139,566	279,501	135,632	139,553	275,185	136,710	139,803	276,513	136,182	138,841	275,024
50-54	132,902	136,064	268,966	135,198	138,572	273,770	136,394	140,578	276,972	137,833	142,440	280,273
55-59	110,295	112,331	222,625	117,552	120,023	237,575	125,202	128,183	253,385	126,417	129,669	256,086
60-64	80,122	83,333	163,455	84,084	87,757	171,842	87,885	91,673	179,558	97,265	101,268	198,533
65-69	58,549	63,639	122,188	60,958	65,800	126,758	64,007	68,847	132,854	67,551	72,736	140,287
70-74	46,997	54,975	101,972	47,595	55,013	102,608	48,431	55,249	103,680	49,676	56,210	105,886
75-79	39,892	51,358	91,250	39,739	50,721	90,460	39,638	50,115	89,753	39,439	49,593	89,033
80-84	28,915	43,453	72,368	29,283	43,589	72,873	29,496	43,384	72,880	29,734	42,970	72,704
85+	21,632	43,096	64,728	22,640	44,394	67,034	23,908	46,404	69,953	25,123	47,637	72,760
Total	1,780,063	1,802,537	3,582,600	1,804,847	1,826,593	3,631,440	1,834,618	1,855,887	3,690,505	1,862,398	1,883,102	3,745,500
Mdn. Age	35.8	38.3	37.0	36.0	38.4	37.1	36.3	38.4	37.3	36.5	38.5	37.5
Age	2008			2009			2010			2011		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	121,933	116,325	238,257	123,875	118,173	242,049	126,118	120,308	246,426	128,395	122,476	250,871
5-9	122,872	117,362	240,235	123,958	118,360	242,318	124,611	119,113	243,723	124,962	119,438	244,400
10-14	124,283	119,148	243,430	125,266	120,107	245,373	126,180	121,178	247,359	127,000	122,222	249,222
15-19	131,766	125,733	257,499	131,034	125,244	256,277	129,512	124,111	253,623	128,931	123,560	252,490
20-24	130,281	124,977	255,258	131,109	125,905	257,013	132,993	127,496	260,488	134,442	128,925	263,377
25-29	136,734	130,840	267,574	138,843	133,289	272,131	140,063	134,045	274,108	141,292	134,605	275,897
30-34	131,365	124,999	256,365	134,297	128,124	262,421	137,115	131,876	268,991	139,692	135,357	275,049
35-39	136,498	128,681	265,179	136,375	128,546	264,921	135,085	127,902	262,987	134,563	127,764	262,327
40-44	127,259	122,941	250,200	128,290	123,065	251,356	132,297	126,123	258,419	136,586	129,785	266,371
45-49	135,743	137,684	273,427	135,632	136,586	272,218	134,367	134,078	268,444	131,762	131,028	262,789
50-54	137,703	142,807	280,510	136,650	142,041	278,691	136,382	142,023	278,405	137,270	142,014	279,284
55-59	129,707	133,782	263,489	133,111	138,027	271,138	135,426	140,557	275,983	136,442	142,337	278,779
60-64	103,273	107,121	210,394	109,594	113,482	223,075	116,837	121,249	238,086	124,175	129,184	253,359
65-69	72,523	77,823	150,345	77,174	82,483	159,657	81,081	86,897	167,978	84,592	90,552	175,145
70-74	51,556	58,008	109,564	53,637	60,120	113,757	55,999	62,069	118,068	58,789	65,105	123,893
75-79	39,298	49,174	88,472	39,458	48,847	88,305	40,157	49,032	89,189	40,957	49,300	90,257
80-84	29,990	42,466	72,456	29,935	41,845	71,780	30,015	41,524	71,539	30,058	41,137	71,195
85+	26,153	49,192	75,345	27,115	50,704	77,820	28,191	51,994	80,185	29,201	53,093	82,294
Total	1,888,938	1,909,062	3,798,000	1,915,353	1,934,947	3,850,300	1,942,429	1,961,571	3,904,000	1,969,109	1,987,891	3,957,000
Mdn. Age	36.7	38.7	37.7	36.9	38.9	37.9	37.1	39.1	38.1	37.2	39.2	38.2
Age	2012			2013			2014			2015		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	129,961	123,966	253,927	131,572	125,498	257,070	133,204	127,051	260,255	134,715	128,489	263,204
5-9	126,597	120,985	247,581	128,103	122,410	250,513	129,944	124,159	254,103	132,106	126,216	258,321
10-14	127,675	122,381	250,056	128,594	123,104	251,698	129,295	123,722	253,017	129,612	124,148	253,760
15-19	128,494	123,479	251,973	128,611	123,788	252,399	129,309	124,453	253,761	129,947	125,246	255,193
20-24	135,303	130,266	265,569	136,084	130,620	266,704	135,244	130,011	265,255	133,543	128,698	262,241
25-29	140,973	134,459	275,432	139,750	134,629	274,379	140,373	135,373	275,746	142,086	136,794	278,880
30-34	143,101	138,689	281,790	146,638	141,370	288,008	148,667	143,766	292,433	149,672	144,269	293,941
35-39	135,429	129,768	265,197	137,964	132,433	270,397	140,897	135,572	276,469	143,657	139,325	282,982
40-44	139,618	132,285	271,903	140,961	134,012	274,973	140,713	133,738	274,450	139,257	132,919	272,175
45-49	130,333	128,135	258,468	129,345	126,056	255,402	130,327	126,102	256,430	134,251	129,065	263,316
50-54	136,832	141,092	277,924	136,457	139,556	276,013	136,369	138,840	275,209	135,036	136,200	271,236
55-59	137,913	144,248	282,162	137,813	144,632	282,445	136,763	143,825	280,588	136,445	143,698	280,143
60-64	125,408	130,701	256,109	128,702	134,854	263,556	132,067	139,090	271,157	134,280	141,503	275,783
65-69	93,648	99,994	193,642	99,507	105,817	205,324	105,643	112,120	217,762	112,628	119,765	232,392
70-74	62,088	68,801	130,889	66,770	73,701	140,471	71,112	78,160	149,272	74,7		

Table C. 3

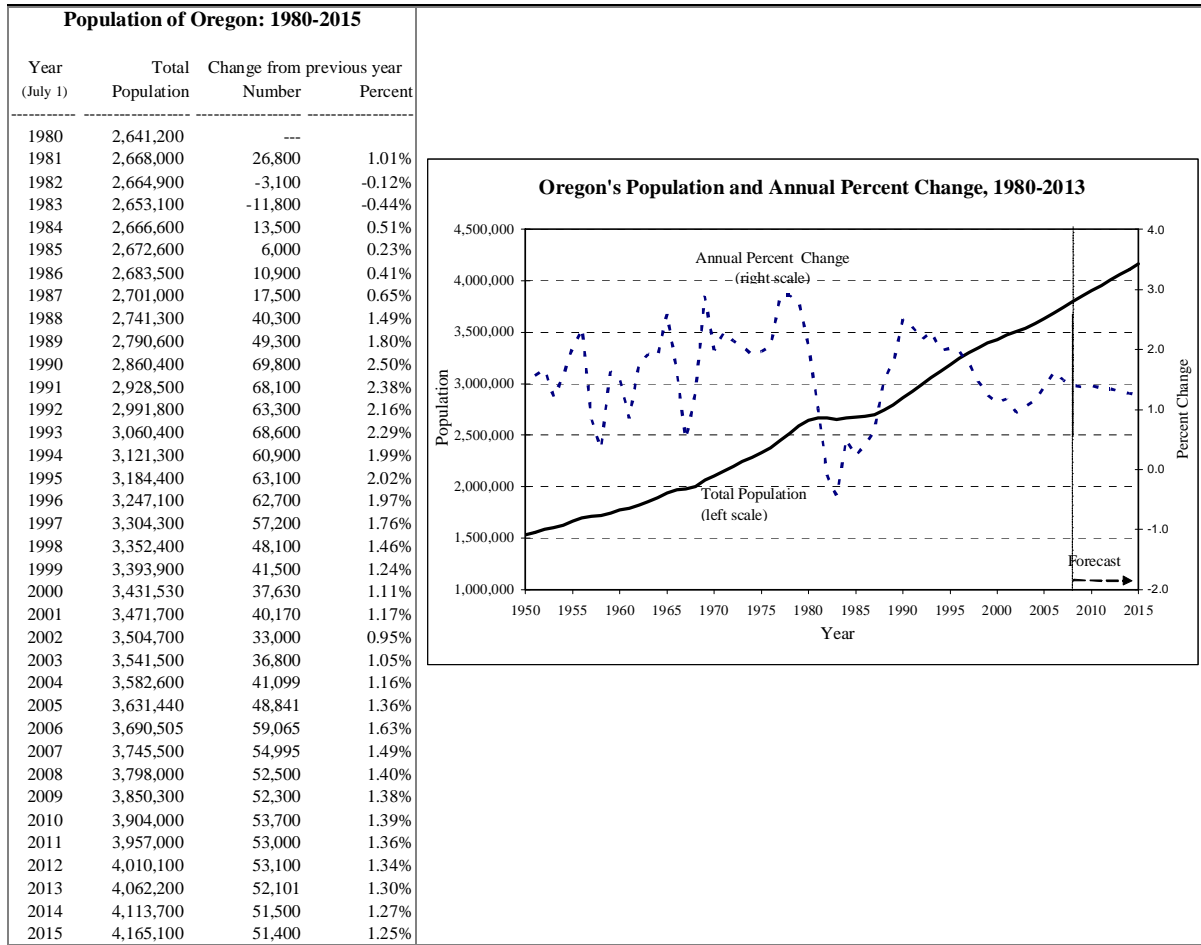


Table C. 4

Table C. 5

Table C. 6

Year (July 1)	Children: Ages 0-4			School Age Population: Ages 5-17			Young Adult Population: Ages 18-24		
	Population	Number	Percent	Population	Number	Percent	Population	Number	Percent
1980	199,525	---	---	524,446	---	---	329,407	---	---
1990	209,638	10,113	5.07%	532,727	8,281	1.58%	268,134	-61,273	-18.60%
2000	223,198	13,560	6.47%	624,354	91,627	17.20%	330,358	62,224	23.21%
2001	224,544	1,346	0.60%	624,712	358	0.06%	336,733	6,375	1.93%
2002	224,895	351	0.16%	624,644	-68	-0.01%	340,905	4,171	1.24%
2003	226,368	1,473	0.66%	624,381	-263	-0.04%	345,458	4,553	1.34%
2004	227,981	1,612	0.71%	625,526	1,145	0.18%	349,398	3,940	1.14%
2005	229,552	1,571	0.69%	628,404	2,878	0.46%	351,435	2,037	0.58%
2006	231,304	1,752	0.76%	633,564	5,161	0.82%	354,691	3,256	0.93%
2007	235,042	3,738	1.62%	635,576	2,012	0.32%	356,695	2,004	0.57%
2008	238,257	3,215	1.37%	636,472	896	0.14%	359,951	3,256	0.91%
2009	242,049	3,791	1.59%	638,190	1,718	0.27%	362,791	2,840	0.79%
2010	246,426	4,377	1.81%	640,367	2,176	0.34%	364,828	2,036	0.56%
2011	250,871	4,446	1.80%	643,256	2,889	0.45%	366,234	1,406	0.39%
2012	253,927	3,056	1.22%	648,748	5,493	0.85%	366,430	197	0.05%
2013	257,070	3,143	1.24%	653,967	5,219	0.80%	367,346	916	0.25%
2014	260,255	3,185	1.24%	659,102	5,135	0.79%	367,034	-312	-0.09%
2015	263,204	2,949	1.13%	664,708	5,606	0.85%	364,808	-2,227	-0.61%

Table C. 7

Table C. 8

Table C. 9

Year (July 1)	Criminally "At Risk" Population: Males Ages 15-39			Prime Wage Earners: Ages 25-44			Older Wage Earners: Ages 45-64		
	Population	Number	Percent	Population	Number	Percent	Population	Number	Percent
1980	561,931	---	---	790,750	---	---	491,249	---	---
1990	544,738	-17,193	-3.06%	926,326	135,576	17.15%	531,181	39,932	8.13%
2000	617,250	72,512	13.31%	997,012	70,686	7.63%	817,598	286,417	53.92%
2001	620,072	2,822	0.46%	996,909	-103	-0.01%	847,507	29,909	3.66%
2002	622,321	2,248	0.36%	994,088	-2,820	-0.28%	876,588	29,081	3.43%
2003	625,212	2,891	0.46%	993,630	-458	-0.05%	903,969	27,381	3.12%
2004	630,384	5,171	0.83%	996,642	3,012	0.30%	930,548	26,579	2.94%
2005	638,911	8,527	1.35%	1,004,166	7,524	0.75%	958,371	27,823	2.99%
2006	650,160	11,249	1.76%	1,015,399	11,233	1.12%	986,427	28,056	2.93%
2007	659,222	9,062	1.39%	1,027,601	12,203	1.20%	1,009,915	23,488	2.38%
2008	666,645	7,423	1.13%	1,039,318	11,717	1.14%	1,027,820	17,905	1.77%
2009	671,657	5,012	0.75%	1,050,829	11,511	1.11%	1,045,123	17,302	1.68%
2010	674,769	3,112	0.46%	1,064,505	13,676	1.30%	1,060,918	15,795	1.51%
2011	678,920	4,152	0.62%	1,079,644	15,139	1.42%	1,074,211	13,293	1.25%
2012	683,300	4,380	0.65%	1,094,322	14,677	1.36%	1,074,662	451	0.04%
2013	689,047	5,747	0.84%	1,107,757	13,435	1.23%	1,077,814	3,152	0.29%
2014	694,490	5,443	0.79%	1,119,099	11,342	1.02%	1,083,384	5,570	0.52%
2015	698,905	4,415	0.64%	1,127,977	8,879	0.79%	1,090,478	7,094	0.65%

Table C. 10

Year (July 1)	Elderly Population by Age Group							
	Ages 65+	Change from previous decade/yr.	Ages 65-74	Change from previous decade/yr.	Ages 75-84	Change from previous decade/yr.	Ages 85+	Change from previous decade/yr.
1980	305,841	---	185,863	---	91,137	---	28,841	---
1990	392,369	28.29%	224,772	20.93%	128,813	41.34%	38,784	34.48%
2000	439,010	11.89%	218,884	-2.62%	162,070	25.82%	58,056	49.69%
2001	441,294	0.52%	218,216	-0.31%	163,244	0.72%	59,834	3.06%
2002	443,579	0.52%	218,484	0.12%	163,948	0.43%	61,147	2.19%
2003	447,694	0.93%	220,699	1.01%	163,976	0.02%	63,018	3.06%
2004	452,505	1.07%	224,160	1.57%	163,618	-0.22%	64,728	2.71%
2005	459,513	1.55%	229,146	2.22%	163,333	-0.17%	67,034	3.56%
2006	469,120	2.09%	236,534	3.22%	162,633	-0.43%	69,953	4.35%
2007	480,670	2.46%	246,173	4.08%	161,736	-0.55%	72,760	4.01%
2008	496,182	3.23%	259,909	5.58%	160,928	-0.50%	75,345	3.55%
2009	511,319	3.05%	273,415	5.20%	160,084	-0.52%	77,820	3.28%
2010	526,958	3.06%	286,045	4.62%	160,728	0.40%	80,185	3.04%
2011	542,784	3.00%	299,038	4.54%	161,452	0.45%	82,294	2.63%
2012	572,010	5.38%	324,531	8.52%	163,217	1.09%	84,262	2.39%
2013	598,245	4.59%	345,794	6.55%	166,407	1.95%	86,044	2.11%
2014	624,826	4.44%	367,035	6.14%	170,296	2.34%	87,496	1.69%
2015	653,925	4.66%	389,480	6.12%	175,218	2.89%	89,228	1.98%

