



November 2, 2011

Prince Edward Island Population Projections 2012 – 2052

Population Projection Highlights

Under the scenario considered:

- PEI's population is projected to peak at 150,170 in 2025 and then begin to decline, reaching 129,259 by 2052 (see Diagram 1).
- The total working age population of persons aged 15 to 64 is projected to peak at 99,840 in 2012 before beginning to decline. This number is projected to drop to 73,962 by 2052 (see Diagram 8).
- Natural Increase (Births minus Deaths) is projected to become negative by 2020 (see Diagram 2).
- The fertility rate is assumed to remain relatively steady between 1.63 and 1.68 from 2012 to 2052 (See Diagram 3).
- The female population will continue to outpace the males, reaching 8,303 more females than males by 2052 (see Diagram 4).
- With natural increase turning negative, the component with the greatest impact on population growth will be international migration. Diagram 5 shows the trend in past and projected levels of international migration.
- Interprovincial migration trends are shown in Diagram 6.

Diagram 1

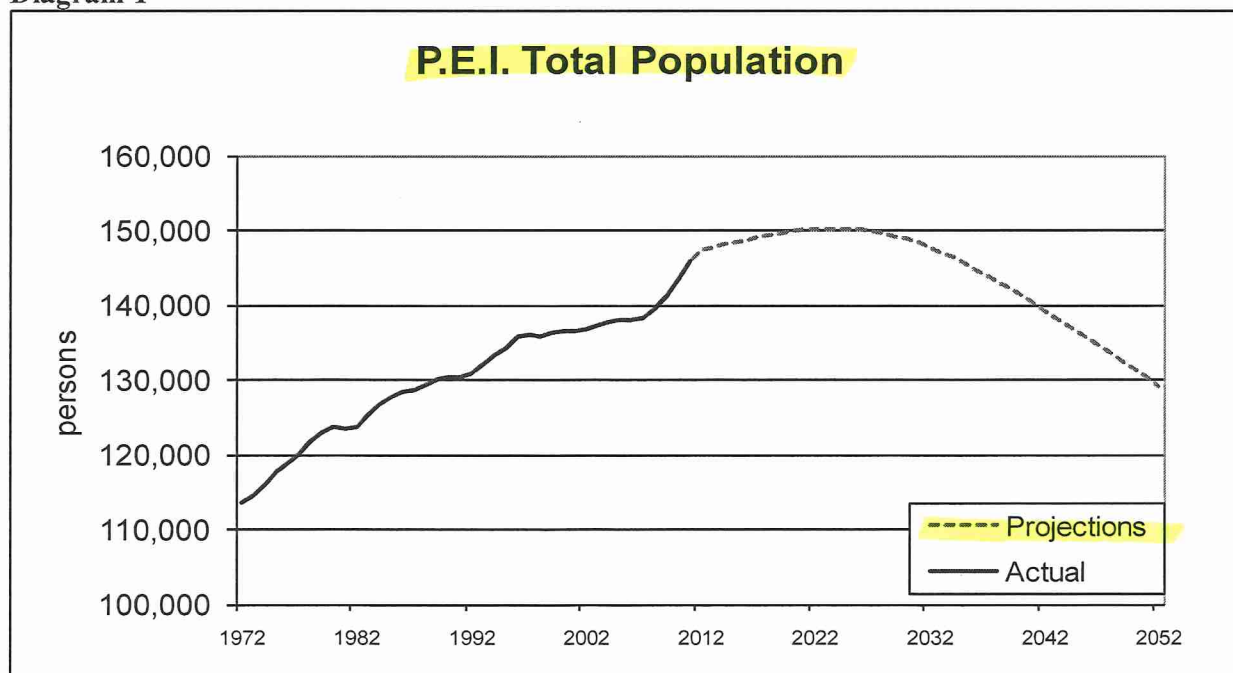


Diagram 2

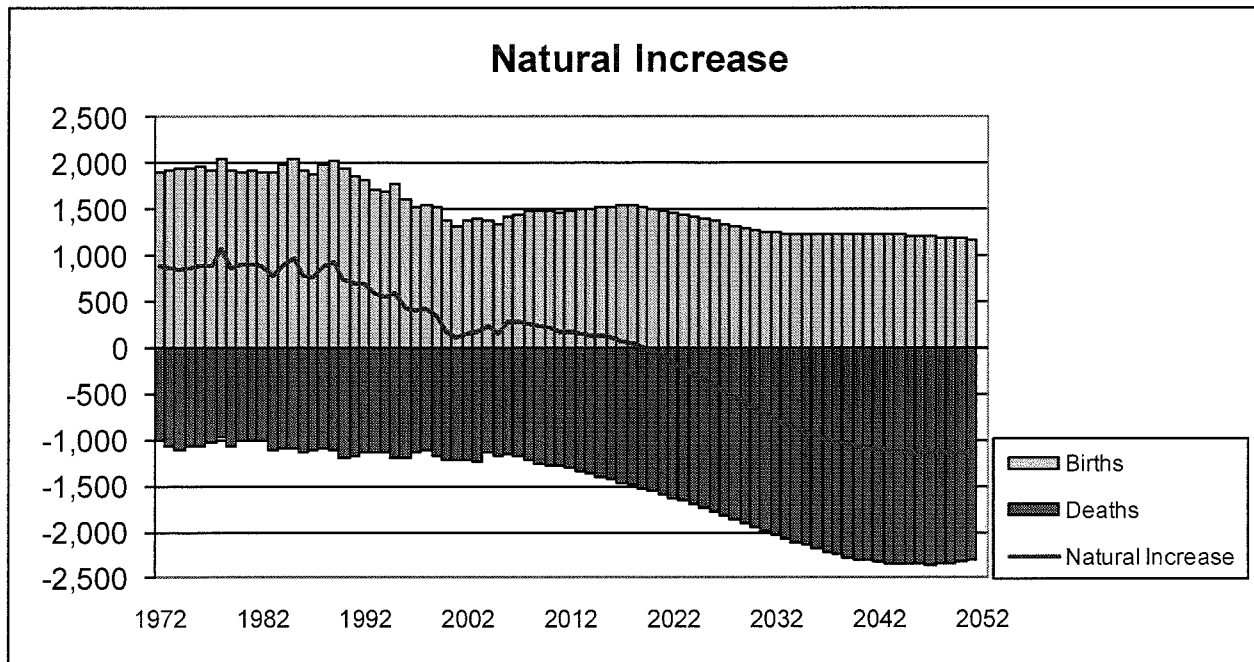


Diagram 3

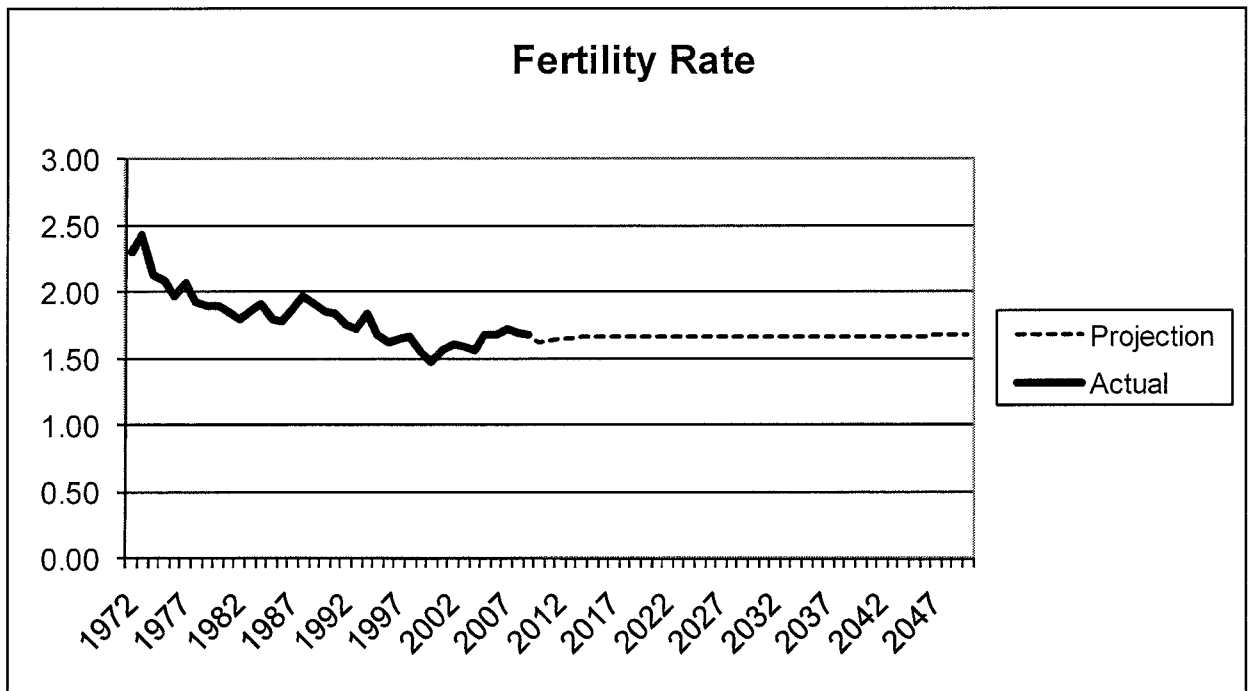


Diagram 4

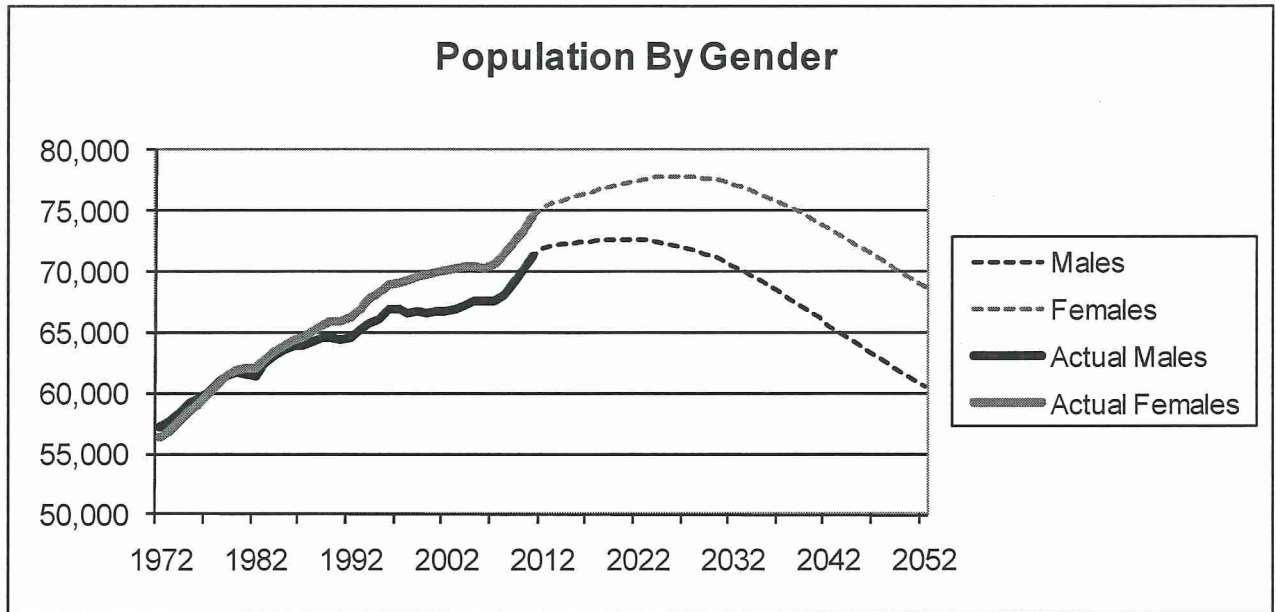


Diagram 5

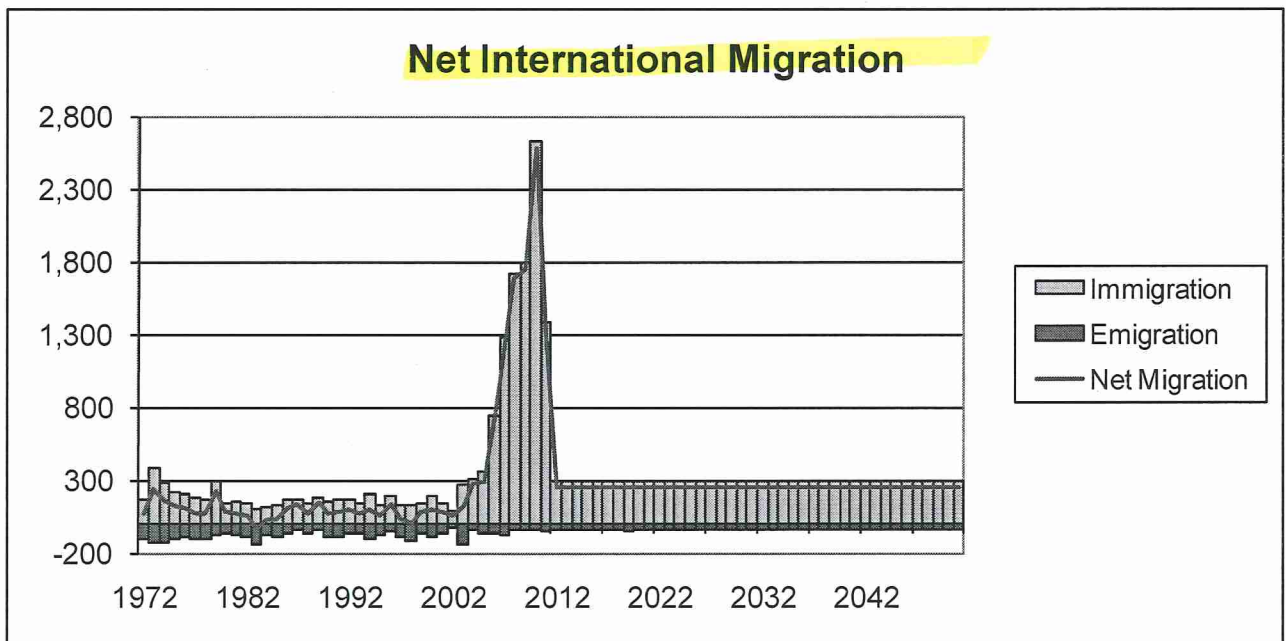
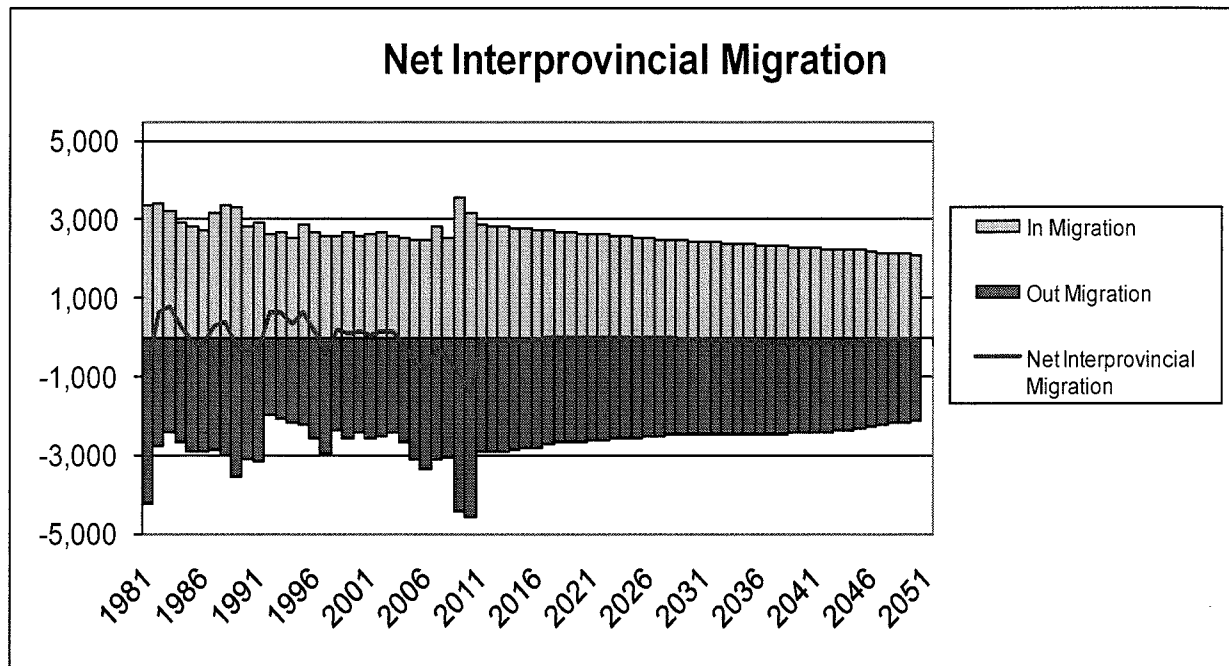


Diagram 6



Components of Population Growth, 1972-2011

In order to formulate population projections, we must first look at trends of the past. Annual population growth on PEI has averaged 0.6 per cent from 1972 to 2011. From 1972 to 1991, the growth rate averaged 0.7 per cent. From 1992 to 2001, the rate of population growth slowed, to an average of just 0.5 per cent per year. In more recent years, from 2002 to 2011, this rate of growth began to increase to once again reach an average of 0.7 per cent. Recent strong international immigration numbers pushed overall growth to an average rate of 1.4 per cent from 2008 to 2011. 2011 saw a growth rate of 1.7 per cent. Natural increase (births minus deaths) has been steadily declining. An aging population and declining birth rates have resulted in an increase in the number of deaths and a lower number of annual births. Over the period 1971 to 2011, natural increase was at its highest in 1978-79 at 1,087. The lowest was seen in 2001-02 at only 108. Natural increase was 214 in 2010-11, down slightly from 241 in 2009-10. Inter-provincial migration has tended to go in cycles, with periods of net loss followed by periods of net gain. Despite these periods of out-migration, on average over the period being examined (1972 to 2011), PEI has shown a net gain in inter-provincial migration. However, since 2003 PEI has had a net loss of 2,937 people due to inter-provincial migration.

Table 1 below shows PEI's annual population estimates and components of growth from 1972 to 2011.

Population Projections 2012-2052

The following population projections were compiled assuming that the trends seen through the 1972 to 2011 period will continue. As a result of the baby boom and the general decline in the fertility rate, the median age will continue to rise, the proportion of senior citizens will increase, births will continue to decline, and the number of deaths will increase. The fertility rate declined during the period of 1972 to 2002, from a peak of 2.43 to a low of 1.47 in 2001-02. The years following 2002 showed a slight increase, climbing back to 1.72 by 2008-09. The projections are based on the fertility rate remaining close to this level, rising slightly from 1.63 to 1.68 from 2012 to 2052. However, the projected fertility rate remains less than the replacement rate of 2.1 births per woman for a stable population. The combination of births and increased international immigration to PEI result in the provincial population increasing until 2025 before beginning to decline.

It is assumed that international immigration will drop dramatically from recent numbers, but will still maintain levels slightly higher than the immigration numbers seen prior to 2004. It is also assumed that inter-provincial migration will continue with the recent trend of net loss, with brief periods of net gain. P.E.I. is projected to show a net loss over the period 2012 to 2052.

Population change is related to many socioeconomic factors, many of which cannot be predicted with certainty. The assumptions used here were based on past trends and current knowledge of immigration, fertility and mortality rates. Table 2 shows PEI's annual population projections and components of growth from 2012 to 2052. Tables 3 and 4 show the annual population estimates and projections by age group.

Table 1 – Components of Growth, 1972 – 2011

Year	Population July 1	July 1 - June 30							
		Natural Increase			Immigrants	Net Emigrants*	Interprovincial		Residual
Births	Deaths	Net	In-Migrants	Out-Migrants					
1972	113,460	1,897	1,013	884	171	37	4,327	3,545	-640
1973	114,620	1,932	1,073	859	377	75	4,947	4,126	-640
1974	115,962	1,944	1,100	844	284	59	5,337	4,003	-641
1975	117,724	1,939	1,062	877	222	47	4,268	3,812	-584
1976	118,648	1,958	1,077	881	200	38	3,837	3,683	57
1977	119,902	1,915	1,019	896	174	46	3,933	3,233	58
1978	121,684	2,053	966	1,087	168	37	3,584	3,658	57
1979	122,885	1,935	1,065	870	300	20	3,185	3,543	58
1980	123,735	1,903	1,002	901	146	23	3,116	4,367	43
1981	123,551	1,924	1,007	917	148	35	3,375	4,231	-137
1982	123,588	1,910	1,011	899	139	24	3,403	2,767	-136
1983	125,102	1,895	1,106	789	103	92	3,219	2,422	-136
1984	126,563	1,977	1,090	887	116	61	2,904	2,654	-136
1985	127,619	2,055	1,091	964	129	30	2,830	2,906	-170
1986	128,436	1,916	1,129	787	165	-25	2,720	2,925	-567
1987	128,641	1,883	1,112	771	165	14	3,163	2,868	-569
1988	129,289	1,984	1,085	899	139	-12	3,390	3,009	-567
1989	130,153	2,028	1,103	925	181	34	3,322	3,575	-568
1990	130,404	1,940	1,199	741	149	68	2,809	3,134	-532
1991	130,369	1,866	1,167	699	165	73	2,937	3,174	-96
1992	130,827	1,820	1,122	698	161	67	2,649	1,995	-96
1993	132,177	1,725	1,120	605	139	10	2,688	2,066	-96
1994	133,437	1,686	1,139	547	200	22	2,514	2,165	-96
1995	134,415	1,788	1,198	590	127	-89	2,882	2,244	-122
1996	135,737	1,616	1,192	424	185	91	2,694	2,558	-296
1997	136,095	1,530	1,132	398	123	99	2,570	2,986	-297
1998	135,804	1,539	1,108	431	125	-24	2,579	2,386	-296
1999	136,281	1,529	1,182	347	142	107	2,662	2,558	-297
2000	136,470	1,381	1,209	172	189	73	2,567	2,402	-260
2001	136,663	1,313	1,205	108	145	87	2,639	2,577	-15
2002	136,876	1,374	1,217	157	89	52	2,686	2,521	-14
2003	137,221	1,403	1,225	178	268	122	2,570	2,426	-15
2004	137,674	1,371	1,126	245	312	22	2,537	2,676	-15
2005	138,055	1,329	1,165	164	352	-1	2,460	3,099	-13
2006	137,920	1,428	1,143	285	738	-67	2,485	3,334	0
2007	138,161	1,447	1,166	281	1,282	-171	2,821	3,112	0
2008	139,604	1,486	1,216	270	1,723	-158	2,522	3,058	0
2009	141,219	1,487	1,246	241	1,792	-83	2,709	2,649	0
2010	143,395	1,489	1,275	214	2,631	-158	3,586	4,129	0
2011	145,855								

* Net Emigrants includes International Emigrants, Canadians Temporarily Abroad, Returning Canadians, and Non-Permanent Residents

Table 2 – Projections, Total Population and Components of Growth 2012 – 2052

Year	Population July 1	July 1 - June 30							Residual
		Natural Increase			Immigrants	Net Emigrants*	Interprovincial		
Births	Deaths	Net	In-Migrants	Out-Migrants					
2011	145,855	1,462	1,277	185	1,379	62	2,910	2,934	0
2012	147,333	1,484	1,307	177	300	62	2,892	2,930	0
2013	147,710	1,499	1,338	161	300	61	2,867	2,905	0
2014	148,072	1,509	1,367	142	300	72	2,834	2,889	0
2015	148,387	1,524	1,395	129	300	69	2,810	2,847	0
2016	148,710	1,536	1,428	108	300	71	2,796	2,800	0
2017	149,043	1,540	1,461	79	300	73	2,713	2,735	0
2018	149,327	1,538	1,487	51	300	73	2,684	2,674	0
2019	149,615	1,527	1,524	3	299	75	2,662	2,662	0
2020	149,842	1,512	1,554	-42	300	73	2,630	2,645	0
2021	150,012	1,491	1,587	-96	300	70	2,612	2,622	0
2022	150,136	1,472	1,626	-154	300	72	2,590	2,594	0
2023	150,206	1,449	1,663	-214	300	72	2,571	2,572	0
2024	150,219	1,424	1,698	-274	300	72	2,548	2,551	0
2025	150,170	1,398	1,742	-344	300	71	2,505	2,533	0
2026	150,027	1,374	1,779	-405	300	70	2,466	2,489	0
2027	149,829	1,347	1,824	-477	300	68	2,441	2,464	0
2028	149,561	1,323	1,859	-536	300	67	2,418	2,446	0
2029	149,230	1,299	1,901	-602	299	65	2,397	2,453	0
2030	148,806	1,278	1,945	-667	300	66	2,379	2,460	0
2031	148,292	1,261	1,992	-731	300	67	2,367	2,464	0
2032	147,697	1,246	2,031	-785	300	68	2,356	2,468	0
2033	147,032	1,237	2,070	-833	300	71	2,344	2,459	0
2034	146,313	1,229	2,105	-876	300	72	2,344	2,446	0
2035	145,563	1,229	2,144	-915	300	72	2,349	2,450	0
2036	144,775	1,227	2,186	-959	300	72	2,338	2,439	0
2037	143,943	1,228	2,219	-991	300	72	2,326	2,442	0
2038	143,064	1,227	2,245	-1,018	300	72	2,310	2,431	0
2039	142,153	1,228	2,273	-1,045	300	72	2,300	2,423	0
2040	141,213	1,230	2,297	-1,067	300	72	2,275	2,419	0
2041	140,230	1,228	2,307	-1,079	300	72	2,262	2,408	0
2042	139,233	1,227	2,324	-1,097	300	72	2,255	2,381	0
2043	138,238	1,227	2,334	-1,107	300	72	2,245	2,353	0
2044	137,251	1,227	2,340	-1,113	299	72	2,216	2,324	0
2045	136,257	1,219	2,350	-1,131	300	72	2,199	2,304	0
2046	135,249	1,215	2,350	-1,135	300	72	2,183	2,274	0
2047	134,251	1,207	2,356	-1,149	300	72	2,144	2,231	0
2048	133,243	1,200	2,344	-1,144	300	72	2,132	2,213	0
2049	132,246	1,194	2,339	-1,145	299	72	2,102	2,185	0
2050	131,245	1,183	2,326	-1,143	299	71	2,085	2,167	0
2051	130,248	1,171	2,311	-1,140	299	71	2,068	2,145	0
2052	129,259								

* Net Emigrants includes International Emigrants, Canadians Temporarily Abroad, Returning Canadians, and Non-Permanent Residents

Age Structure

- In 1972 the median age¹ in PEI was 25.1. By 2011, this has risen to 42.2. The median age for the province is projected to rise to 45.1 by 2021, 46.6 by 2031, 49.0 by 2041, and begin to fall once again to reach 48.2 by 2051.
- The proportion of seniors aged 65 and over in 2011 was 15.8 per cent. This is projected to rise to 21.5 per cent by 2021, 27.6 per cent by 2031, and to 29.2 per cent by 2041 before beginning to decline again, reaching 28.2 per cent by 2051.
- In 2011, the number of people 75 and over was 10,373. There were 9.6 people of working age per one person 75 and over. This age group is projected to double by 2035, reaching 20,864, and to continue to increase until 2042, reaching a peak of 23,383 before beginning to decline. By 2040, it is projected that there will only be 3.4 people of working age per one person 75 and over.
- In 2011, the percentage of the population that was working age (between 15 and 64) was 68.1 per cent. This is projected to decline, reaching 62.9 per cent by 2021 and 57.4 per cent by 2031. This percentage is projected to reach a low of 56.6 per cent in 2036, before beginning to climb back to 57.2 per cent by 2052. The total number of working age persons is expected to peak in 2012 at 99,840 and fall to reach 73,962 by 2052. (see Diagram 8)
- The percentage of children under 15 years old is also projected to decline. In 2011, this age group made up 16.1 per cent of the total population. By 2021, this is projected to fall to 15.7 per cent, 15.0 per cent by 2031, and 13.9 per cent by 2041, before beginning to increase once again to reach 14.5 per cent by 2051 (see Diagram 7).
- The total dependency ratio is the number of persons under age 15 and those aged 65 and older shown as a percentage of persons aged 15 to 64. It is the sum of the youth dependency ratio and the senior dependency ratio and represents the relative size of the population being supported by the working age population. In 1972, the total dependency ratio was 72.6 per cent. By 2008, this had reached an all time low of 46.6 per cent. In 2011 the total dependency ratio was 46.7 per cent. The ratio is projected to steadily increase, reaching a peak of 76.6 per cent by 2037. Diagram 9 shows the dependency ratio for P.E.I. since 1971 and projections to 2052.
- The aging of the population can be seen most evidently by looking at the age pyramid diagrams, which show the proportion of the population by gender and age groups. (Diagrams 9A –C)

¹ The median age is the age at which half the population is older and half the population is younger.

Diagram 7

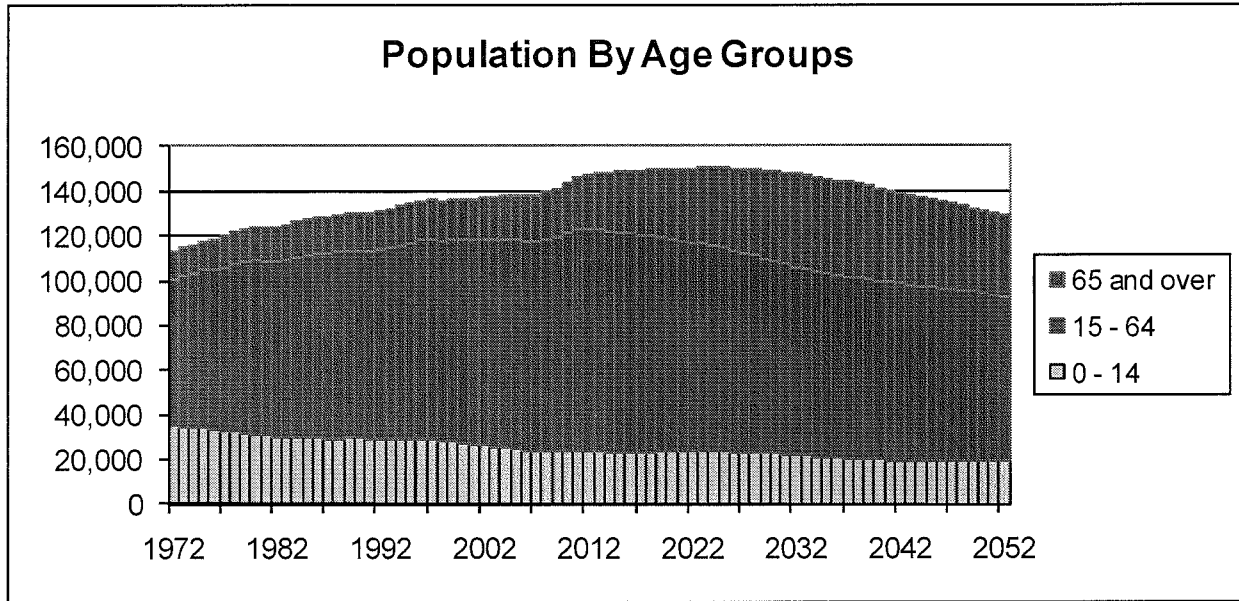


Diagram 8

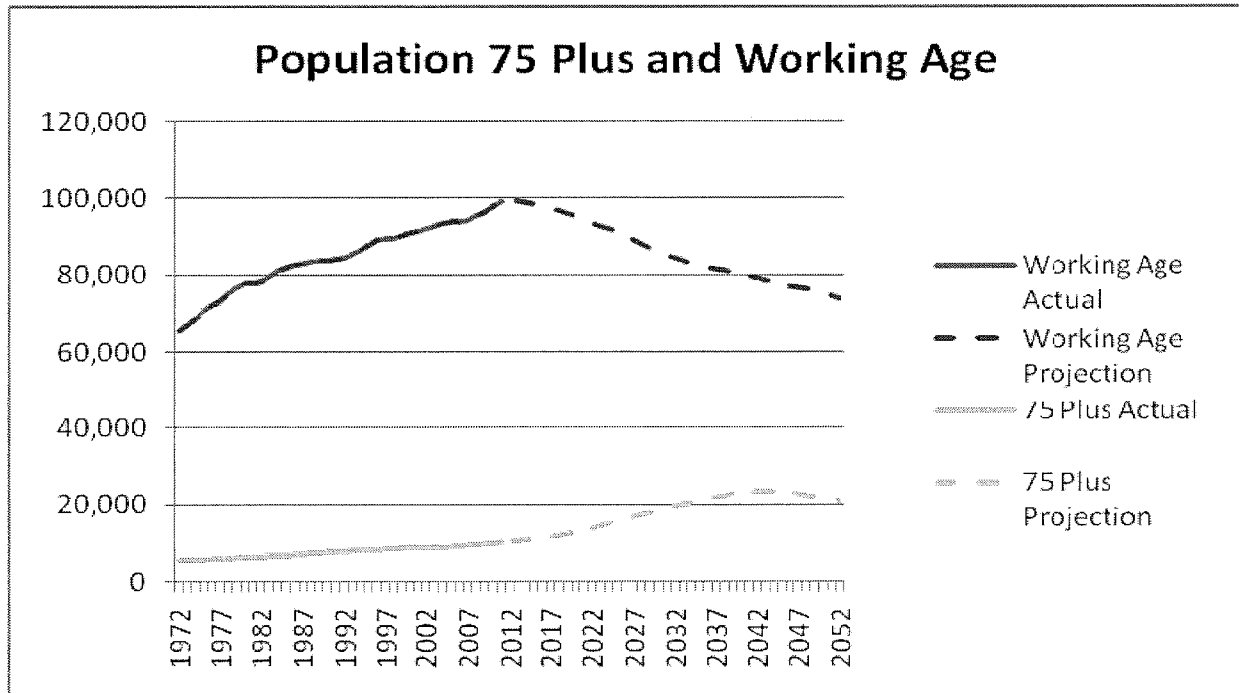
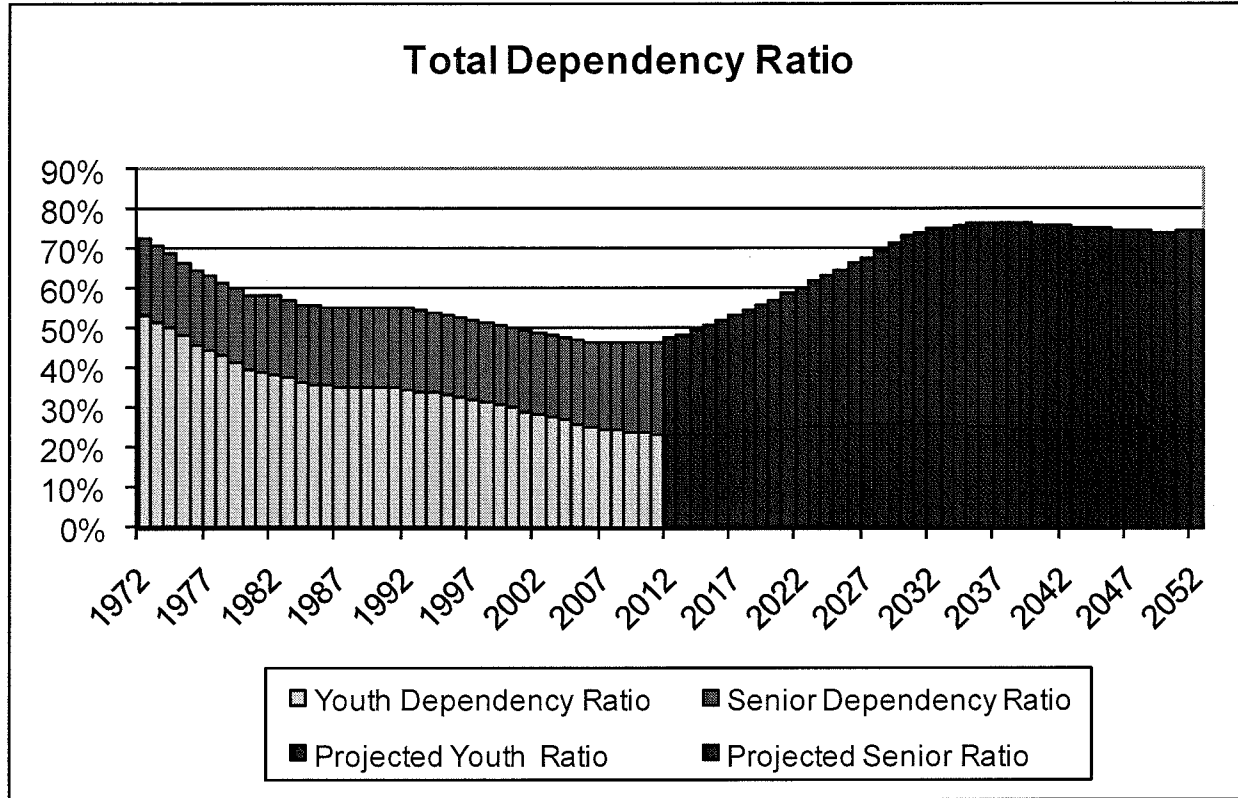


Diagram 9



Age Pyramids
Diagram 9a

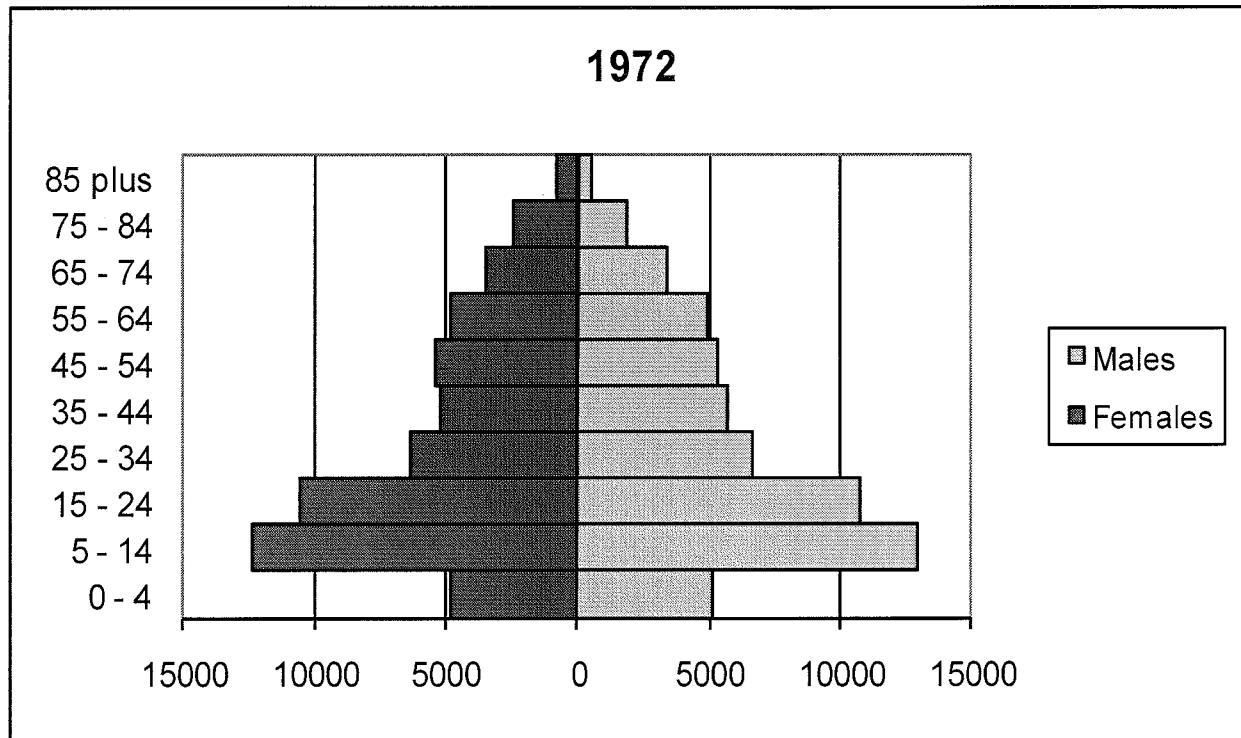


Diagram 9b – Current Year

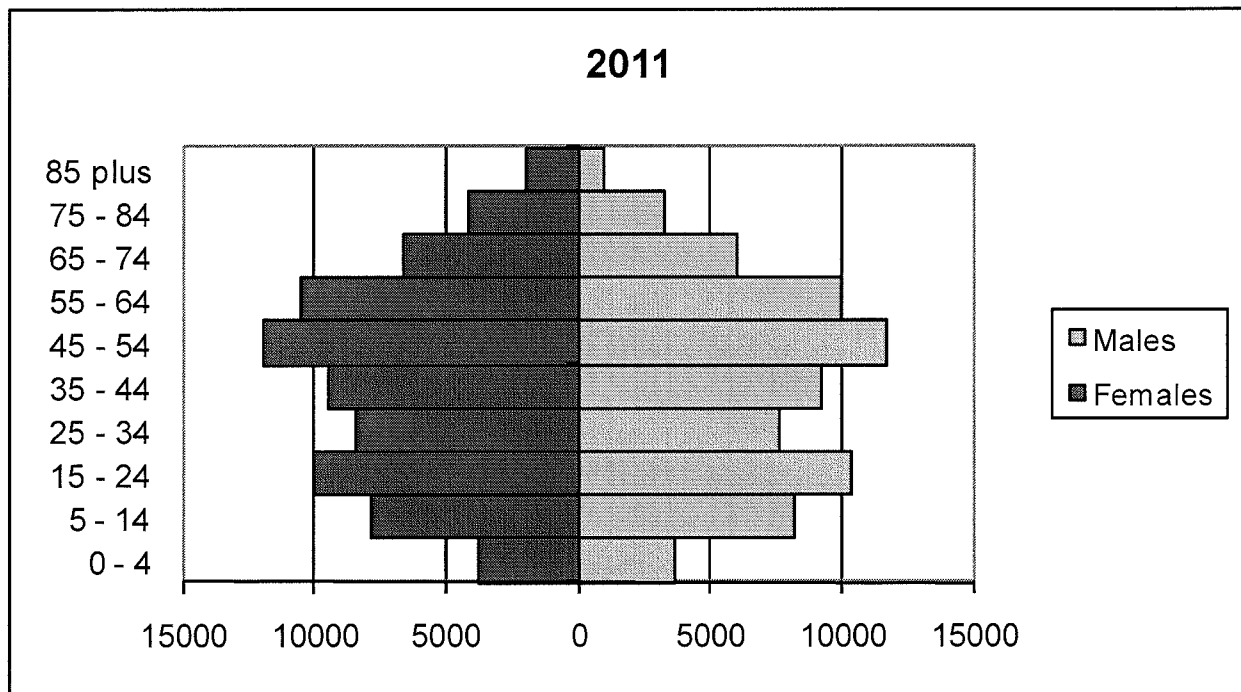


Diagram 9c

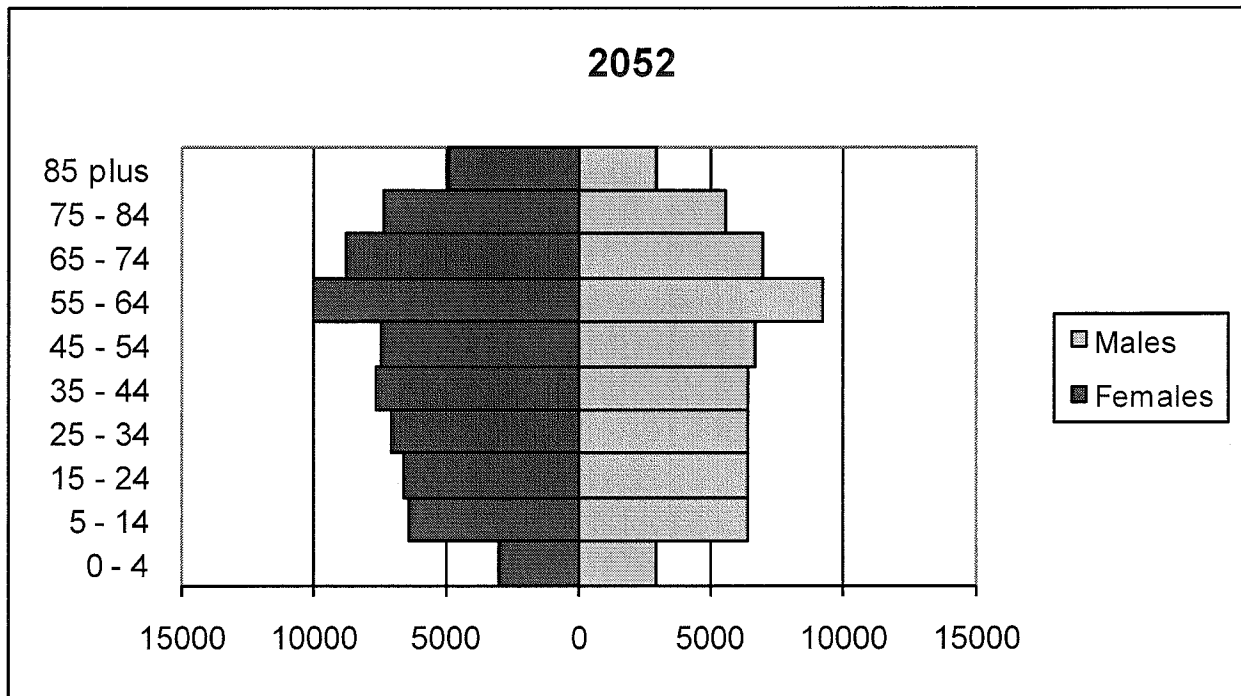


Table 3 – Population by Age Group, estimates 1972-2011

Year	0 - 4	5 - 14	15 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75 - 84	85 plus
1972	9,959	25,259	21,297	13,046	10,906	10,709	9,777	6,895	4,271	1,341
1973	9,895	24,857	21,597	13,897	11,091	10,669	9,908	7,033	4,261	1,412
1974	9,808	24,558	21,870	14,848	11,261	10,626	10,097	7,131	4,333	1,430
1975	9,812	24,223	22,367	15,769	11,572	10,637	10,320	7,243	4,362	1,419
1976	9,626	23,628	23,011	16,409	11,729	10,580	10,377	7,484	4,376	1,428
1977	9,583	23,342	23,176	17,120	11,972	10,637	10,436	7,697	4,487	1,452
1978	9,659	22,813	23,810	17,921	12,275	10,702	10,490	7,952	4,562	1,500
1979	9,773	22,010	24,327	18,495	12,669	10,811	10,429	8,217	4,571	1,583
1980	9,745	21,375	24,478	19,089	13,042	10,848	10,487	8,425	4,617	1,629
1981	9,623	20,917	23,821	19,312	13,409	10,974	10,547	8,663	4,561	1,724
1982	9,524	20,730	23,131	19,225	14,097	11,099	10,560	8,814	4,622	1,786
1983	9,522	20,510	23,327	19,534	14,952	11,178	10,593	8,898	4,753	1,835
1984	9,491	20,292	23,509	19,884	15,743	11,341	10,568	9,049	4,847	1,839
1985	9,569	20,111	23,272	20,221	16,404	11,532	10,503	9,213	4,918	1,876
1986	9,677	19,835	22,719	20,822	16,906	11,719	10,522	9,288	5,060	1,888
1987	9,643	19,710	22,065	20,962	17,461	11,864	10,516	9,334	5,206	1,880
1988	9,637	19,788	21,270	21,253	18,148	12,012	10,547	9,356	5,414	1,864
1989	9,779	19,867	20,510	21,462	18,769	12,355	10,623	9,272	5,633	1,883
1990	9,775	19,801	19,896	21,338	19,251	12,691	10,648	9,265	5,824	1,915
1991	9,520	19,860	19,584	20,788	19,629	13,157	10,722	9,289	5,939	1,881
1992	9,440	19,796	19,492	20,358	19,732	13,940	10,858	9,337	5,967	1,907
1993	9,508	19,861	19,506	20,243	20,022	14,767	10,964	9,331	5,991	1,984
1994	9,416	19,908	19,656	20,070	20,244	15,591	11,119	9,341	6,060	2,032
1995	9,145	20,130	19,554	19,817	20,512	16,376	11,363	9,249	6,155	2,114
1996	9,065	20,169	19,601	19,686	20,938	17,115	11,633	9,217	6,173	2,140
1997	8,706	20,124	19,383	19,337	21,250	17,818	11,779	9,293	6,223	2,182
1998	8,335	19,876	19,116	18,516	21,569	18,464	11,978	9,355	6,333	2,262
1999	8,138	19,718	18,959	18,047	21,749	19,047	12,448	9,488	6,301	2,386
2000	7,954	19,367	19,086	17,351	21,827	19,675	12,853	9,571	6,317	2,469
2001	7,575	19,093	19,285	16,921	21,541	20,228	13,348	9,749	6,425	2,498
2002	7,315	18,735	19,324	16,780	21,300	20,299	14,262	9,863	6,503	2,495
2003	7,220	18,354	19,316	16,710	21,001	20,359	15,175	10,085	6,493	2,508
2004	7,074	18,007	19,345	16,692	20,771	20,451	16,043	10,260	6,516	2,515
2005	6,889	17,631	19,378	16,557	20,441	20,700	16,813	10,475	6,571	2,600
2006	6,702	17,165	19,203	16,259	20,025	21,093	17,385	10,768	6,632	2,688
2007	6,767	16,670	19,291	15,900	19,528	21,470	17,995	11,055	6,707	2,778
2008	6,920	16,435	19,465	15,900	19,157	22,027	18,659	11,305	6,876	2,860
2009	7,046	16,338	19,723	15,783	18,896	22,602	19,220	11,712	7,038	2,861
2010	7,197	16,203	20,133	15,915	18,611	23,223	19,854	12,154	7,194	2,911
2011	7,430	16,000	20,448	16,092	18,713	23,612	20,533	12,654	7,431	2,942

Table 4 – Population by Age Group, projections 2012-2052

Year	0 - 4	5 - 14	15 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75 - 84	85 plus
2012	7,467	15,954	20,475	16,293	18,602	23,746	20,724	13,501	7,570	3,001
2013	7,454	15,860	20,074	16,513	18,228	23,574	20,946	14,307	7,719	3,035
2014	7,445	15,729	19,553	16,857	17,883	23,431	21,158	15,074	7,860	3,082
2015	7,461	15,573	18,975	17,322	17,554	23,117	21,443	15,780	8,036	3,126
2016	7,500	15,513	18,276	17,841	17,198	22,711	21,890	16,368	8,246	3,167
2017	7,579	15,534	17,543	18,319	16,910	22,228	22,310	16,942	8,442	3,236
2018	7,636	15,559	17,006	18,618	16,774	21,398	22,861	17,511	8,622	3,342
2019	7,676	15,582	16,644	18,813	16,559	20,622	23,372	17,987	8,950	3,410
2020	7,696	15,637	16,298	18,829	16,559	19,802	23,795	18,483	9,266	3,477
2021	7,686	15,834	15,798	18,775	16,710	19,235	23,783	18,993	9,627	3,571
2022	7,639	15,879	15,598	18,618	16,790	18,813	23,708	19,149	10,305	3,637
2023	7,569	15,921	15,519	18,257	17,006	18,423	23,527	19,351	10,942	3,691
2024	7,475	15,948	15,424	17,765	17,342	18,081	23,362	19,540	11,532	3,750
2025	7,364	15,978	15,309	17,205	17,818	17,755	23,033	19,812	12,068	3,828
2026	7,243	15,989	15,282	16,526	18,345	17,388	22,623	20,223	12,490	3,918
2027	7,120	16,004	15,318	15,812	18,837	17,085	22,141	20,606	12,893	4,013
2028	6,991	15,978	15,354	15,288	19,138	16,947	21,318	21,118	13,304	4,125
2029	6,864	15,911	15,384	14,924	19,333	16,719	20,551	21,593	13,654	4,297
2030	6,737	15,802	15,432	14,587	19,341	16,718	19,754	21,976	14,006	4,453
2031	6,612	15,651	15,602	14,114	19,266	16,872	19,201	21,946	14,385	4,643
2032	6,495	15,464	15,647	13,902	19,088	16,951	18,781	21,844	14,527	4,998
2033	6,390	15,243	15,681	13,810	18,691	17,179	18,391	21,651	14,685	5,311
2034	6,302	15,001	15,706	13,692	18,147	17,528	18,052	21,471	14,837	5,577
2035	6,231	14,748	15,729	13,568	17,526	18,031	17,728	21,138	15,060	5,804
2036	6,184	14,490	15,739	13,532	16,792	18,584	17,366	20,746	15,379	5,963
2037	6,152	14,236	15,754	13,547	16,027	19,095	17,073	20,291	15,668	6,100
2038	6,135	13,993	15,718	13,567	15,456	19,410	16,938	19,531	16,065	6,251
2039	6,126	13,769	15,643	13,583	15,046	19,604	16,718	18,842	16,430	6,392
2040	6,128	13,562	15,529	13,624	14,686	19,592	16,727	18,129	16,707	6,529
2041	6,129	13,389	15,367	13,783	14,188	19,499	16,896	17,622	16,650	6,707
2042	6,132	13,236	15,172	13,807	13,977	19,295	16,988	17,243	16,537	6,846
2043	6,135	13,121	14,948	13,820	13,900	18,884	17,218	16,889	16,350	6,973
2044	6,136	13,034	14,704	13,832	13,808	18,325	17,576	16,592	16,165	7,079
2045	6,134	12,973	14,460	13,846	13,697	17,694	18,076	16,299	15,870	7,208
2046	6,122	12,937	14,205	13,857	13,679	16,950	18,627	15,969	15,545	7,358
2047	6,109	12,912	13,958	13,887	13,709	16,182	19,125	15,718	15,174	7,477
2048	6,092	12,896	13,724	13,881	13,745	15,610	19,421	15,606	14,597	7,671
2049	6,068	12,892	13,509	13,845	13,772	15,201	19,597	15,411	14,100	7,851
2050	6,036	12,900	13,305	13,775	13,825	14,836	19,577	15,426	13,600	7,965
2051	6,000	12,895	13,137	13,668	14,009	14,330	19,478	15,591	13,227	7,913
2052	5,953	12,888	12,996	13,533	14,048	14,124	19,261	15,687	12,954	7,815

Limitations of Population Projections

In general, all assumptions relating to the components of population change (i.e., migration, births and deaths) are based on past conditions, modified wherever possible to take into consideration possible future changes. Consequently, the resulting population projections are not necessarily what will be, but rather what could be given the realization of these conditions. It is certainly possible that unforeseen changes in factors such as government policy, economic development, land use and zoning will affect future populations. As a result, the projections should be regarded as only one possible scenario of the future size and age-gender structure of the population.

The Component/Cohort-Survival Method

Prince Edward Island population projections result from the application of a 'component/cohort-survival' population model to assumptions dealing with fertility, mortality and migration. The component/cohort-survival method requires separate projections of each of the components of population change, namely fertility, mortality and net migration. With this information, and with a base year age-specific estimate of population, a projection for any subsequent year is made by promoting each age group in the preceding year to next highest age group, while at the same time taking into account the effects of net migration, deaths and births.

Specifically, beginning from a base year estimate of population by single year of age and sex, each age group i in the base year t is promoted to the next higher age group $i+1$ in time $t+1$, while at the same time taking into account the effects of net migration, births and/or deaths in that age cohort. This process is then repeated for the number of years required.

Data tables can be downloaded at https://www.gov.pe.ca/photos/original/pt_popproj_data.xls

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Projections are calculated by Prince Edward Island Statistics Bureau, based on historical population estimates provided by Statistics Canada, Demography Division, up to and including 2011.

Source of population estimates and components of growth 1972 to 2011: Statistics Canada, Demography Division, *Table 051-0004 Components of population growth, Canada, provinces and territories, annual*. CANSIM (database), <http://cansim2.statcan.gc.ca/cgi-win/CNSMCGI.PGM>