MINISTRY OF EDUCATION

Te Tāhuhu o te Mātauranga

Schools Analysis Unit

National School Roll Projections

2011 Update

Executive Summary

The 2011 National School Roll Projections were completed in August 2011 and, overall, have been increased slightly compared to the previous projections.

The ministry has produced three variants of projections – low, medium and high – to provide risk assessments around projected rolls. The medium projection is traditionally used for financial forecasting and other planning purposes.

Under this scenario, total school rolls are projected to increase from 755,700 in 2012 a peak of an estimated 810,600 full-time equivalent students in 2024. This increase is attributed to relatively large birth cohorts entering primary schooling together with higher retention rates in upper secondary schooling.

Primary school rolls[1] are expected to increase steadily from 2012 as the recent high births and relatively high expected birth rates from 2007 to 2010 start to impact on primary schools.

This trend impacts on primary school rolls which are expected to peak in 2019 with 517,200 students expected to attend New Zealand primary schools that year.

Secondary school rolls were 0.4% lower than previous projections for 2010 (a difference of 1,000) and continue to decline slightly until the impacts of the high birth cohort enter secondary schooling in 2019.

Recent high birth cohorts will move into secondary schooling leading to a large increase in secondary school rolls from 2020. This growth is expected to peak in 2024 at an estimated 302,700 full-time equivalent students.

The Ministry of Education will continue to monitor closely the number of school enrolments and the drivers behind these (births, migration and retention) and consider the impact on future planning and financial forecasting.

[1] Projected rolls do not include foreign fee-paying students and students attending special schools.

Introduction

This report describes the latest projections of the number of full-time equivalent students[2] enrolled in New Zealand schools. The projections are used to assess demand for resources in the schooling sector and, as part of the Government's five-year budget process, to support expenditure forecasts of teachers' salaries, schools' operational grants and student allowances. The forecast rolls presented here are snapshots based as at 1 July for primary year-levels and 1 March for secondary year-levels.

These projections include actual school rolls up to July 2011 for primary year-levels and March 2011 for secondary year-levels. Assumptions regarding progression/retention rates, births and migration have been revised since the previous projections.

This report is divided into three sections:

1. Results of the latest school roll projections;

2. Projections under low, medium and high fertility assumptions; and

3. Projections for special school students and home schooling students.

[2] Note that special and home-schooled students are modelled separately and are not included in the roll projections discussed in Sections 1 and 2 of this report.

1. School Roll Projections

The forecast results presented here are based on a series of three roll projections: low, medium and high. While the medium projection is what the ministry has traditionally used for financial forecasting and planning purposes, consideration should be given to the possibility of high and low projections eventuating. The medium projection is based on the ministry's best estimates for what will happen to progression/retention rates, fertility and migration levels in future years. For example, it is assumed that retention rates will be high in the next few years due to the current financial conditions. There is also the possibility that migration could be lower than predicted by Statistics New Zealand (SNZ). These kinds of assumptions are taken into account when producing the medium projection. The low and high projections are produced by setting the progression/retention rates, fertility and migration assumptions to lower or higher levels, respectively (see Section 2 for further discussion about fertility and migration assumptions).

The projected rolls, as presented below, consist of regular students in Year 1 to Year 15 within the New Zealand schooling system. This includes adult students, but excludes foreign fee paying students (FFPs) and students receiving scholarships from the New Zealand Agency for International Development (NZAID). Special school and home schooled students are projected separately and will be discussed in Section 3.

Primary School Roll Projections

In 2011, primary enrolments were around 472,700 - approximately 700 or 0.2% fewer than in 2010. The rolls are expected to increase from 2012 onwards and peak at 517,200 in 2019 (Table 1). Note that the high Year 7 rolls observed in Table 1 are due to measurement issues and not to do with an unusually large cohort.

The single most important driver in the primary forecast is the number of children born in a given year and their entrance into the school system five years later. Since 2004, there has been a gradual increase in the number of births. Birth rates were particularly high since 2007 there have been five consecutive years of high birth cohorts that will begin entering primary schooling from 2012. This increase is expected to boost primary rolls from 2012 and impact on secondary rolls in later years. In addition, if births remain at current levels for the next few years this will further increase projected primary enrolments from 2017 onwards.

The impact of migrants on primary enrolments is expected low and expected to remain so. The level of primary school-age migrants has declined steadily since its peak in 2003 and this trend is expected to be low for the next few years.

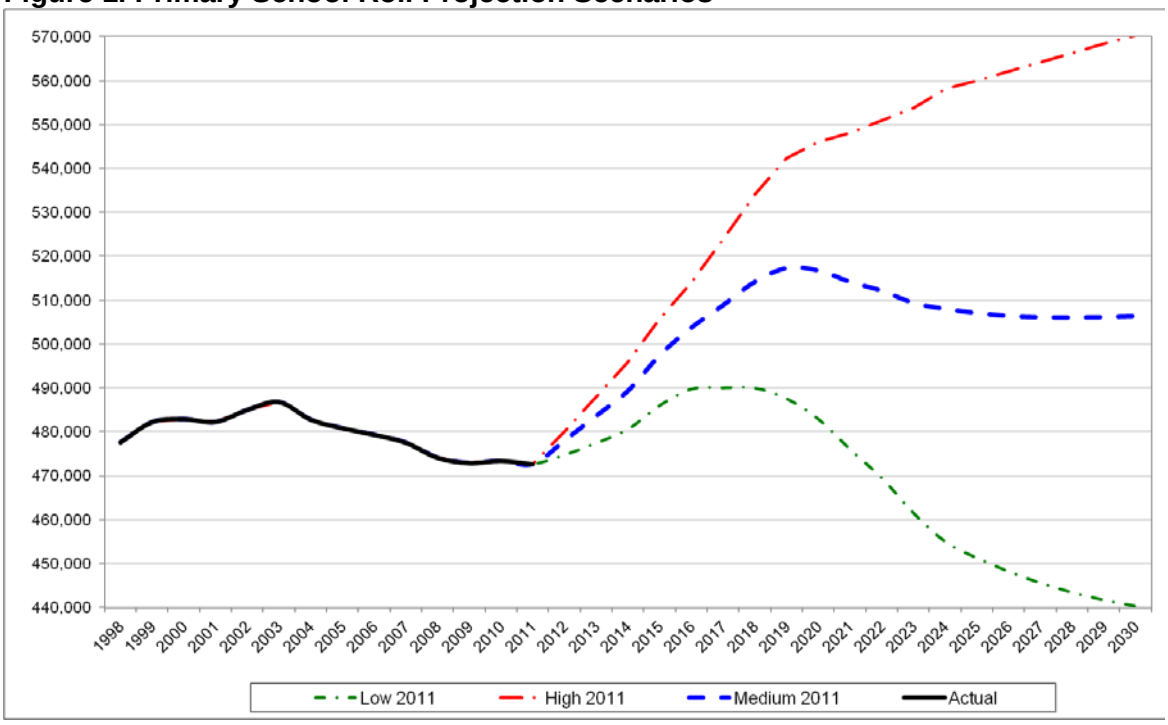
Figure 1 shows projected primary rolls under the three sets of scenarios (low, medium and high).

Breakdown of the Primary School Roll Projections (Medium Variant)

Projection Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
2011*	59,582	57,344	57,618	56,685	56,785	57,595	68,946	58,144	**472,699**
2012	62,505	59,213	57,352	57,818	56,932	56,387	67,839	60,008	**478,055**
2013	64,709	62,113	59,218	57,551	58,069	56,532	66,413	59,045	**483,651**
2014	63,693	64,300	62,113	59,421	57,801	57,659	66,590	57,810	**489,387**
2015	64,615	63,292	64,296	62,321	59,676	57,394	67,910	57,960	**497,463**
2016	63,185	64,206	63,289	64,506	62,583	59,253	67,601	59,110	**503,733**
2017	62,840	62,787	64,202	63,498	64,774	62,134	69,781	58,839	**508,855**
2018	62,529	62,445	62,786	64,413	63,762	64,306	73,171	60,738	**514,150**
2019	62,268	62,137	62,445	62,994	64,680	63,303	75,728	63,681	**517,236**
2020	62,077	61,878	62,137	62,652	63,258	64,213	74,554	65,900	**516,668**
2021	61,957	61,689	61,878	62,344	62,915	62,803	75,617	64,875	**514,078**
2022	61,897	61,570	61,690	62,085	62,606	62,463	73,960	65,805	**512,074**
2023	61,897	61,510	61,570	61,896	62,346	62,156	73,561	64,365	**509,301**
2024	61,897	61,510	61,511	61,776	62,157	61,899	73,201	64,017	**507,968**
2025	61,917	61,510	61,511	61,717	62,037	61,711	72,898	63,704	**507,005**
2026	61,947	61,530	61,511	61,717	61,977	61,593	72,677	63,441	**506,393**
2027	61,977	61,560	61,531	61,717	61,977	61,533	72,538	63,250	**506,082**
2028	62,017	61,589	61,560	61,737	61,977	61,533	72,468	63,128	**506,010**
2029	62,067	61,629	61,590	61,766	61,997	61,533	72,468	63,068	**506,119**
2030	62,128	61,679	61,630	61,796	62,027	61,553	72,468	63,068	**506,348**

* Actual July roll in 2011.

Figure 1. Primary School Roll Projection Scenarios



Secondary School Roll Projections

Breakdown of the Secondary School Roll Projections (Medium Variant)

Projection Year	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Total
2011*	59,145	58,683	60,597	54,884	45,649	729	396	**280,083**
2012	57,961	59,175	58,687	54,462	46,038	1,135	207	**277,665**
2013	59,817	57,994	59,176	52,770	45,670	1,147	323	**276,896**
2014	58,858	59,846	58,001	53,204	44,282	1,136	326	**275,653**
2015	57,632	58,889	59,845	52,154	44,640	1,103	323	**274,586**
2016	57,779	57,667	58,893	53,808	43,762	1,112	314	**273,333**
2017	58,924	57,813	57,681	52,955	45,153	1,090	316	**273,932**
2018	58,654	58,955	57,823	51,884	44,438	1,125	310	**273,189**
2019	60,544	58,685	58,961	52,001	43,565	1,107	320	**275,184**
2020	63,471	60,571	58,691	53,023	43,647	1,087	315	**280,804**
2021	65,676	63,489	60,569	52,777	44,507	1,088	309	**288,416**
2022	64,656	65,688	63,470	54,460	44,294	1,110	310	**293,987**
2023	65,582	64,670	65,654	57,042	45,709	1,104	316	**300,077**
2024	64,150	65,595	64,639	58,982	47,848	1,140	314	**302,667**
2025	63,804	64,167	65,562	58,070	49,447	1,193	325	**302,567**
2026	63,493	63,822	64,142	58,904	48,677	1,232	339	**300,608**
2027	63,231	63,511	63,798	57,637	49,389	1,212	350	**299,129**
2028	63,041	63,250	63,489	57,329	48,336	1,231	345	**297,021**
2029	62,920	63,060	63,230	57,054	48,077	1,204	350	**295,896**
2030	62,860	62,940	63,041	56,823	47,848	1,198	343	**295,052**

* Actual March roll in 2011.

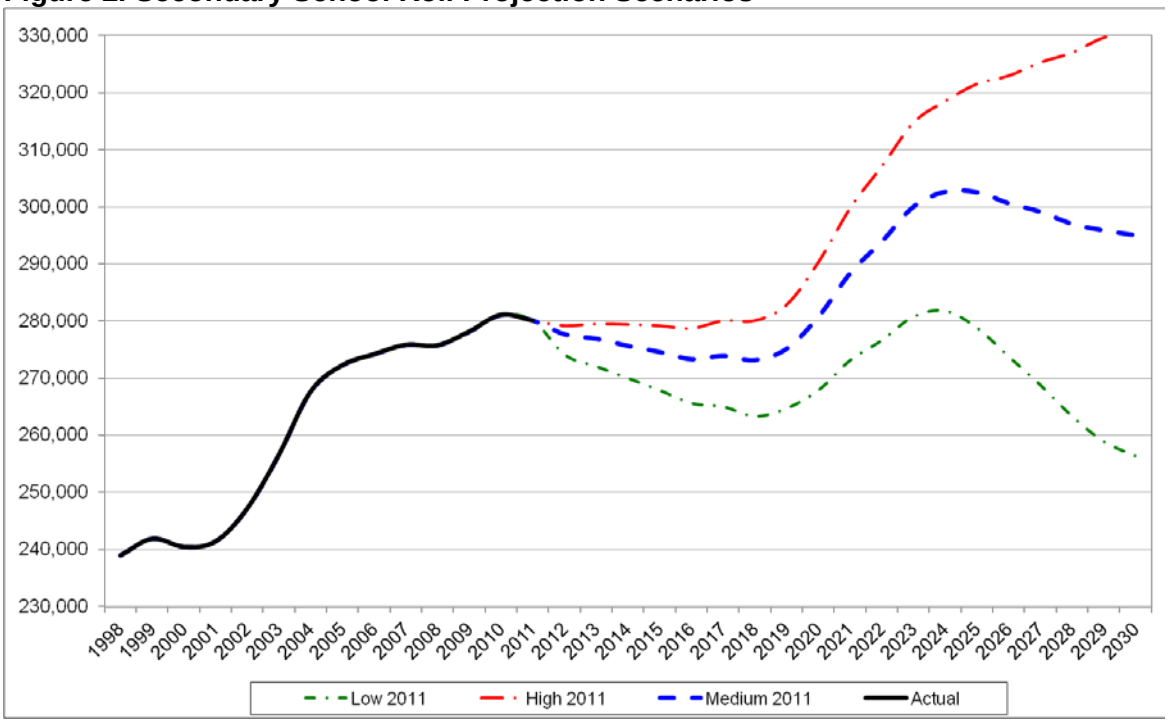
In 2011, secondary enrolments were around 280,000 - approximately 1000 or 0.4% less than in 2010. Secondary rolls are expected to continue to decline until 2018. Larger increases start around 2020 due to higher birth rates from 2004 – 2011. Secondary rolls are projected to peak in 2024, with around 302,700 full-time equivalent students expected (Table 2).

The secondary school roll projections are affected by actual and projected births as well as retention levels at upper secondary schools. The recent roll growth in the secondary cohort is mainly due to the increase in retention rates at the senior levels. This is due to the current economic environment. It is expected that the retention rates in senior year levels will remain high in the future while the country recovers from the recession. The forecast assumes they will remain close to current levels, but in the past they have dropped slightly when the labour market improves.

The impact of migrants on secondary enrolments has declined since its peak in 2003 and has been fairly consistent since 2005, with an average net gain of 1600 students per year for the last 5 years. This trend is expected to be maintained for the next few years.

Figure 2 shows projected secondary rolls under the three sets of scenarios (low, medium and high).

Figure 2. Secondary School Roll Projection Scenarios



2. Fertility Scenarios

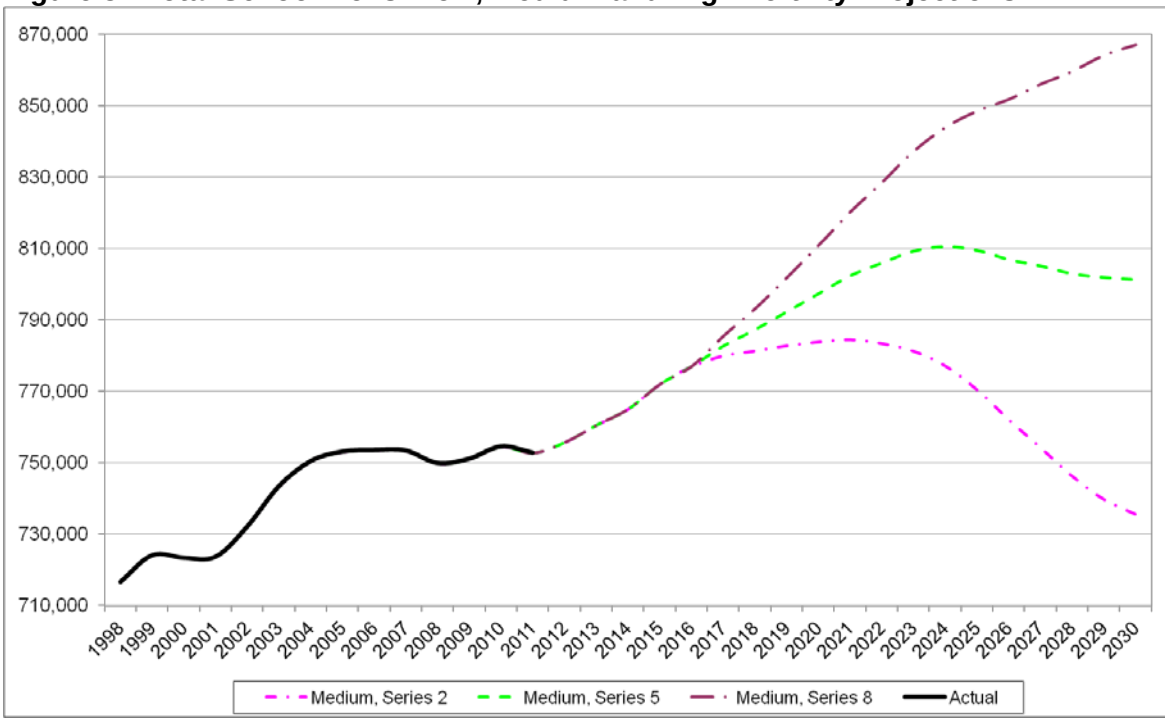
Given the rapid rise in births in recent years, it is important to assess the sensitivity of projections relating to fertility assumptions.

SNZ produces nine series of birth projections, based on different sets of assumptions regarding fertility, migration and mortality. Series 2, 5 and 8 of these projections have been adopted as a basis for the low, medium and high scenarios for the ministry's 2011 National School Roll Projections. Series 5 is considered by SNZ as the most likely long-term scenario and is based on medium fertility, medium mortality and medium migration assumptions. Series 2 and 8 use the same assumptions except that Series 2 assumes low fertility, mortality and migration while Series 8 assumes high.

As stated previously, the ministry's low, medium and high projections are produced by varying progression/retention rates, fertility and migration assumptions. In order to isolate the impact of fertility from other factors it is useful to consider the ministry's medium projection and apply different fertility scenarios whilst holding all other factors constant. Figure 3 shows the resulting projections when Series 2, 5 and 8 are applied from 2012 onwards and compares them with the ministry's medium projection. (Note that Series 2 of the birth projections assumes low fertility, medium mortality and medium migration).

Figure 3 shows that the fertility assumption has a crucial impact on projected rolls in later years. Under the high fertility (Series 8) scenario we would expect total rolls to increase to around 867,200 in 2030. Under the medium fertility (Series 5) scenario we would expect total rolls to peak at just over 810,600 in 2024. It is interesting to note that even under the low fertility (Series 2) scenario, we would still expect total rolls to peak at a higher level (784,600 in 2021) than the previous peak of 754,500 in 2010. This is due to the effect of the actual high births of the last few years flowing through the school system.

Figure 3. Total School Rolls: Low, Medium and High Fertility Projections



3. Special Schools and Home Schooled Students

Special school enrolments and home schooled students are modelled separately from the National School Roll Projections and are not included in the discussions above. Projected special school enrolments are expected to increase from 3,700 in July 2011 to 4,000 in July 2030 (Table 3). The number of home schooled students is also expected to grow, from 6,500 in July 2011 to 6,900 in July 2030.

Projections for Special Schools and Home Schooling Students

	Special School Students			Home Schooling Students		
Projection Year	**Primary**	**Secondary**	**Total**	**Primary**	**Secondary**	**Total**
2007*	1,669	1,798	**3,467**	4,189	2,284	**6,473**
2008*	1,677	1,843	**3,520**	4,208	2,292	**6,500**
2009*	1,665	1,927	**3,592**	4,319	2,465	**6,784**
2010*	1,710	1,929	**3,639**	4,276	2,479	**6,755**
2011	1,821	1,907	**3,728**	3,998	2,451	**6,449**
2012	1,827	1,914	**3,741**	4,013	2,460	**6,473**
2013	1,839	1,926	**3,764**	4,038	2,475	**6,513**
2014	1,850	1,937	**3,787**	4,061	2,489	**6,550**
2015	1,866	1,954	**3,821**	4,096	2,511	**6,607**
2016	1,878	1,967	**3,845**	4,121	2,526	**6,648**
2017	1,892	1,981	**3,873**	4,151	2,545	**6,695**
2018	1,903	1,993	**3,896**	4,173	2,558	**6,731**
2019	1,915	2,006	**3,921**	4,200	2,575	**6,775**
2020	1,928	2,019	**3,946**	4,230	2,593	**6,823**
2021	1,940	2,031	**3,971**	4,260	2,612	**6,872**
2022	1,948	2,040	**3,989**	4,281	2,625	**6,906**
2023	1,956	2,049	**4,005**	4,301	2,637	**6,937**
2024	1,960	2,052	**4,012**	4,308	2,641	**6,949**
2025	1,957	2,049	**4,006**	4,302	2,637	**6,940**
2026	1,951	2,043	**3,994**	4,288	2,629	**6,917**
2027	1,946	2,038	**3,984**	4,279	2,623	**6,902**
2028	1,941	2,033	**3,974**	4,267	2,616	**6,883**
2029	1,939	2,030	**3,969**	4,261	2,612	**6,874**
2030	1,937	2,029	**3,966**	4,258	2,610	**6,868**

* Actual July rolls.

Conclusion

Total school rolls are projected to increase from 755,700 in 2012 a peak of an estimated 810,600 full-time equivalent students in 2024. This increase is attributed to relatively large birth cohorts entering primary schooling together with higher retention rates in upper secondary schooling. The number of recent births remains the most significant driver of school rolls in short and long-term. Entry of consecutive cohorts into the schooling system will essentially determine the trend in school rolls in the coming years. Slight growth in total school rolls is expected in the short-term. The Ministry will continue to closely monitor the number of school enrolments and the determinants of these enrolments (births, economic conduction, migration and retention).