



MINISTRY OF EDUCATION

Te Tāhuhu o te Mātauranga

Central Forecasting and Modelling Unit

National School Roll Projections

November 2007 Update

For External Distribution

Executive Summary

The 2007 National School Roll Projections (NSRP) were completed in November and have been increased significantly compared to previous projections. This is mainly due to higher numbers of births projected by Statistics New Zealand.

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 the medium projection, primary school rolls¹ are expected to increase steadily from 2009 and peak in 2019 with 514,000 students expected to attend New Zealand schools that year.

Secondary school rolls are expected to follow similar patterns and peak in 2024 with an estimated 290,000 full-time equivalent students.

Total school rolls are expected to remain at the present level of around 753,000 students² until 2012. This is followed by projected roll increases over the next decade, with more than 790,000 students expected in the early 2020's. This is around 70,000 students higher than previously projected.

As the projected increase in enrolments is largely due to increased fertility rates in Statistics New Zealand's birth projections, analysis has been undertaken to identify what would happen if fertility rates were lower than anticipated. Using Statistics New Zealand's low fertility scenario, school rolls are expected to remain around 748,000 to 764,000 prior to 2023. This means that even with low fertility rates in the future, projected rolls are still consistently higher compared to the previous projection.

Significant changes in school rolls are not expected over the next four years. Nevertheless, the high level of actual births in 2007 will start to impact on primary schools from 2012 onwards. 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.

² Expressed in terms of full-time equivalent students (FTES).

Introduction

This report describes the latest projections of the number of full-time equivalent students 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 2007 for primary year-levels and March 2007 for secondary-year levels. Assumptions regarding births and migration have been revised following updated information from Statistics New Zealand (SNZ).

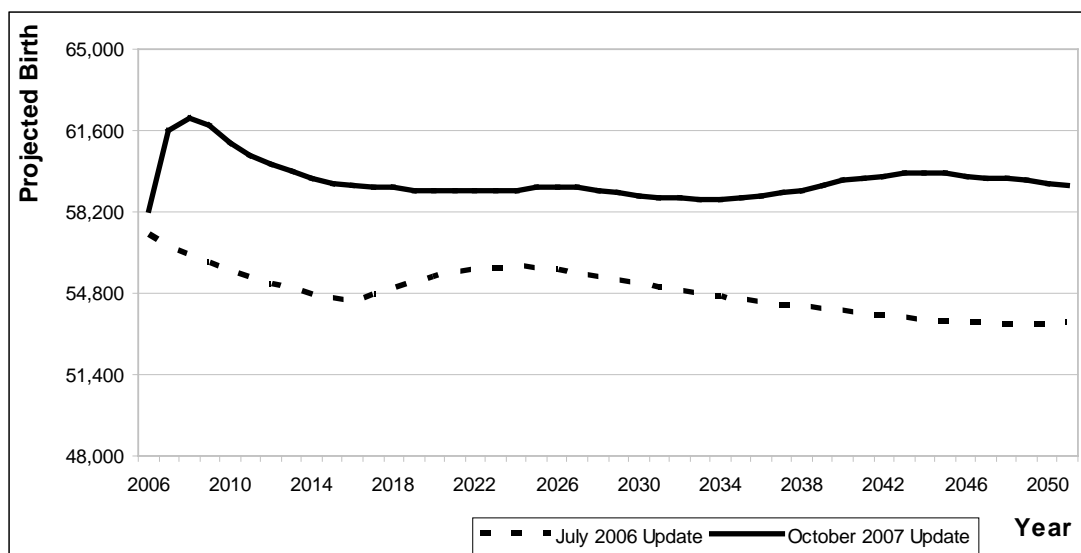
This report is divided into 4 sections:

- Results of the latest birth projections released by SNZ
- Results of the latest school roll projections
- Projections under low fertility assumptions
- Projections for special school students and home schooling students

Birth Projections

In late October, SNZ released their latest birth and population projections at the national level. Under their medium series³, SNZ expect around 59,000 to 62,000 births each year until 2026. This is considerably higher than previous projections⁴ of around 55,000 to 57,000 births prior to 2026.

Figure 1. Comparison of SNZ's Birth Projections



SNZ's latest projections have increased the projected fertility rates following higher than expected levels of births in previous years. For example, for the year ended June 2007, there were over 61,000 births compared to an average of 57,000 births in the past decade. The revised fertility rates are mostly due to higher than expected births for Maori and Pasifika people.

Nevertheless, while fertility rates have increased, the revised rates are still below the level of replacement fertility. This means that, in the long run, the New Zealand population as a whole is still expected to decline.

Increases in the birth rate will have an immediate impact on the early childhood education sector, followed by the primary and secondary sectors in due course.

³ SNZ produces 9 series of birth projections based on different combinations of fertility, migration and mortality assumptions. Series 5 is the medium projection which assumes medium levels of fertility, migration and mortality.

⁴ Provided to the ministry in July 2006.

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 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 (NZ Aid). Special school and home schooled students are projected separately and will be discussed later in this document.

Primary School Roll Projections

Table 1. 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
2007*	57,447	57,863	58,849	57,261	59,110	57,648	68,730	60,477	477,385
2008	57,097	56,738	58,140	59,183	57,549	58,756	68,251	59,897	475,611
2009	59,805	56,416	57,035	58,493	59,496	57,230	69,584	59,503	477,562
2010	59,668	59,095	56,724	57,395	58,815	59,171	67,795	60,670	479,333
2011	59,835	58,959	59,409	57,083	57,715	58,496	70,086	59,114	480,697
2012	63,376	59,125	59,272	59,776	57,402	57,405	69,288	61,106	486,751
2013	63,869	62,612	59,438	59,639	60,101	57,095	67,995	60,413	491,162
2014	63,491	63,097	62,933	59,805	59,964	59,770	67,633	59,294	495,988
2015	62,994	62,725	63,419	63,311	60,130	59,635	70,791	58,976	501,980
2016	62,387	62,235	63,046	63,799	63,643	59,800	70,633	61,722	507,263
2017	61,982	61,637	62,555	63,424	64,132	63,283	70,828	61,582	509,423
2018	61,577	61,238	61,956	62,932	63,757	63,768	74,941	61,752	511,920
2019	61,375	60,840	61,556	62,331	63,263	63,395	75,515	65,326	513,601
2020	61,172	60,640	61,157	61,930	62,661	62,906	75,075	65,823	511,366
2021	61,071	60,441	60,957	61,529	62,259	62,309	74,497	65,441	508,506
2022	60,970	60,342	60,757	61,329	61,858	61,911	73,792	64,939	505,899
2023	60,970	60,242	60,658	61,129	61,657	61,513	73,322	64,327	503,817
2024	60,970	60,242	60,558	61,029	61,456	61,314	72,852	63,918	502,339
2025	60,970	60,242	60,558	60,928	61,356	61,115	72,617	63,509	501,295
2026	60,869	60,242	60,558	60,928	61,255	61,016	72,382	63,305	500,555

* Actual July roll in 2007.

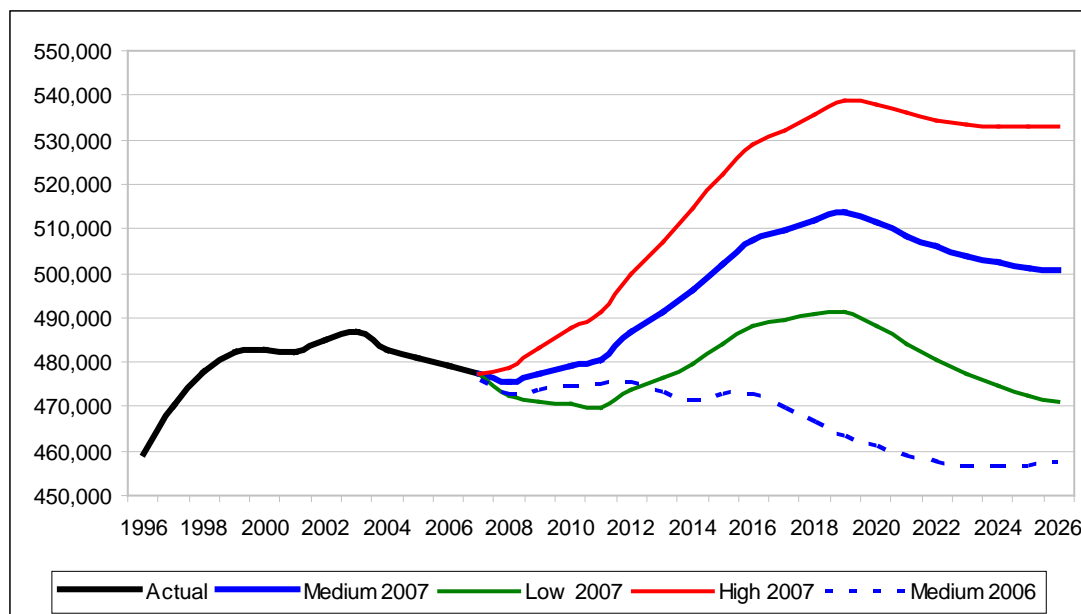
In 2007, primary enrolments were around 477,400 - approximately 2,000 or 0.4% fewer than the previous year. A further reduction of primary level enrolments is expected in 2008 but then rolls are expected to increase from 2009 onwards.

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 2003, there has been an increase in the number of births and this has intensified in recent years. This increase is expected to boost primary rolls from 2009 and eventually impact on secondary rolls in later years. In addition, the latest SNZ birth projections will further increase projected primary enrolments from 2013 onwards.

The impact of migrants on primary enrolments is expected to decline in the short-term. The level of primary school-age migrants had declined steadily since its peak in 2003 and this trend is expected to be maintained for the next few years.

Figure 2 below shows the level of projected primary rolls under the three sets of scenarios (low, medium and high) and compares these with the previous medium projection (2006).

Figure 2. Primary School Roll Projection Scenarios



Secondary School Roll Projections

Table 2. 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
2007*	60,511	61,186	61,375	53,215	38,483	883	168	275,821
2008	60,094	60,495	60,252	51,945	41,387	932	171	275,276
2009	59,533	60,100	59,597	51,028	40,406	1,003	180	271,847
2010	59,152	59,544	59,226	50,484	39,711	980	194	269,292
2011	60,307	59,168	58,679	50,196	39,288	963	189	268,789
2012	58,766	60,317	58,313	49,716	39,086	953	186	267,337
2013	60,739	58,782	59,438	49,423	38,698	948	184	268,211
2014	60,053	60,747	57,934	50,368	38,484	939	183	268,707
2015	58,946	60,064	59,859	49,096	39,214	933	181	268,293
2016	58,630	58,966	59,190	50,721	38,224	951	180	266,863
2017	61,349	58,648	58,119	50,159	39,486	927	184	268,872
2018	61,210	61,355	57,805	49,275	39,052	957	179	269,834
2019	61,378	61,216	60,456	48,997	38,384	947	185	271,563
2020	64,918	61,383	60,319	51,232	38,156	930	183	277,121
2021	65,409	64,906	60,482	51,110	39,889	925	180	282,901
2022	65,031	65,394	63,931	51,246	39,788	967	179	286,537
2023	64,534	65,018	64,408	54,150	39,893	965	187	289,155
2024	63,928	64,524	64,040	54,546	42,140	967	186	290,330
2025	63,523	63,920	63,556	54,235	42,442	1,022	187	288,884
2026	63,118	63,517	62,965	53,831	42,201	1,029	197	286,858

* Actual March roll in 2007.

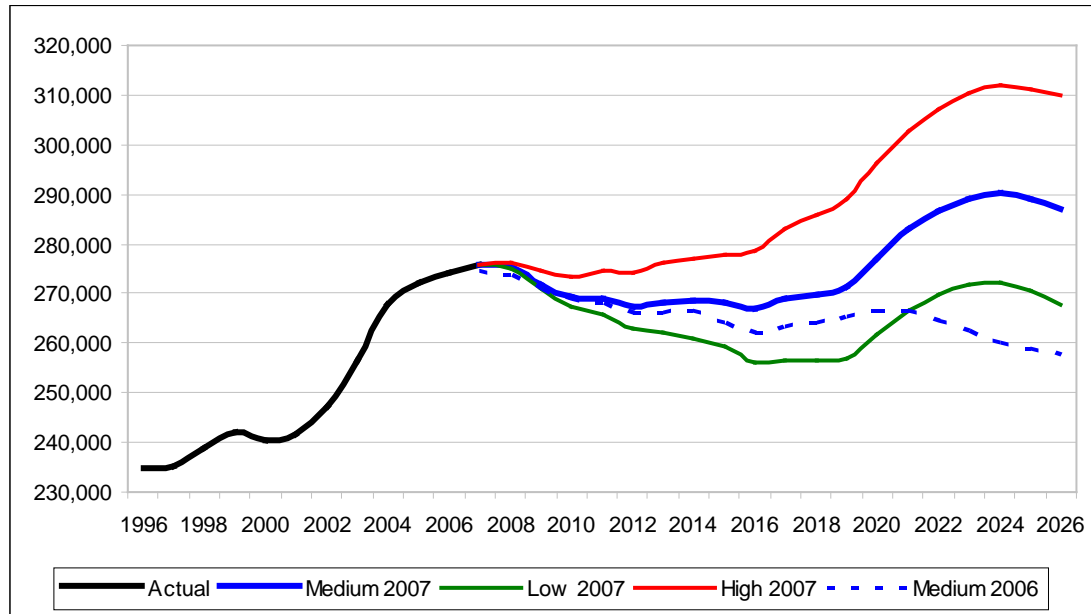
In 2007, secondary enrolments were around 275,800 - approximately 1,600 or 0.6% more than the previous year. Secondary rolls are expected to continue to decline until 2016 when the increase in births in 2003 begins to flow through the secondary system. Larger increases appear around 2020 due to recent high births and the impact of SNZ's revised birth projections. Secondary rolls are projected to peak at around 2024 with 290,300 full-time equivalent students expected.

The secondary school roll projections are affected by actual and projected births as well as retention levels at upper secondary schools. There are policies that have recently been implemented or are being consulted on that are aimed at improving the retention levels in secondary schools. Projections provided here do not incorporate any assumptions regarding changes in retention rates resulting from these policies.

The impact of migrants on secondary enrolments is expected to decline in the short-term. The level of secondary school-age migrants had declined steadily since its peak in 2002 and this trend is expected to be maintained for the next few years.

Figure 3 below shows projected secondary rolls under the three sets of scenarios (low, medium and high) and compares these with the previous medium projection (2006).

Figure 3. Secondary School Roll Projection Scenarios



Low Fertility Scenario

Given that roll projections have been revised upwards significantly, mostly as a result of SNZ's birth projections, it is important to assess the sensitivity of projections relating to fertility assumptions. An alternative low fertility scenario is set out below.

Low Fertility Projections

SNZ produces nine series of birth projections, based on different sets of assumptions regarding fertility, migration and mortality. Series 4, 5 and 6 of these projections have been adopted as a basis for the low, medium and high scenarios for the ministry's national school roll projections. All three series are based on medium fertility and medium mortality, but vary according to high, medium and low migration assumptions.

Here we consider Series 2 of the birth projections, which assumes low fertility, medium mortality and medium migration. This is compared with the medium fertility projections to isolate the impact of fertility from other factors.

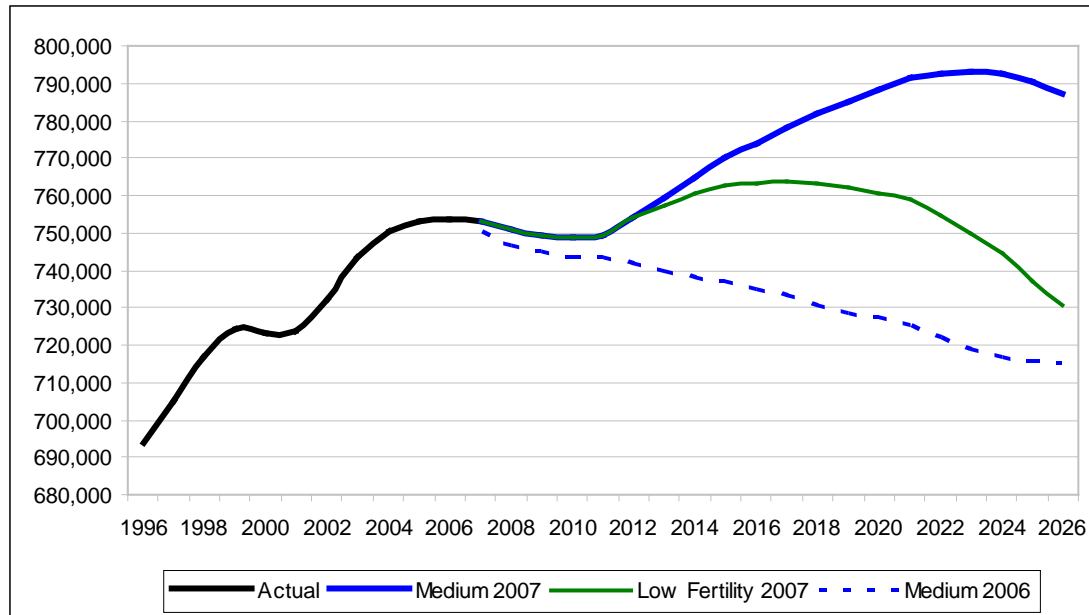
Table 3. Comparison between Medium and Low Fertility Projections

Projection Year	Medium Fertility Projections			Low Fertility Projections		
	Primary	Secondary	Total	Primary	Secondary	Total
2007*	477,385	275,821	753,206	477,385	275,821	753,206
2008	475,611	275,276	750,887	475,611	275,276	750,887
2009	477,562	271,847	749,409	477,562	271,847	749,409
2010	479,333	269,292	748,625	479,333	269,292	748,625
2011	480,697	268,789	749,486	480,697	268,789	749,486
2012	486,751	267,337	754,088	486,751	267,337	754,088
2013	491,162	268,211	759,374	489,341	268,211	757,552
2014	495,988	268,707	764,695	491,564	268,707	760,271
2015	501,980	268,293	770,273	494,455	268,293	762,748
2016	507,263	266,863	774,126	496,437	266,863	763,299
2017	509,423	268,872	778,295	494,885	268,872	763,757
2018	511,920	269,834	781,754	493,485	269,834	763,320
2019	513,601	271,563	785,164	490,550	271,563	762,113
2020	511,366	277,121	788,486	483,635	277,121	760,755
2021	508,506	282,901	791,407	477,668	281,080	758,749
2022	505,899	286,537	792,435	472,614	282,096	754,710
2023	503,817	289,155	792,972	468,255	281,629	749,884
2024	502,339	290,330	792,669	464,532	279,818	744,350
2025	501,295	288,884	790,179	461,413	275,457	736,870
2026	500,555	286,858	787,413	458,830	271,678	730,509

* Actual March or July roll in 2007.

The fertility assumption has a crucial impact on projected rolls in later years. Nevertheless, even under the low fertility scenario, we are still expecting more students than previously projected (see figure 4).

Figure 4. Total School Rolls: Low and Medium Fertility Projections



Special Schools and Home Schooled Students

Special school enrolments and home schooled students are modelled separately from the National School Roll Projections (see Table 4 below) and are not included in the discussions above. Projected special school enrolments are expected to increase slightly from 3,500 in July 2007 to 3,600 in July 2026. The number of home schooled students is also expected to grow from 6,500 in July 2007 to 6,800 in July 2026.

Table 4. Projections for Special Schools and Home Schooling Students

Projection Year	Special School Students			Home Schooling Students		
	Primary	Secondary	Total	Primary	Secondary	Total
2003*	1,703	1,444	3,147	4,285	2,152	6,437
2004*	1,695	1,518	3,213	4,315	2,191	6,506
2005*	1,739	1,635	3,374	4,371	2,057	6,428
2006*	1,668	1,684	3,352	4,247	2,051	6,298
2007*	1,672	1,798	3,470	4,291	2,182	6,473
2008	1,667	1,792	3,458	4,277	2,175	6,453
2009	1,663	1,788	3,451	4,271	2,172	6,443
2010	1,661	1,786	3,447	4,268	2,171	6,439
2011	1,663	1,788	3,450	4,273	2,173	6,447
2012	1,673	1,798	3,471	4,301	2,187	6,489
2013	1,684	1,811	3,496	4,332	2,203	6,535
2014	1,696	1,824	3,520	4,363	2,219	6,582
2015	1,709	1,837	3,546	4,395	2,235	6,631
2016	1,717	1,846	3,564	4,418	2,247	6,665
2017	1,727	1,856	3,583	4,442	2,259	6,701
2018	1,734	1,865	3,599	4,462	2,269	6,731
2019	1,742	1,873	3,615	4,481	2,279	6,760
2020	1,750	1,881	3,631	4,499	2,288	6,787
2021	1,756	1,888	3,645	4,514	2,296	6,810
2022	1,759	1,891	3,650	4,518	2,298	6,816
2023	1,760	1,892	3,652	4,520	2,299	6,818
2024	1,759	1,892	3,651	4,517	2,297	6,815
2025	1,754	1,886	3,640	4,503	2,290	6,794
2026	1,748	1,879	3,627	4,488	2,283	6,771

* Actual July rolls.

Conclusion

School roll projections have been increased significantly, mostly as a result of revised birth projections by SNZ. Four sets of projection scenarios have been presented here to demonstrate the impact of different assumptions on the roll projections.

These projections should be used with caution given the increasing degree of uncertainty that exists over time. Nevertheless, even if future births are lower than projected, the high level of actual births experienced in 2007 is 'real' and will impact on the early childhood education sector and the schooling system shortly. 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.