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Tigard-Tualatin School District Long-Range Enrollment Forecast, 2008-09 to 2017-18

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**TIGARD-TUALATIN SCHOOL DISTRICT
LONG-RANGE ENROLLMENT FORECASTS
2008-09 TO 2017-18**



JUNE, 2008

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**Prepared By
Population Research Center
Portland State University**

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EXECUTIVE SUMMARY

To address their *long-range* planning needs, The Tigard-Tualatin School District (TTSD) requested that PRC prepare 10 year enrollment forecasts for the District and each of its existing schools. This forecast for the 2008-09 through 2017-18 school years has been prepared as a supplement to the 2008-09 to 2012-13 forecast that was presented to the TTSD Board in December, 2007. Forecasts for 2008-09 and 2009-10 for the District and its schools are identical to those published in December, and secondary school forecasts are unchanged through 2012-13. Elementary schools undergo small revisions beginning in 2010-11 due to the availability of updated birth data.

Total K-12 enrollment in the TTSD has grown in 19 of the past 20 years. New housing development has contributed to enrollment growth throughout that period. Sustained growth in elementary enrollment from the late 1980s to the mid 1990s and the more recent growth in high school enrollment were influenced by the rapid increase in births caused by the “echo” of the baby boom. Since the late 1990s, a growing Latino population has also been a major contributor to the District’s enrollment growth.

Under current plans there is a shrinking amount of developable residential land in the District’s communities. If plans remain unchanged and new housing construction returns to recent levels after the current downturn, the District will be near its residential capacity by the end of the 10 year horizon of these forecasts. However, additional residential capacity may be added in the West Bull Mountain area, where concept planning for areas added to the Urban Growth Boundary in 2002 is underway. Also, recent comprehensive plans envision development in the town centers of the Cities of Tigard and Tualatin that includes a mix of higher-density and affordable housing.

The District’s population is aging, but we forecast that school age population will grow due to an increasing number of births as well as continued migration into the area. We conclude that the planned, proposed, and potential new housing development will support modest household and population growth.

Overall K-12 enrollment is forecast to increase by 11 percent in the next 10 years. The growth of about 1,400 students is similar to the K-12 growth of the past 10 years, but the pattern of growth by grade level differs. High schools have led the District's growth in recent years, but are expected to grow very little over the next five years between 2007-08 and 2012-13. In this first five year increment, growth is concentrated at the elementary and middle school levels. During the last five years, 2012-13 to 2017-18, forecast growth is more balanced among the grade levels, with average annual growth rates at or near one percent for elementary, middle, and high school.

Table A compares the historic and forecast growth for the District by five year increment. More detailed forecasts for the District as well as forecasts for individual schools under their current boundaries and grade configurations are in the "Enrollment Forecasts" section of this report. Additional information about recent population, housing, and enrollment trends may be found in the December 2007 report, *Tigard-Tualatin School District Enrollment Forecast Update, 2008-09 to 2012-13*.

	Actual			Forecast	
	1997-98	2002-03	2007-08	2012-13	2017-18
District Total	11,062	11,913	12,460	13,158	13,892
5 year change		851 8%	547 5%	698 6%	734 6%
K-5	5,095	5,380	5,672	6,072	6,405
5 year change		285 6%	292 5%	400 7%	333 5%
6-8	2,592	2,834	2,855	3,065	3,222
5 year change		242 9%	21 1%	210 7%	157 5%
9-12	3,375	3,699	3,933	4,021	4,265
5 year change		324 10%	234 6%	88 2%	244 6%

Population Research Center, PSU. June 2008.

BACKGROUND

The Tigard-Tualatin School District (TTSD) has annually updated enrollment forecasts for a variety of planning needs. The Portland State University Population Research Center (PRC) has prepared the District's enrollment forecasts for a five year planning horizon in each of the past two years, and presented results to the TTSD Board most recently in December, 2007.

To address their *long-range* planning needs, TTSD requested that PRC prepare 10 year enrollment forecasts for the District and each of its existing schools. A new model using somewhat different methodology was required to produce the 10 year forecasts through the 2017-18 school year. This year, in order to complete the *mid-range* forecasts under the usual timeline in the Fall, the 10 year forecast has been prepared as a supplement to the five year forecast. Because the historic enrollment data has not changed since the mid-range forecast was prepared, we did not anticipate a need to significantly revise the existing forecast. In fact, the forecasts for 2008-09 and 2009-10 for all schools are identical to those published in December, and secondary school forecasts are unchanged through 2012-13. Elementary schools undergo small revisions beginning in 2010-11 due to the availability of updated birth data for calendar years 2005 and 2006.

This report includes a discussion of the similarities and differences between mid-range and long-range forecasts, the methodology and assumptions used in the long-range forecasts, and the results of the district-wide enrollment forecasts and individual school forecasts. More detailed information about the District's recent population, housing, and enrollment trends is included in the December 2007 report, *Tigard-Tualatin School District Enrollment Forecast Update, 2008-09 to 2012-13*.

ENROLLMENT TRENDS

Total K-12 enrollment in the Tigard-Tualatin School District has grown in 19 of the past 20 years. Table 1 on the next page summarizes the enrollment history for the District by grade level annually for the most recent 10 year period, from 1997-98 to 2007-08. In most years shown in the table, the District added between 100 and 200 students, experiencing growth rates of one to two percent. Cumulative growth for the entire period was about 1,400 students, or 12 percent.

Like many Oregon districts, the TTSD's biggest growth rates over the past 10 years have been in high school, reflecting the "echo" of the baby boom that caused births to soar between the early 1980s and early 1990s. Enrollment in grades 9-12 is now 16 percent higher than in 1997-98.

TTSD has also experienced significant growth of 11 percent at the elementary level and 10 percent at the middle school level in the past 10 years. Almost without exception, Oregon districts that have added enrollment below the high school level in recent years have had either lots of new housing, large increases in Latino enrollment, or both. Since the end of the early 1980s recession, the District has consistently added between 300 and 600 single family homes each year. We estimate that in Fall 2007 about 1,700 TTSD students resided in new single family homes built between 2000 and 2006, exceeding the District's overall growth. The number of Latino students enrolled in TTSD schools grew by about 1,600 between Fall 1997 and Fall 2007. Together, the housing growth and the Latino enrollment growth have offset the aging of the overall population, a major demographic phenomenon that might have caused enrollment to decline.

Boundary changes and new school openings make long term comparisons for individual schools difficult, but Table 2 shows that enrollments are more balanced now than they were five years ago. That is, the range between the enrollment at the largest and smallest school at each level (elementary, middle, and high) has narrowed.

**Table 1
Tigard-Tualatin School District, Enrollment History, 1997-98 to 2007-08**

Grade	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
K	776	785	806	813	835	831	779	807	893	906	860
1	906	893	857	869	901	909	906	921	900	990	984
2	854	926	882	855	874	937	912	887	944	905	1,017
3	857	868	925	894	889	878	926	920	897	964	903
4	876	871	890	978	902	906	877	913	940	931	963
5	826	908	867	904	993	919	899	914	900	975	945
6	852	857	885	885	918	1,008	924	926	913	910	965
7	879	862	861	916	899	912	990	945	950	929	937
8	861	886	877	875	918	914	915	1,003	969	957	953
9	919	910	928	933	928	991	952	971	1,066	992	1,015
10	903	908	898	928	948	923	977	951	952	1,033	1,015
11	830	908	865	891	933	963	891	942	932	910	1,007
12	723	709	790	764	827	822	844	890	874	898	890
US*	0	14	0	0	0	0	18	20	3	7	6
Total	11,062	11,305	11,331	11,505	11,765	11,913	11,810	12,010	12,133	12,307	12,460
<i>Annual change</i>		243 2.2%	26 0.2%	174 1.5%	260 2.3%	148 1.3%	-103 -0.9%	200 1.7%	123 1.0%	174 1.4%	153 1.2%
K-5	5,095	5,251	5,227	5,313	5,394	5,380	5,299	5,362	5,478	5,671	5,672
6-8	2,592	2,605	2,623	2,676	2,735	2,834	2,829	2,874	2,832	2,796	2,855
9-12	3,375	3,449	3,481	3,516	3,636	3,699	3,682	3,774	3,823	3,840	3,933

	5 Year Change: 1997-98 to 2002-03		5 Year Change: 2002-03 to 2007-08		10 Year Change: 1997-98 to 2007-08	
	Change	Pct.	Change	Pct.	Change	Pct.
K-5	285	5%	292	5%	577	11%
6-8	242	9%	21	1%	263	10%
9-12	324	9%	234	6%	558	16%
Total	851	8%	547	5%	1,398	12%

*Note: "US" are ungraded secondary students, included in grade 9-12 totals.

Sources: 1997-98 to 2006-07 from Oregon Department of Education; 2007-08 from TTSD

**Table 2
Enrollment History for Individual Schools, 2002-03 to 2007-08**

School	Historic Enrollment						Change 2002-03 to 2007-08	
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Number	Percent
Alberta Rider				424	535	540	540	
Bridgeport	546	528	493	500	521	534	-12	-2.2%
Byrom	682	688	657	661	634	659	-23	-3.4%
C.F. Tigard	595	590	636	605	614	598	3	0.5%
Deer Creek	624	646	651	563	606	609	-15	-2.4%
Durham	602	557	563	532	525	512	-90	-15.0%
Metzger	596	575	583	578	609	589	-7	-1.2%
Templeton	573	526	517	537	557	551	-22	-3.8%
Tualatin	462	458	526	537	539	560	98	21.2%
Woodward	700	731	736	537	531	520	-180	-25.7%
Elementary Totals	5,380	5,299	5,362	5,474	5,671	5,672	292	5.4%
Fowler M.S.	911	875	929	935	910	898	-13	-1.4%
Hazelbrook M.S.	875	902	1,018	1,010	1,002	1,002	127	14.5%
Twality M.S.	1,048	1,052	927	887	879	951	-97	-9.3%
Middle School Totals	2,834	2,829	2,874	2,832	2,791	2,851	17	0.6%
Tigard H.S.	1,963	1,913	1,960	2,005	2,000	2,002	39	2.0%
Tualatin H.S.	1,736	1,769	1,782	1,791	1,772	1,863	127	7.3%
Durham Center			32	31	73	72	72	
High School Totals	3,699	3,682	3,774	3,827	3,845	3,937	238	6.4%
District Totals	11,913	11,810	12,010	12,133	12,307	12,460	547	4.6%

Sources: Oregon Department of Education; TTSD

ENROLLMENT FORECASTS

The three most important influences on enrollment in a public school district are the age distribution of district residents, the public school “capture rates” (ratios of District enrollment to overall school age population), and migration (residential relocation). In growing districts, migration is often related to the level of new housing development. These influences should be taken into consideration in enrollment forecasts, whether they are short-range, mid-range, or long-range. Although there are no exact parameters, we often characterize one year as short-range, five years as mid-range, and ten years as long range.

Mid-range Forecast Methodology

In a five year forecast, the progression of current students through the grade levels accounts for the largest part of future enrollment, and trends in the number of new students entering kindergarten or first grade are closely related to trends in the number of births that have already occurred within the district. Therefore, the forecast models rely on expected ratios of kindergarten enrollment to births, and expected grade progression rates (GPRs). The GPR is the ratio of enrollment in a specific grade in one year to the enrollment of the same age cohort in the previous year. For example, the number of students enrolled in second grade this year divided by the number of students enrolled in first grade last year.

If capture rates and migration rates are stable or if they are changing gradually over time, they will be reflected in the historic kindergarten to birth ratios and GPRs that are used as a basis for the forecasts. Typically, most of the new housing to be occupied within a four to five year horizon will be built in developments that have already been platted, approved, or proposed. Public information about pending housing development may be used to adjust the kindergarten to birth ratios and GPRs for the District and its individual schools.

While land use decisions and recent building permit activity are good indicators of the potential amount and location of new housing, changes in the demand for housing and the demographic composition of new households moving into the District are difficult to predict over a five year period.

The uncertainties about housing demand are even greater over a longer forecast horizon, and a long-range forecast presents the additional challenges of quantifying potential housing supply and forecasting births.

District-wide Long-range Forecast Methodology

To ensure that enrollment forecasts are consistent with the dynamics of likely population growth within the District, we combine the grade progression enrollment model with a demographic cohort-component model used to forecast population for the District by age and sex. The components of population change are births, deaths, and migration. Using age-specific fertility rates, age-sex specific mortality rates, age-sex specific migration rates, estimates of recent net migration levels, and forecasts of future migration levels, each component is applied to the base year population in a manner that simulates the actual dynamics of population change.

The 1990 and 2000 Census results are used as a baseline for the population forecasts. By “surviving” the 1990 population and 1990s births (estimating the population in each age group that would survive to the year 2000) and comparing the “survived” population to the actual 2000 population by age group, we are able to estimate the overall level of net migration between 1990 and 2000 as well as net migration by gender and age cohort. The net migration data was used to develop initial net migration rates, which were used as a baseline for rates used to forecast net migration for the 2000 to 2020 period.

We estimated the number of births to women residing within the District each year from 1989 to 2006, using data from the Oregon Department of Human Services, Center for Health Statistics. Detailed information including the age of mothers enabled us to calculate fertility rates by age group for both 1990 and 2000. We adjusted the future fertility rates to reflect trends of decreasing fertility rates for women under age 25 and

increases for women age 30 and older. These trends are based on state and national observations, as well as the number of births by age of mother occurring within the District during the 2001 to 2005 period for which detailed birth data is available.

Historic school enrollment is linked to the population forecast in two ways. First, the kindergarten and first grade enrollments at the time of the most recent census (the 1999-2000 school year) are compared to the population at the appropriate ages counted in the census. The “capture rate,” or ratio of enrollment to population, is an estimate of the share of area children who are enrolled in TTSD schools. Assumptions for capture rates based on census data are used to bring new kindergarten and first grade students into the District’s enrollment. If there is evidence that capture rates have changed since the time of the census, they may be adjusted in the forecast.

The other way that historic population and enrollment are linked is through migration. Annual changes in school enrollment by cohort closely follow trends in the net migration of children in the District’s population. Once the students are in first grade, a set of baseline GPRs are used to move students from one grade to the next. These rates, usually 1.00 for elementary grades, represent a scenario under which there is no change due to migration. Enrollment change beyond the baseline is added (or subtracted, if appropriate) at each grade level depending on the migration levels of the overall population by single years of age.

Residential Development

In the five year forecast published in December, we documented a slowdown in residential building permit activity beginning in 2007, reflecting current lower demand for new housing. Given the expected growth in the metropolitan region and the District’s proximity to the region’s major employment centers, we expect housing demand to rebound. The current downturn did influence the short-range enrollment growth rates for 2008-09 and 2009-10.

A bigger concern in the long run is the availability of residential land for new housing construction. Before we prepared the population forecast for this study, we considered

the possibility that land use constraints would prevent the District from returning to its recent average of about 450 new single family homes annually. If about 200 homes are built in each of the next two years, and an average of 450 homes are built in the following eight years, a total of 4,000 units would be added in the 10 year period. Does the District have enough residential land? After reviewing existing plans and current planning efforts, we conclude that the capacity does exist. However, as the supply of buildable land shrinks, single family housing that is both affordable and desirable for families with school age children may become scarcer.

Very little rental multi-family development has occurred in recent years, so developers may respond to demand for this product type. Market rate multi-family development usually generates very few school age children per unit, but a large number of new units or a concerted effort to add affordable units could contribute to District enrollment gains.

In Tigard, according to the *Tigard 2007 Report* that was part of the City's comprehensive plan update, at the end of June 2006, less than 10 percent of land within the City was considered buildable. Large lots available for residential development were scarce with only 49 lots greater than two acres. "Based on the June 2006 buildable lands data, if the City developed its remaining residential lands, an additional 2,902 to 3,482 units could be built."¹ These estimates include a 20% allowance for additional projects that occur on land not included on the buildable lands inventory (BLI).

We conducted our own analysis using GIS shape files provided by the City of Tigard, including the 2007 BLI and platted subdivisions, as well as information from the City's web site about new subdivisions approved but not yet platted. Our results were similar. We estimated that a net housing gain of 1,077 units will occur based on approved land use applications that have been submitted since 2005, and that about 3,000 additional units could be built on remaining residential land, also allowing for a share of development that occurs on lands not included in the inventory. We also calculated that 86 percent of Tigard's buildable residential land is within the TTSD boundary.

¹*Tigard 2007 Report*, February 2007. Available at http://www.ci.tigard.or.us/city_hall/departments/cd/long_range_planning/comprehensive_plan.asp

To the west of the City of Tigard, West Bull Mountain includes 500 acres added to the Urban Growth Boundary (UGB) in 2002, known as Areas 63 and 64. About 380 acres are within the TTSD boundary. A team of Washington County staff and consultants is currently working on a concept plan for West Bull Mountain with extensive public involvement. Their timeline calls for adopting comprehensive plan amendments as early as Summer 2009. Given the progress being made in planning, it is likely that additional residential capacity could be added to the District in this area within the 10 year horizon of these forecasts.

In King City, after the current developments that are underway are completed, there will be only a small amount of land available for more residential development. Including ongoing and potential new subdivisions, there may be capacity for a few hundred homes within the City's current boundaries.

The City of Tualatin envisions only limited development under its current plans. At the beginning of the Tualatin Tomorrow strategic planning work in mid-2006, a community profile declared that "Tualatin is expected to grow to about 28,000 people at build-out, given the amount of land within its current urban planning area boundary."²

Given the 2005 population estimate of 25,465 and subsequent growth to 26,025 in 2007, the expected population at build-out allows the City to add only 2,000 more residents.³ However, the possibility of future changes to the plans is acknowledged in the final vision, with action statements such as "consider a housing element for the Town Center plan, including guidelines and tools to promote development of a mix of higher-density and affordable housing," and "prioritize City efforts on orchestrating development of affordable housing throughout Tualatin."⁴

Future expansions of the City of Tualatin's boundaries, if any, will have little effect on growth in the TTSD, since nearly all of the unincorporated areas adjacent to the City are

²*Tualatin Community Profile and Trends Report*, July 2006. <http://www.tualatintomorrow.org/>

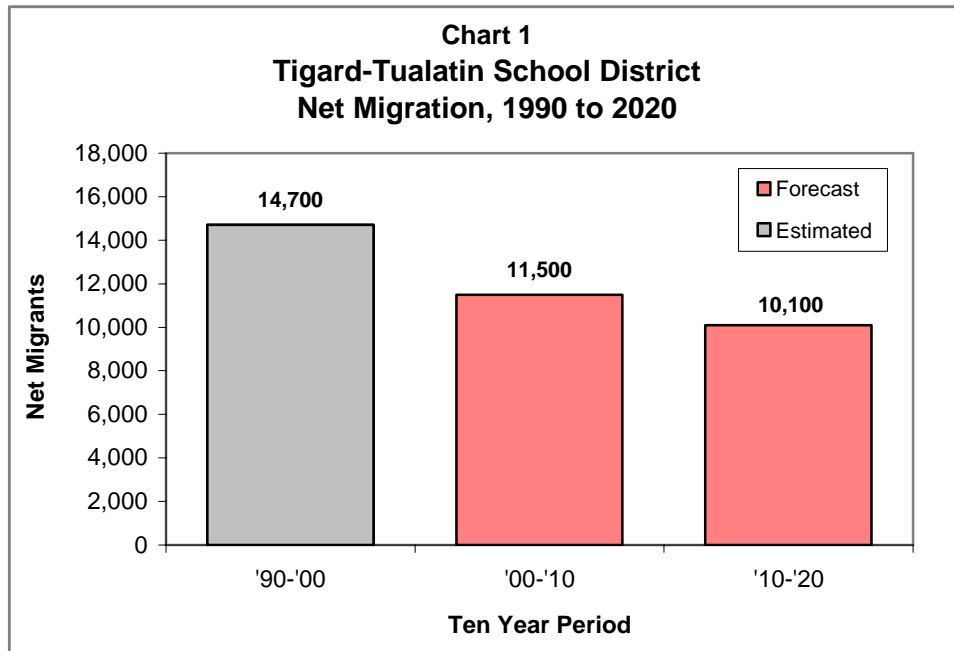
³*2007 Oregon Population Report*, Population Research Center, Portland State University. <http://www.pdx.edu/prc>.

⁴*Community Vision and Strategic Action Plan*, June 2007. <http://www.tualatintomorrow.org/>

outside of the TTSD’s boundaries. Tualatin’s contribution to TTSD’s growth will be from build-out of existing residential land and any infill and redevelopment.

Population Forecast

Since we are nearing the end of the 2000 to 2010 forecast period, we have a substantial amount of data to compare to the 1990 to 2000 baseline period, including several years of school enrollment, birth, and housing development data. All indicate that population gains within the District in the current decade will be slightly lower than in the 1990s, and that most of the difference will be due to lower levels of net migration (people moving in minus those moving out). The population has continued to grow due to natural increase (births minus deaths). As the overall population grows and new housing development within the District boundaries remains at or below its recent levels, population growth due to net migration is forecast to be even lower in the 2010 to 2020 period. Chart 1 shows our 1990 to 2000 estimate and 2000 to 2020 forecasts of TTSD population growth attributable to net migration.



Although very little growth in the young adult population is expected due to net migration, the young adult population will increase because of overall population growth and the larger baby boom “echo” cohort born in the 1980s and 1990s. This increase causes the number of births within the TTSD to increase throughout the forecast period in spite of stable or declining fertility rates. Table 3 shows historic births from 1990 to 2006 as well as forecasts from 2007 until 2012, the period that will have an impact on the enrollment forecasts presented in this study.

Table 3
Estimated and Forecast Births
Tigard-Tualatin School District

Year	Births
1990	793
1991	829
1992	888
1993	893
1994	945
1995	954
1996	997
1997	951
1998	956
1999	1,024
2000	1,063
2001	1,082
2002	1,116
2003	1,110
2004	1,154
2005	1,158
2006 (preliminary)	1,208
2007 (forecast)	1,194
2008 (forecast)	1,223
2009 (forecast)	1,243
2010 (forecast)	1,262
2011 (forecast)	1,275
2012 (forecast)	1,288

Source: 1990-2006 birth data from Oregon Center for Health Statistics allocated to TTSD boundary by PSU-PRC. 2007-2012 forecasts, PSU-PRC.

Our forecast for 2020 population in the TTSD is 102,837, an increase of 32,062 persons from the 2000 Census (1.9 percent average annual growth). The 2000 to 2020 growth

rate of 45 percent for the District is similar to the 47 percent growth in the State of Oregon Office of Economic Analysis' most recent forecast for Washington County.

The district-wide population forecast by age group is presented in Table 4. School-age population (5 to 17) is forecast to increase at a slower rate than overall population. The 4,121 person growth in school-age population amounts to 32 percent in the 20 year period, or 1.4 percent annually. By 2020, the fastest growing age groups are the “baby boom” generation ages 55 to 74. Population age 55 and older in the District is forecast to double between 2000 and 2020.

**Table 4
Population by Age Group
Tigard-Tualatin School District, 1990 to 2020**

	1990 Census	2000 Census	2010 Forecast	2020 Forecast	2000 to 2020 Change	
					Number	Percent
Under Age 5	3,934	4,977	6,100	6,691	1,714	34%
Age 5 to 9	3,744	5,049	5,789	6,598	1,549	31%
Age 10 to 14	3,255	4,896	5,446	6,530	1,634	33%
Age 15 to 17	1,761	2,890	3,307	3,828	938	32%
Age 18 to 19	1,074	1,618	2,038	2,260	642	40%
Age 20 to 24	3,190	4,433	4,847	5,668	1,235	28%
Age 25 to 29	4,509	5,475	6,445	7,192	1,717	31%
Age 30 to 34	5,159	5,477	5,995	6,089	612	11%
Age 35 to 39	5,018	5,916	7,308	8,004	2,088	35%
Age 40 to 44	4,404	6,143	7,283	7,282	1,139	19%
Age 45 to 49	3,045	5,723	6,507	7,911	2,188	38%
Age 50 to 54	2,046	4,532	6,180	7,237	2,705	60%
Age 55 to 59	1,655	3,137	5,728	6,412	3,275	104%
Age 60 to 64	1,710	2,183	4,581	6,079	3,896	178%
Age 65 to 69	1,753	1,722	3,069	5,433	3,711	216%
Age 70 to 74	1,709	1,791	2,089	4,067	2,276	127%
Age 75 to 79	1,614	1,856	1,606	2,519	663	36%
Age 80 to 84	1,131	1,590	1,458	1,462	-128	-8%
Age 85 and over	942	1,367	1,671	1,576	209	15%
Total Population	51,653	70,775	87,447	102,837	32,062	45%
Total age 5 to 17	8,760	12,835	14,542	16,956	4,121	32%
share age 5 to 17	17.0%	18.1%	16.6%	16.5%		

	1990-2000	2000-2010	2010-2020
Population Change	19,122	16,672	15,390
<i>Percent</i>	37%	24%	18%
<i>Average Annual</i>	3.1%	2.1%	1.6%

Source: U.S. Census Bureau, 1990 and 2000 Censuses; data aggregated to TTSD boundary by Portland State University Population Research Center. PSU-PRC Forecasts, 2010 and 2020.

District-wide Enrollment Forecast

Chart 2 compares the historic and forecast number of births in the District with the historic and forecast number of TTSD kindergarten students. Births correspond to kindergarten cohorts (September to August). Although many children move into and out of the District between birth and age five, and not all District residents attend TTSD kindergartens, the trend in kindergarten enrollment has generally followed the trend in the birth cohort. Fall 2007 was an exception, because kindergarten enrollment was lower than in Fall 2006 in spite of an increase in births between 2000-01 and 2001-02. Over the past 10 years, the gap between births and kindergarten enrollment has grown as a consequence of lower net migration, declining capture rates, or some combination of the two factors. Kindergarten and first grade capture rates are shown in Table 5 on the next page. The higher rates for first grade reflect the fact that additional residents enter TTSD schools after completing their kindergarten year in private schools.

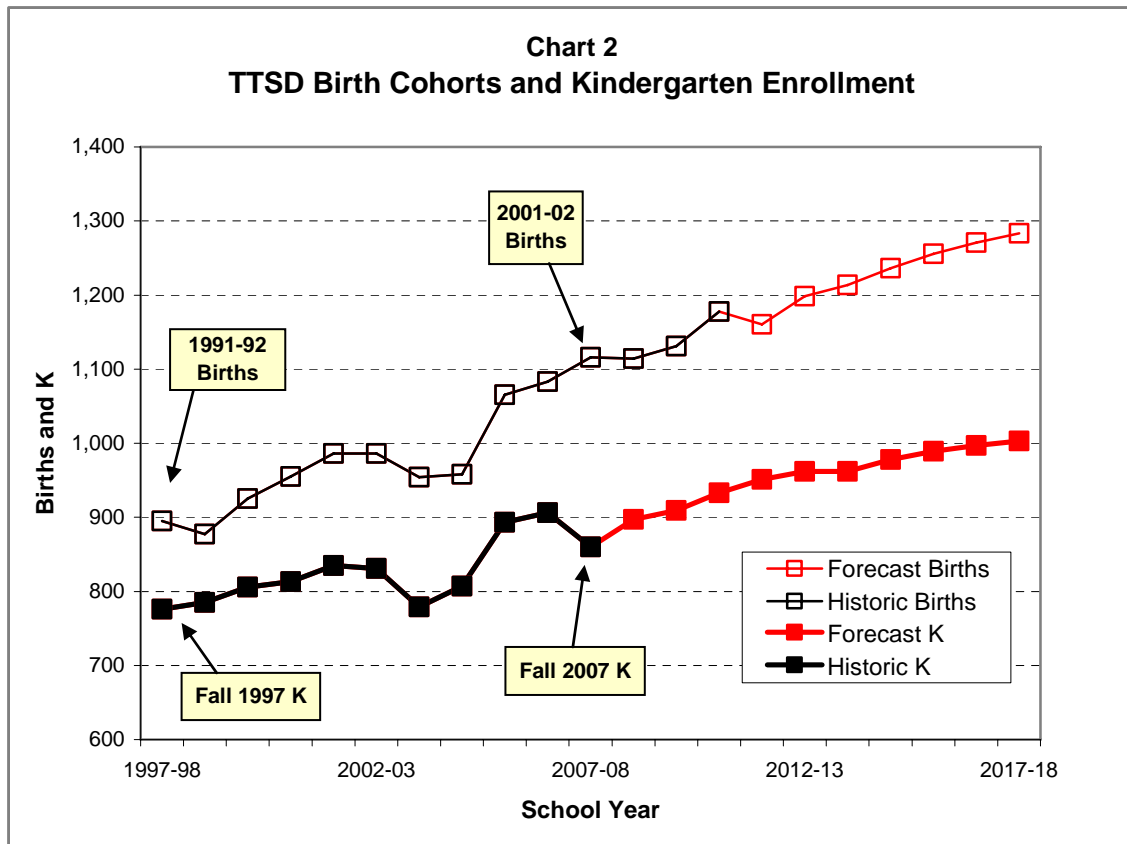


Table 5
Estimated and Forecast Capture Rates*
Tigard-Tualatin School District

School Year	Kindergarten	Grade 1
1989-1990	0.83	0.88
1999-2000	0.82	0.87
2009-2010 (forecast)	0.78	0.85
2017-2018 (forecast)	0.78	0.84

**The ratio of enrollment in District schools to total population in the District.*

The District’s growth has been fueled by migration, as there have consistently been more households moving in than out. This migration has contributed to the long term growth in District births and subsequent kindergarten enrollments, as we showed in Chart 2. Table 6 illustrates how the TTSD also gains students due to migration at nearly every grade level. Over the last 10 years, average GPRs for each grade from 2nd to 8th have been 1.01 or 1.02, indicating growth of one to two percent more students each year

Table 6
Grade Progression Rates¹
Tigard-Tualatin S.D. History and Forecast

Grade Transition	Historic Average: 1997-98 to 2007-08	Baseline (without the influence of migration)	Forecast Average: 2007-08 to 2017-18
K-1	1.11	-- ²	1.09
1-2	1.01	1.00	1.01
2-3	1.01	1.00	1.01
3-4	1.02	1.00	1.01
4-5	1.02	1.00	1.01
5-6	1.01	1.00	1.01
6-7	1.01	1.00	1.01
7-8	1.01	1.00	1.01
8-9	1.06	1.04	1.05
9-10	0.99	0.98	0.99
10-11	0.98	0.96	0.97
11-12	0.92	0.97	0.97

1. Ratio of enrollment in an individual grade to enrollment in the previous grade the previous year.

2. The enrollment forecast model uses capture rates for first grade; K-1 baseline GPRs are not used.

attributable to migration of school-age children. The forecast also includes enrollment growth due to migration, but at slightly lower rates than in the past.

Table 7 contains grade level forecasts for the Tigard-Tualatin School District for each year from 2008-09 to 2017-18. The forecasts are also summarized by grade level groups (K-5, 6-8, and 9-12). Overall K-12 enrollment is forecast to increase by 11 percent in the next 10 years. The growth of 1,432 students is similar to the K-12 growth of the past 10 years, but the pattern of growth by grade level differs. High schools have led the District's growth in recent years, but are expected to grow very little over the next five years between 2007-08 and 2012-13. In this first five year increment, growth is concentrated at the elementary and middle school levels. During the last five years, 2012-13 to 2017-18, forecast growth is more balanced among the grade levels, with average annual growth rates at or near one percent for elementary, middle, and high school.

**Table 7
Tigard-Tualatin School District, Enrollment Forecasts, 2008-09 to 2017-18**

Grade	Actual		Forecast								
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
K	860	897	909	933	951	962	962	978	989	997	1,003
1	984	946	987	1,000	1,020	1,039	1,049	1,048	1,065	1,076	1,085
2	1,017	992	954	1,002	1,015	1,032	1,049	1,058	1,056	1,073	1,084
3	903	1,023	997	961	1,010	1,023	1,042	1,058	1,067	1,064	1,081
4	963	911	1,032	1,013	976	1,026	1,033	1,051	1,066	1,074	1,071
5	945	977	924	1,047	1,028	990	1,036	1,042	1,059	1,073	1,081
6	965	943	975	931	1,054	1,035	1,000	1,045	1,050	1,067	1,081
7	937	980	958	990	946	1,070	1,045	1,009	1,054	1,058	1,075
8	953	951	995	972	1,005	960	1,081	1,055	1,017	1,062	1,066
9	1,015	1,001	999	1,045	1,021	1,055	1,008	1,134	1,106	1,065	1,112
10	1,015	1,006	992	997	1,043	1,019	1,044	997	1,120	1,091	1,051
11	1,007	983	974	960	965	1,010	988	1,011	965	1,083	1,055
12	890	972	948	940	926	931	972	951	972	928	1,041
US*	6	6	6	6	6	6	6	6	6	6	6
Total	12,460	12,588	12,650	12,797	12,966	13,158	13,315	13,443	13,592	13,717	13,892
<i>Annual change</i>		128 1.0%	62 0.5%	147 1.2%	169 1.3%	192 1.5%	157 1.2%	128 1.0%	149 1.1%	125 0.9%	175 1.3%
K-5	5,672	5,746	5,803	5,956	6,000	6,072	6,171	6,235	6,302	6,357	6,405
6-8	2,855	2,874	2,928	2,893	3,005	3,065	3,126	3,109	3,121	3,187	3,222
9-12	3,933	3,968	3,919	3,948	3,961	4,021	4,018	4,099	4,169	4,173	4,265

	5 Year Growth: 2007-08 to 2012-13		5 Year Growth: 2012-13 to 2017-18		10 Year Growth: 2007-08 to 2017-18	
	Growth	Pct.	Growth	Pct.	Growth	Pct.
K-5	400	7%	333	5%	733	13%
6-8	210	7%	157	5%	367	13%
9-12	88	2%	244	6%	332	8%
Total	698	6%	734	6%	1,432	11%

*Note: "US" are ungraded secondary students; included in grade 9-12 totals

Population Research Center, Portland State University, June 2008

Individual School Forecasts

We prepared forecasts for individual schools under a scenario in which current boundaries and grade configurations remain constant. Of course, school districts typically respond to enrollment change in various ways that might alter the status quo, such as attendance area boundary changes, building new schools, or offering special programs. However, the individual school forecasts depict what future enrollments might be if today's facilities and boundaries were unchanged.

The methodology for the individual school forecasts is the same as in the mid-range forecast, but more judgment is needed to distribute future births from the district-wide enrollment to individual elementary attendance areas. Births are allocated to attendance areas through 2012 based on trends in actual births to residents of each area during the 1998 to 2005 period, and expected levels of housing development. New kindergarten classes were forecast each year based on expected ratios of kindergarten to birth cohorts within elementary attendance areas. Subsequent grades were forecast using GPRs based initially on recent rates and adjusted based on expected levels of housing growth. The final forecasts for individual schools are controlled to match the district-wide forecasts.

Among elementary schools, Alberta Rider and Woodward's attendance areas contain the most buildable residential land as well as the TTSD portion of the West Bull Mountain UGB expansion area. Most of their buildable land within the City of Tigard is zoned R-7 for homes with a minimum lot size of 5,000 square feet, a higher density than most existing neighborhoods. The two schools are likely to experience the largest increase among elementary schools over the next 10 years if their boundaries remain unchanged.

Middle school enrollment growth is concentrated at Twality due to growth in its feeder elementary schools, notably Alberta Rider and Deer Creek, as well as ongoing new housing development. Each of the high schools is expected to grow slowly during the first several years of the forecast, with most of their growth occurring after 2013-14.

Table 8 on the next page presents the enrollment forecasts for each school, grouped by school level (elementary, middle, and high).

Table 8
Enrollment Forecasts for Individual Schools, 2008-09 to 2017-18

School	Actual 2007-08	Forecast										Change 2007-08- 2017-18
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	
Alberta Rider	540	549	579	606	639	656	688	719	745	761	768	228
Bridgeport	534	535	516	541	540	539	542	541	552	560	568	34
Byrom	659	661	674	685	676	680	672	677	667	666	661	2
C.F. Tigard	598	610	591	600	604	595	592	585	593	601	611	13
Deer Creek	609	630	637	664	661	673	695	691	692	688	686	77
Durham	512	501	498	503	514	525	533	545	553	557	561	49
Metzger	589	596	601	619	621	623	623	631	638	641	644	55
Templeton	551	557	576	583	584	590	596	595	605	609	615	64
Tualatin	560	581	593	603	602	610	616	617	621	627	636	76
Woodward	520	526	538	552	559	581	614	634	636	647	655	135
Elementary Totals	5,672	5,746	5,803	5,956	6,000	6,072	6,171	6,235	6,302	6,357	6,405	733
Fowler M.S.	898	875	884	861	904	903	916	913	922	942	956	58
Hazelbrook M.S.	1,002	989	1,013	985	1,029	1,030	1,076	1,063	1,072	1,066	1,061	59
Twality M.S.	951	1,006	1,027	1,043	1,068	1,128	1,130	1,129	1,123	1,175	1,201	250
Middle School Totals	2,851	2,870	2,924	2,889	3,001	3,061	3,122	3,105	3,117	3,183	3,218	367
Tigard H.S.	2,002	2,000	1,955	1,965	1,977	2,009	2,017	2,046	2,095	2,090	2,128	126
Tualatin H.S.	1,863	1,900	1,896	1,915	1,916	1,944	1,933	1,985	2,006	2,015	2,069	206
Durham Center (8 th -12 th)	72	72	72	72	72	72	72	72	72	72	72	0
High School Totals	3,937	3,972	3,923	3,952	3,965	4,025	4,022	4,103	4,173	4,177	4,269	332
District Totals	12,460	12,588	12,650	12,797	12,966	13,158	13,315	13,443	13,592	13,717	13,892	1,432

Population Research Center, Portland State University, June 2008