Portland State University

PDXScholar

School District Enrollment Forecast Reports | Population Research Center

2-1-2008

Banks School District Enrollment Forecasts 2008-09 TO 2017-18

Portland State University. Population Research Center

Charles Rynerson
Portland State University, rynerson@pdx.edu

Vivian Siu
Portland State University

Follow this and additional works at: https://pdxscholar.library.pdx.edu/enrollmentforecasts

 Part of the Urban Studies and Planning Commons

Let us know how access to this document benefits you.

Recommended Citation

Portland State University. Population Research Center; Rynerson, Charles; and Siu, Vivian, "Banks School District Enrollment Forecasts 2008-09 TO 2017-18" (2008). *School District Enrollment Forecast Reports*. 1.
https://pdxscholar.library.pdx.edu/enrollmentforecasts/1

This Technical Report is brought to you for free and open access. It has been accepted for inclusion in School District Enrollment Forecast Reports by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: pdxscholar@pdx.edu.

BANKS SCHOOL DISTRICT
ENROLLMENT FORECASTS
2008-09 TO 2017-18

Portland State
UNIVERSITY

Population Research
Center

FEBRUARY, 2008

BANKS SCHOOL DISTRICT
ENROLLMENT FORECASTS
2008-09 TO 2017-18

Prepared By
Population Research Center
Portland State University

FEBRUARY, 2008

Project Staff:
Charles Rynerson
Vivian Siu

CONTENTS

TABLES, CHARTS, AND MAPS

TABLES, CHARTS, AND MAPS (continued)

EXECUTIVE SUMMARY

The Banks School District (BSD) added about 265 students between 1996-97 and 2001-02, a period marked by a thriving economy in Washington County and the construction of about four hundred new homes in the City of Banks. Since 2001-02, total K-12 enrollment has remained near 1,200. The current (2007-08) year's official enrollment of 1,200 is 24 students (2.0 percent) lower than last year. Elementary (K-6) enrollment experienced a larger decrease of 28 students (4.7 percent) this year.

This report presents the results of a study conducted by the Portland State University Population Research Center (PRC) concluding that the District should expect enrollment growth in the long run, although the forecasts for the next three to four years are for stable or slightly declining K-12 enrollments. Two forecast scenarios are presented, a "HIGH SCENARIO" forecast that is consistent with the population forecast recently adopted in the City of Banks Comprehensive Plan, and a "LOW SCENARIO" forecast under which housing development and migration trends remain similar to their recent levels.

The City of Banks has identified housing needs and updated its Comprehensive Plan to reflect a population forecast of 3,739 by the year 2024, nearly triple the 2000 Census population.[1] The City is currently considering an expansion of its Urban Growth Boundary (UGB). However, the largest portion of the District comprising unincorporated Washington County is expected to grow very little if at all. Combining the City's population forecast with the expectation of slower growth in the unincorporated area, we forecast total BSD population growth in the HIGH SCENARIO averaging 1.7 percent annually between 2000 and 2024.

[1]"Banks Comprehensive Plan Text Amendment to Update Housing and Residential Land Needs," Ordinance Number 110.30 adopted by Banks City Council December 13, 2005.

This study also presents estimates of the number of students per housing unit within the District. We found that student generation is higher in homes within the City of Banks than those in unincorporated Washington County. More significantly, BSD student generation rates are higher in newer homes (Arbor Village and Banks Estates in the City and homes built since 2000 in the unincorporated area) than in older homes. Detailed information about the average number of BSD students per home is presented in the "Housing Development and Student Generation" section of this report.

HIGH SCENARIO Enrollment Forecast

Table 1 contains recent historic and HIGH SCENARIO forecast enrollments for the District's grade level groups in five year intervals. We characterize this as the *most likely* scenario, because it is consistent with an increased supply of housing related to the potential UGB expansion, and with the demonstrated long run demand for housing in Washington County. Following the table is a brief summary of the forecasts.

Table 1
Enrollment History and *HIGH SCENARIO* Forecast
Banks School District

	Actual			HIGH Forecast	
	1997-98	**2002-03**	**2007-08**	**2012-13**	**2017-18**
K-6	478	586	574	618	746
5 year change		*108*	*-12*	*44*	*128*
7-8	155	194	213	208	264
5 year change		*39*	*19*	*-5*	*56*
9-12	328	424	413	433	508
5 year change		*96*	*-11*	*20*	*75*
Total	**961**	**1,204**	**1,200**	**1,259**	**1,518**
5 year change		***243***	***-4***	***59***	***259***

- Total K-12 enrollment is expected to grow by 318 students in the next ten years.

- Enrollment grows very little during the first three to five years of the forecast due to the small amount of vacant or redevelopable residential land that currently exists either inside or outside of the City of Banks.

- Beginning in about 2012-13, increased migration into the District occurs as new residential developments add to the District's population and housing.

- K-12 Enrollment growth averages four percent annually during the 2012-13 to 2017-18 period.

LOW SCENARIO Enrollment Forecast

Table 2 contains recent historic and LOW SCENARIO forecast enrollments for the District's grade level groups in five year intervals. This scenario is likely if land use changes do not occur or are delayed, or large scale development does not occur within the 10 year forecast horizon. Following the table is a brief summary of the forecasts. Chart 1 at the end of the Executive Summary compares total K-12 enrollment under the HIGH and LOW scenarios with historic enrollment.

Table 2
Enrollment History and *LOW SCENARIO* Forecast
Banks School District

	Actual			LOW Forecast	
	1997-98	**2002-03**	**2007-08**	**2012-13**	**2017-18**
K-6	478	586	574	567	595
5 year change		*108*	*-12*	*-7*	*28*
7-8	155	194	213	188	229
5 year change		*39*	*19*	*-25*	*41*
9-12	328	424	413	405	453
5 year change		*96*	*-11*	*-8*	*48*
Total	**961**	**1,204**	**1,200**	**1,160**	**1,277**
5 year change		***243***	***-4***	***-40***	***117***

- Total K-12 enrollment is expected to grow by 77 students in the next ten years.

- All school levels experience small declines in the first five years, and then grow by one to two percent annually during the following five year interval.

- Enrollment growth is possible even with limited housing growth, assuming that families with school age children continue to be attracted to the District and remain a large part of the resale and rental housing markets.

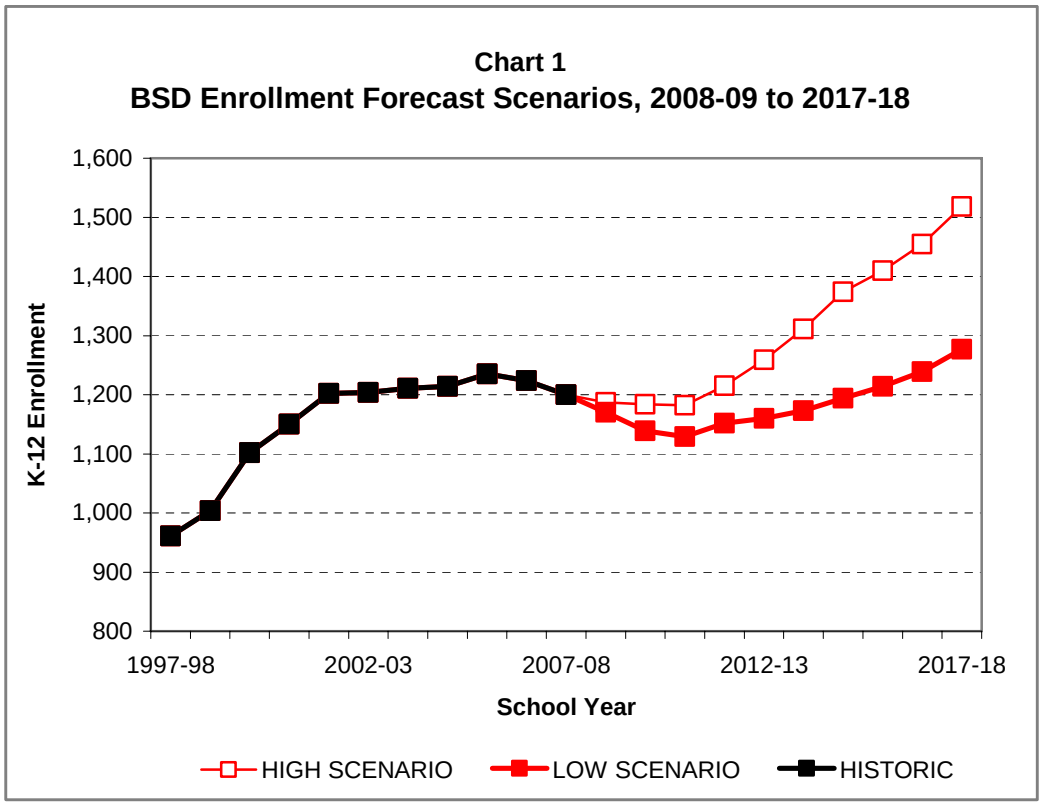


Chart 1
BSD Enrollment Forecast Scenarios, 2008-09 to 2017-18
K-12 Enrollment
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
1997-98
2002-03
2007-08
2012-13
2017-18
School Year
HIGH SCENARIO
LOW SCENARIO
HISTORIC

INTRODUCTION

The Banks School District (BSD) and its Facilities Planning Committee requested that the Portland State University Population Research Center (PRC) prepare enrollment forecasts for use in the District's long-range planning. This study integrates information about BSD enrollment trends with local area population, housing, and economic trends, and includes forecasts of district-wide enrollment by grade level for the period between 2008-09 and 2017-18. Information sources include the U.S. Census Bureau, birth data from the Oregon Center for Health Statistics, county population forecasts from the Oregon Office of Economic Analysis, planning documents associated with the City of Banks Comprehensive Plan, residential tax lot data and other shape files from Metro's Regional Land Inventory System (RLIS), Washington County building permit data, employment trends and forecasts from the Oregon Employment Department, and personal interviews with city officials.

The District serves the City of Banks in Washington County as well as surrounding unincorporated areas in northwestern Washington County, including the communities of Buxton, Manning, and Timber.

Following this introduction are sections presenting recent population, housing, and enrollment trends within the District. Another section is devoted to our research on the average number of BSD students per housing unit by housing characteristic. Next are the results of the district-wide enrollment forecasts and a description of the forecast methodology. The final section contains a brief discussion of the nature and accuracy of forecasts.

We would like to acknowledge (in alphabetical order) the help of the following individuals who contributed to the study by answering questions, providing local insight, or providing data:

- Jolynn Becker, City of Banks
- Andrea Brunet, NWRESD
- Gary Hartman, Banks School District
- Ted Havens, Visitation School
- Steve Kelley, Washington County
- Members, BSD Facilities Committee
- Marlo Mosser, Banks School District
- Marv Ott, Banks School District
- Diane Ramsperger, St. Francis of Assisi School
- Miriam Wilson, Arbor Custom Homes
- K.J. Won, City of Banks
- Diane Woodruff, Banks Christian Academy

POPULATION AND HOUSING TRENDS, 1990 to 2007

During the decade between 1990 and 2000, total population within the BSD grew by 11 percent, from 5,136 persons to 5,722. The District's growth rate in the 1990s was much slower than the 43 percent Washington County growth rate. However, the population of the City of Banks more than doubled in the 1990s. The 128 percent population increase that Banks experienced between 1990 and 2000 was second only to Sherwood among Washington County's cities. As a result of the City's growth and a small population loss in unincorporated areas, the share of the District's population living within the City grew from 11 percent in 1990 to 22 percent in 2000.

Between 2000 and 2007, Washington County and the City of Banks have continued to grow, but their rate of growth has slowed compared with the 1990s. While population counts are not available for the BSD after the 2000 Census, trends in housing construction, births, and school enrollment suggest that the District's population has continued to grow more slowly than the overall population of the county. Table 3 shows the 1990 and 2000 census counts and 2007 population estimates for the City, County, and the metro area.

Table 3
City and Region Population, 1990, 2000, and 2007

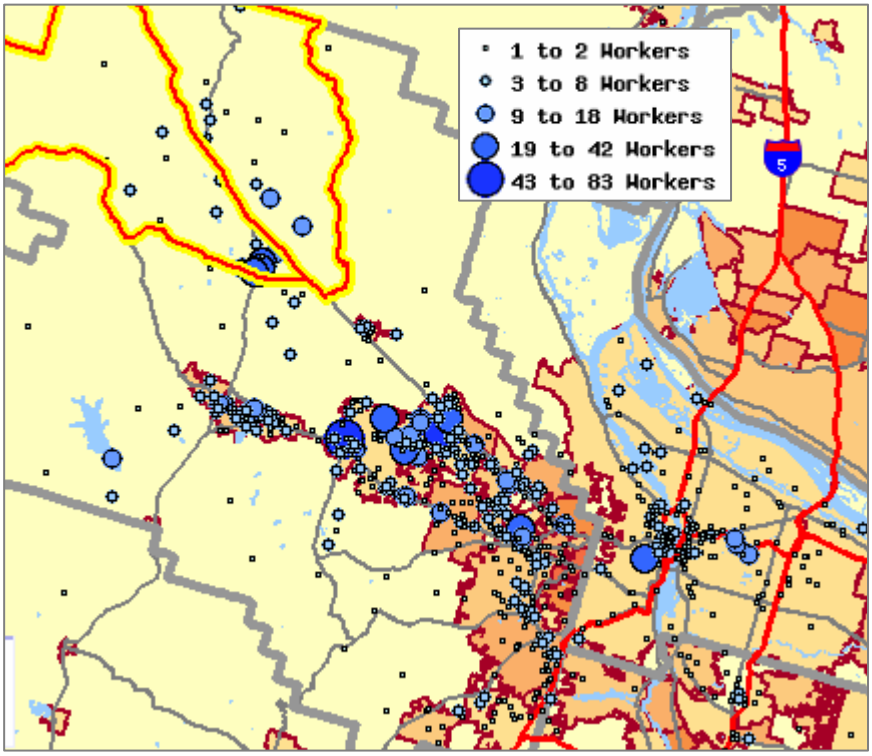
				Avg. Annual Growth Rate	
	1990	2000	2007	1990-2000	2000-2007
City of Banks	563	1,286	1,435	*8.5%*	*1.5%*
BSD Unincorporated	4,573	4,436	N/A	*-0.3%*	
BSD Total	5,136	5,722	N/A	*1.1%*	
Washington County	311,554	445,342	511,075	*3.6%*	*1.9%*
Portland-Vancouver-Beaverton MSA*	1,523,741	1,927,881	2,159,720	*2.4%*	*1.6%*

**Note: Portland-Vancouver-Beaverton MSA consists of Clackamas, Columbia, Multnomah, Washington, Yamhill (OR) and Clark and Skamania (WA) Counties.*

Sources: U.S. Census Bureau, 1990 and 2000 censuses; Portland State University Population Research Center, July 1, 2007 estimates.

The period between 1997 and 2000 when the City of Banks gained the most housing and population coincided with explosive growth in Washington County's job market, led by the semiconductor industry concentrated in nearby Hillsboro. Although the County lost jobs between 2001 and 2003, growth resumed by 2004 and the County added over 20,000 jobs (nine percent) between 2004 and 2006. By late 2007, job growth had begun to slow again, as the County only added 1,700 jobs (0.7 percent) in the 12 months ending in December 2007.[2]

Map 1
Place of Work of Banks Area Residents, 2004



The dots on Map 1 indicate the places of work for most Banks area residents.[3] Based on 2004 data from firms covered by unemployment insurance (excluding most agricultural jobs and self-employment), nearly three quarters of employed Banks area residents worked in Washington County, and most of the rest worked in the City of Portland.

[2]"Current Employment Statistics". Oregon Employment Department, OLMIS.
[3]U.S. Census Bureau, LED Origin-Destination Database (2nd quarter 2004). Commute shed report for residents of Washington County census tracts 334 and 335, which include most of the BSD's area. The map and report were created on line at http://lehdmap2.did.census.gov/themap/.

Among the region's incorporated cities, the largest share of Banks area residents worked in Hillsboro (24 percent), followed by Portland (17 percent), Beaverton (nine percent), Forest Grove (six percent), and the City of Banks itself (five percent).

Population and Migration by Age Group

Population by age group for 1990 and 2000 is shown in Table 4 on the next page. In 2000, 22 percent of the District's population was of school age (5 to 17), compared with only 19 percent in Washington County overall. School-age population in the BSD grew by only three percent in the 1990s, a slower rate than the 11 percent increase for overall population. The largest growth occurred in the age groups between 40 and 59, while the age groups between 20 and 39 had relatively stable populations. Adults in their 40s and 50s generally contribute less to the number of births and young children than those in their 20s and 30s, so it is not surprising that the number of children grew very little. The declines observed in the 25 to 29 year old population between 1990 and 2000 have a precedent in state and national demographic trends, as persons age 25 to 29 in 2000 were born during the late 1960s and early 1970s "baby bust" that followed the "baby boom." Similarly, persons who were age 65 to 69 in 2000 were born during the depression era of the early 1930s, when births also fell from previous levels. In the BSD, the age groups experiencing the largest percentage declines between 1990 and 2000 were the 65 to 69 and 70 to 74 year old age groups.

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 net migration by age cohort. We estimate that about 63 percent of BSD's population growth in the 1990s was directly attributable to net migration (people moving in minus people moving out). Chart 2 on the next page shows the estimated population change that each age group contributed due to migration between 1990 and 2000. This growth added to the population of children as well as adults in their 30s and 40s. The number of persons in their 30s changed very little between 1990 and 2000, so without the additional population due to migration, the age 30 to 39 population would have fallen.

Table 4

Population by Age Group
Banks School District, 1990 and 2000

	1990	2000	1990 to 2000 Change	
			Number	Percent
Under Age 5	386	411	25	*6%*
Age 5 to 9	460	450	-10	*-2%*
Age 10 to 14	493	517	24	*5%*
Age 15 to 17	283	309	26	*9%*
Age 18 to 19	168	144	-24	*-14%*
Age 20 to 24	262	256	-6	*-2%*
Age 25 to 29	314	289	-25	*-8%*
Age 30 to 34	397	384	-13	*-3%*
Age 35 to 39	476	511	35	*7%*
Age 40 to 44	435	522	87	*20%*
Age 45 to 49	349	523	174	*50%*
Age 50 to 54	290	436	146	*50%*
Age 55 to 59	181	301	120	*66%*
Age 60 to 64	184	215	31	*17%*
Age 65 to 69	160	136	-24	*-15%*
Age 70 to 74	129	105	-24	*-19%*
Age 75 to 79	93	105	12	*13%*
Age 80 to 84	41	66	25	*61%*
Age 85 and over	35	42	7	*20%*
Total Population	**5,136**	**5,722**	**586**	***11%***
Total age 5 to 17	1,236	1,276	40	*3%*
share age 5 to 17	*24.1%*	*22.3%*		

Source: U.S. Census Bureau, 1990 and 2000 Censuses; data aggregated to BSD boundary by Portland State University Population Research Center.

Chart 2

Population Change Due to Migration, 1990 to 2000
Banks School District by Age Group

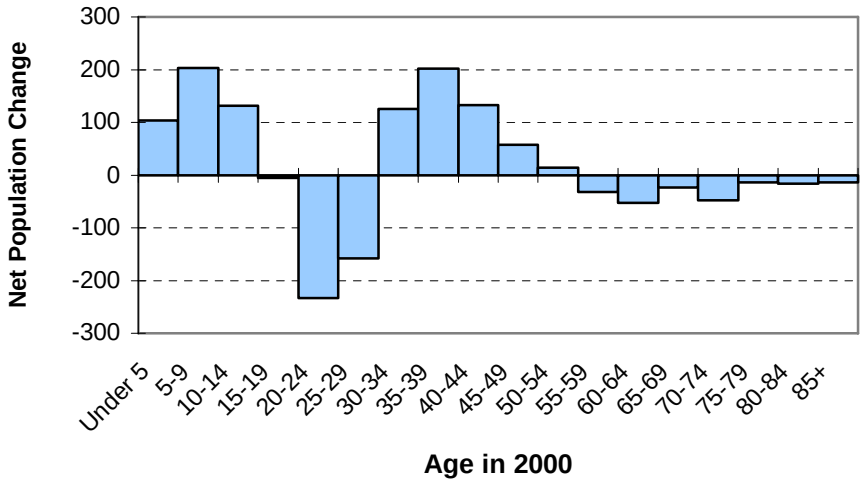
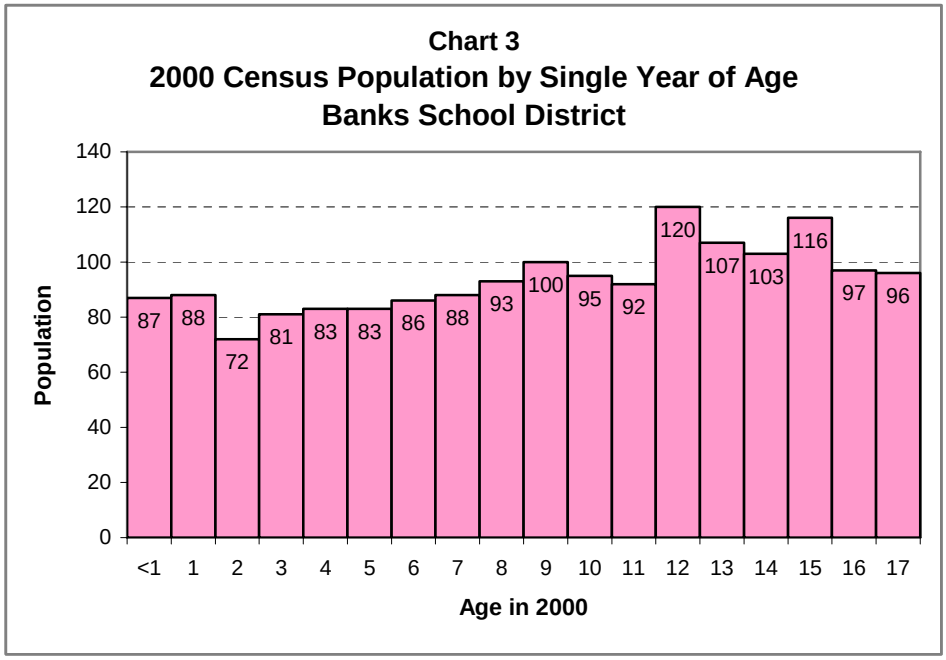


Chart 3 provides even more age detail for the child population within the BSD in 2000, showing that among individual years of age there were more children in their teens than in preschool or early elementary ages. The pattern was similar in 1990, and remains so today, judging from birth and enrollment data. The District's small share of multiple family housing may be a factor, since younger families with small children are more likely to be renters or apartment dwellers. Many families move into the District after their children have already started school elsewhere, perhaps seeking more space or a rural or small town lifestyle for their families.



Births and Fertility Rates

Between the early 1990s and early 2000s, the number of births to women living in the BSD increased significantly, from an average of 44 per year in 1991 to 1993 to an average of 86 per year between 2001 and 2003. More recently, the number of births has fallen somewhat. Table 5 on the next page reports the number of births in the District annually from 1990 to 2006.

Because of the small population of the BSD and the fluctuation in the number of births each year, it is difficult to estimate fertility rates for the District. In Chart 4 we show the

Table 5

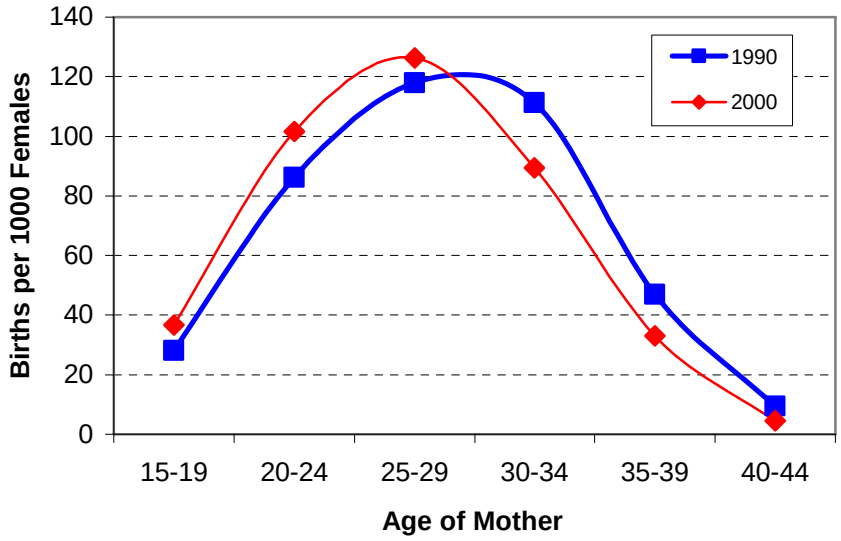
Annual Births, 1990 to 2006
Banks School District

Year	Births
1990	61
1991	42
1992	44
1993	46
1994	57
1995	54
1996	68
1997	50
1998	63
1999	66
2000	90
2001	90
2002	79
2003	90
2004	66
2005	72
2006	61

Source: PSU-PRC estimates using Oregon Center for Health Statistics zip code data and individual birth records.

Chart 4

Age-Specific Fertility Rates, 1990 and 2000
Washington County, Non-Hispanic



1990 and 2000 fertility rates for non-Hispanic women in Washington County (in 2000, only four percent of BSD female residents of child-bearing age were Hispanic). Notice that fertility rates decreased for women under age 30 and increased for women age 30 and over. The state and nation also experienced these same trends between 1990 and 2000.[4] After 2000, national data shows that birth rates for women in their 30s have continued to increase, while birth rates for teens and women in their 20s have leveled off and have recently begun to increase slightly.[5,6]

Housing Growth

During the 1990s, the number of housing units within the District's boundaries increased by 290 (16 percent), as shown in Table 6 below. The number of households that included at least one child under the age of 18 grew at a slower rate than the number of households without children, so the share with children fell from 46 percent in 1990 to 43 percent in 2000. However, the BSD's share of households with children remained higher than

Table 6
Banks School District
Housing and Household Characteristics, 1990 and 2000

	1990	2000	1990 to 2000 Change	
			Number	Percent
Housing Units	1,772	2,062	290	*16%*
Households	1,689	1,948	259	*15%*
Households with children under 18 *share of total*	770 *46%*	837 *43%*	67	*9%*
Households with no children under 18 *share of total*	919 *54%*	1,111 *57%*	192	*21%*
Household Population	5,134	5,722	588	*11%*
Persons per Household	3.04	2.94	-0.10	*-3%*

Source: U.S. Census Bureau, 1990 and 2000 Censuses; data aggregated to BSD boundary by Population Research Center, PSU.

[4]"Birth and Fertility Rates for States by Hispanic Origin Subgroups: United States, 1990 and 2000". Vital and Health Statistics, Series 21, Number 57, National Center for Health Statistics, May 2006.
[5]"Births: Final Data for 2005". National vital statistics reports; Volume 56, Number 6, National Center for Health Statistics, December, 2007.
[6]"Births: Preliminary Data for 2006". National vital statistics reports; Volume 56, Number 7, National Center for Health Statistics, December, 2007.

Washington County's 38 percent share. The average number of persons per household decreased from 3.04 in 1990 to 2.94 in 2000, but the District's household size remained well above Washington County's average 2.61 persons per household in 2000.

To determine the pace of housing construction since 2000, we used tax lot attribute data from Metro's Regional Land Inventory System (RLIS). The original source for the RLIS data is the Washington County Assessor's Office, which identifies the year that homes were built. The number of units built by year by jurisdiction is shown in Table 7. New housing identified from tax roles includes replacement homes, and does not indicate how many homes were removed or demolished. For that reason, the number of new homes exceeds the *net* change in housing stock. We discovered from Washington County building permit data that about half of the new homes were replacements for previously existing homes, and there were additional housing demolitions on properties where homes have not been rebuilt. Our estimate is that the *net* increase in the number of homes in the unincorporated area during the seven year period from 2000 to 2006 is 31, rather than the 78 shown in Table 7. Since 2002, the net increase in the District's housing stock has been less than one half of one percent annually.

Table 7
Banks School District
Homes Built 2000 to 2006 by Jurisdiction

	Year Built							2000-06
Jurisdiction	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**Total**
Banks	22	29	4	0	3	0	1	59
Unincorporated	4	9	12	15	11	13	14	78
District Total	**26**	**38**	**16**	**15**	**14**	**13**	**15**	**137**

Note: New homes identified in tax assessor's data do not represent NET housing growth, because some are replacements for older homes, and demolitions are not deducted from the total. Our analysis of Washington County building department data identified demolition permits for 37 homes within the BSD between January 2000 and October 2007.

Source: Data compiled by PSU-PRC, using geographic shapefiles and attribute data from Metro Regional Land Inventory System (RLIS), November 2007.

ENROLLMENT TRENDS

After a decade of relatively stable K-12 enrollment of about 1,000 students, the Banks School District reached a low of 935 students in the 1996-97 school year. In the next five years, the District added about 265 students. This growth between 1996-97 and 2001-02 corresponded with a thriving economy in Washington County and the construction of about four hundred new homes in the City of Banks. Since 2001-02, total K-12 enrollment has remained near 1,200. The current (2007-08) year's official enrollment of 1,200 is 24 students (2.0 percent) lower than last year. Elementary (K-6) enrollment experienced a larger decrease of 28 students (4.7 percent) this year.

Table 8 on the next page summarizes the enrollment history for the District by grade level annually from 1997-98 to 2007-08. Throughout the period, the smallest class sizes have usually been in the primary grades, K-3, while the older grades enroll more students. An example of how a cohort of students can grow over time starts with the kindergarten class of 52 students in 1997-98, the value in the upper left hand corner of the table. If you follow this group as they advance through the grades, you'll see that they added students in each of the next seven years, becoming a 1st grade class of 59 students in 1998-99, and so on, until their class had 108 students in 7th grade in 2004-05. Not every class will grow that much, and this growth spans the period of rapid residential development and enrollment growth in the District. But this illustrates an important dynamic of BSD's enrollment that differs from most other districts. Most large Portland area districts gain relatively few students after the primary grades. Some districts, especially those with lots of rental housing, lose more students than they gain as the cohorts progress through the grade levels.

The bar charts following Table 8 illustrate the enrollment change in two discrete intervals since 1997-98. Chart 5a shows the growth in all school levels between 1997-98 and 2002-03, while Chart 5b shows the more stable enrollment at each school level in the later period between 2002-03 and 2007-08.

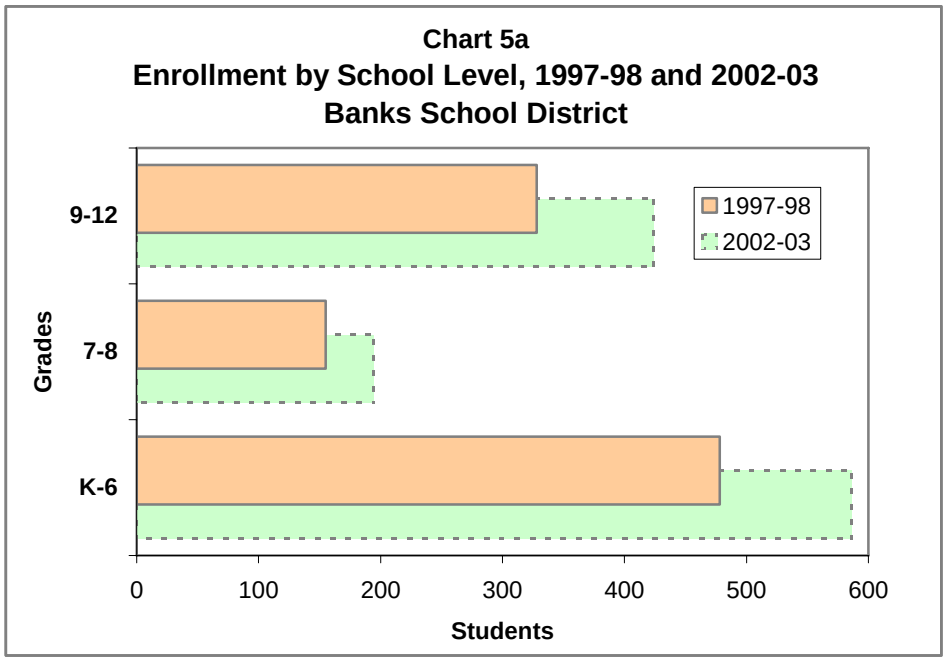
Table 8

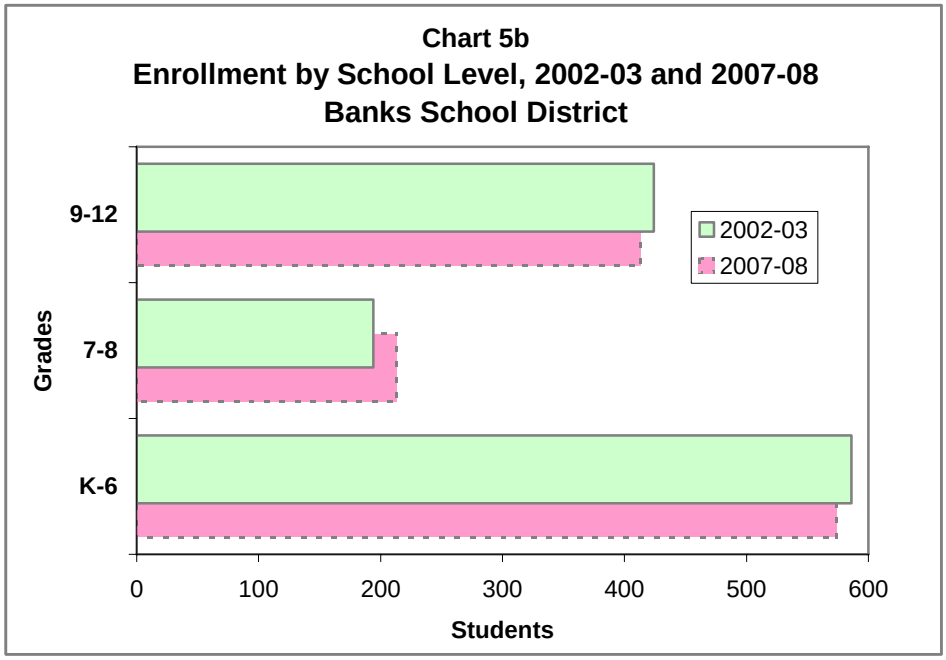
Banks School District, Historic Enrollment, 1997-98 to 2007-08

Grade	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
K	52	61	94	69	71	69	64	60	75	67	59
1	59	59	65	90	73	80	75	68	65	85	76
2	65	67	67	81	91	74	83	84	76	76	86
3	53	70	84	72	78	93	82	89	98	89	77
4	100	63	81	86	84	80	94	89	87	93	89
5	77	101	74	87	96	88	84	103	97	94	93
6	72	81	103	83	93	102	97	87	104	98	94
7	80	81	83	111	90	101	111	108	93	108	105
8	75	79	87	88	121	93	104	109	103	89	108
9	103	107	95	96	107	123	104	113	127	101	92
10	93	85	97	102	101	108	116	104	107	123	101
11	71	86	92	102	104	101	101	115	102	105	123
12	61	64	80	83	93	92	96	85	101	96	97
Total	**961**	**1,004**	**1,102**	**1,150**	**1,202**	**1,204**	**1,211**	**1,214**	**1,235**	**1,224**	**1,200**
K-6	478	502	568	568	586	586	579	580	602	602	574
7-8	155	160	170	199	211	194	215	217	196	197	213
9-12	328	342	364	383	405	424	417	417	437	425	413

	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-6	108	*19%*	-12	*-2%*	96	*20%*
7-8	39	*23%*	19	*10%*	58	*37%*
9-12	96	*26%*	-11	*-3%*	85	*26%*
Total	**243**	***22%***	**-4**	***0%***	**239**	***25%***

Source: Banks School District.

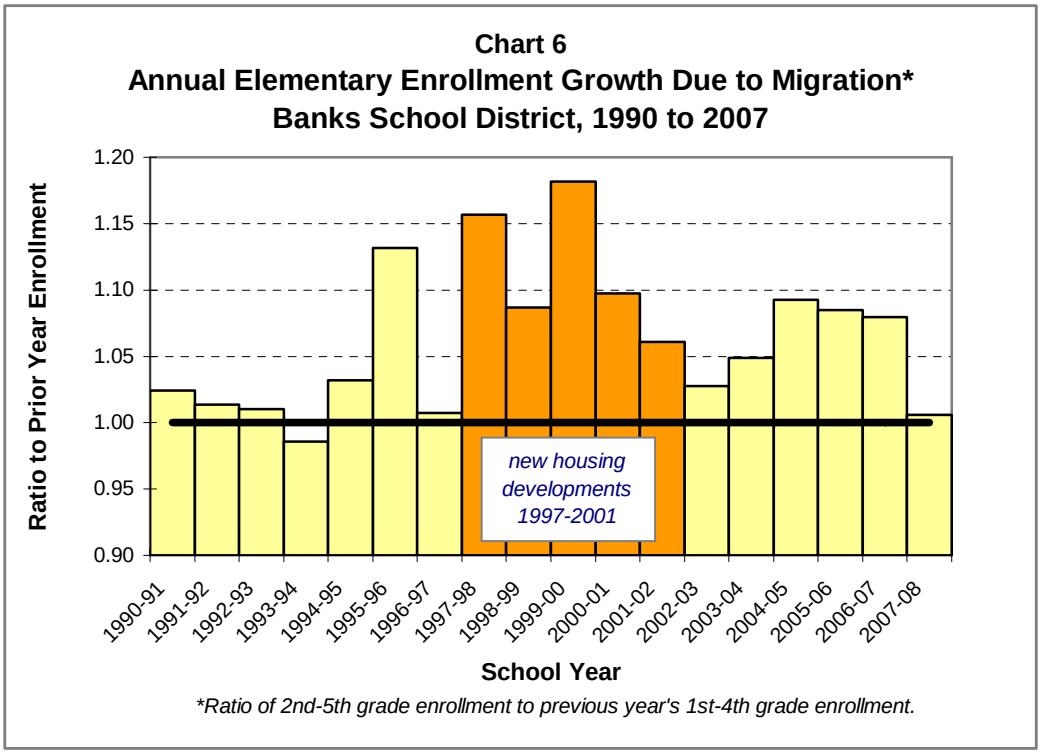




To measure the proportionate enrollment changes that occur to cohorts as they progress through the grade levels, we calculated a series of grade progression rates (GPRs). A GPR is the ratio of enrollment in a specific grade to the enrollment in the preceding grade in the previous year. For example, the number of students enrolled in second grade this

year divided by the number of students enrolled in first grade last year. Rates for some grades may be consistently high, indicating that new students are entering the District from private schools. For this reason, it is common to see higher GPRs for the kindergarten to 1st and the 8th to 9th grade transitions. After 9th grade, low GPRs can indicate that students are leaving school before graduation or being retained at previous grade levels. But for most elementary grades, if the population entering and leaving the District is in balance and students are not being retained at particular grades for academic reasons, one can expect GPRs very close to 1.00. Rates above 1.00 in the elementary grades usually indicate net migration into the District, while rates below 1.00 indicate net out-migration.

GPRs for individual grades can fluctuate each year, particularly in a smaller District such as the BSD. They can also be influenced by retention. One student in a class of 100 repeating a grade would contribute one percent to the apparent "migration" level of the repeated grade while lowering the "migration" of the subsequent grade. By combining several elementary grades, we get a more accurate measurement of the contribution of migration to the District's elementary enrollment. Chart 6 shows the ratios calculated



from a group of four elementary grade cohorts. The chart shows that, in 17 of the past 18 years, the District has enrolled more students in grades 2-5 than it enrolled in grades 1-4 the previous year. During the period highlighted on the chart between 1997 and 2001, 400 homes were built in the Arbor Village and Banks Estates subdivisions and the Quail Hollow Apartments, and migration contributed an average of 12 percent annually to elementary enrollments. Since 2001, migration has contributed an average of six percent annually to elementary enrollments.

The elementary enrollment loss between 2006-07 and 2007-08 was due to a very small incoming kindergarten class of 59 students (the smallest since 1997-98), a relatively large 6th grade class of 98 students moving on to Junior High School, and a net gain of less than one percent due to migration.

Private and Home School Enrollment and Inter-District Transfers

Banks Christian Academy and St. Francis of Assisi are both K-8 private schools located within the BSD boundaries. Visitation School, also K-8, is located just outside of the BSD near Forest Grove. Interviews with administrators from these schools confirm that Banks Christian and St. Francis of Assisi are the primary private school options for Banks area residents. Many of their students are BSD residents, though neither of the two schools could provide an exact figure, and it is likely that a slight majority of students at each school come from outside of the BSD. At Visitation School, only a few students are BSD residents. All three of these schools have added enrollment this year, and Banks Christian Academy could accommodate further enrollment growth at their existing facility. The other two schools are near capacity, and future expansion is a possibility, but would require more planning and a capital campaign, so any expansion would be several years in the future.

Smaller numbers of Banks area residents attend other private schools, including private high schools. The nearest private high schools are located in Hillsboro, Aloha, and Beaverton, about 15 to 20 miles from Banks. The distance to private high schools relative to the proximity to private K-8 schools may contribute to the enrollment growth that the BSD often experiences between 8th and 9th grade.

Because of mobility, the number of students enrolled in private schools physically located within the District can not be used to measure overall private school share. The best source of data for private school enrollment of BSD residents is the 2000 Census. Responses on the "long form" of the 2000 Census indicate that about 15 percent of BSD area students in 1st-8th grade and three percent in 9th-12th grade attended private schools in 2000.[7] The 12 percent share for 1st-12th grade overall was unchanged from the 1990 Census, but higher than the nine percent share in the nearby Forest Grove School District.[8]

In addition to public and private schools, the other option is home schooling. Home schooled students age 7 to 18 living in the District are required to register with the Northwest Regional Educational Service District (NWRESD), though the statistics kept by the NWRESD are not precise because students who move out of the area are not required to drop their registration. Students who enroll in public schools after being registered as home schooled are dropped from the home school registry. In January 2008 there were 40 BSD residents registered, including 19 high school age children and 21 younger children. The current number of registered home school students represents just over two percent of the BSD's total K-8 residents, and about four percent of its high school age residents.

Private schools and home schooling help to explain the difference between the number of school-age children living in the District and the number attending District schools. Both represent "outflow" from the District. That is, children eligible but not attending District schools. The other "outflow" consists of District residents who attend public schools in other school districts. There is also a related "inflow" of residents of other districts. Under state rules, families must request and be granted an interdistrict transfer from their resident district and the transfer must also be approved by the district that they want to attend. The BSD currently has a net gain of 47 students from interdistrict transfer agreements, a small increase from last year's net gain of 40 students.

[7]Summary File 3, Table P36, U.S. Census Bureau, 2000 Census. Estimate for BSD by PRC based on data reported for census block groups.
[8]Summary Tape File 3, Table P54, U.S. Census Bureau, 1990 Census. Estimate for BSD by PRC based on data reported for census block groups.

Recent figures for the enrollment at area private schools, the number of home schooled BSD residents, and interdistrict transfers into and out of the BSD are shown in Table 9.

Table 9
Area Private School Enrollments, Home Schooled Students, and Interdistrict Transfers

Private School*	**2005-06**	**2006-07**	**2007-08**
Banks Christian Academy (K-8)	72	69	92
St. Francis of Assisi (K-8)	65	89	96
Visitation School (K-8)	104	89	117
Home Schooled			
Banks S.D. residents registered with NWRESD	47	40	40
Interdistrict Transfers			
Into BSD	--	67	65
Out of BSD	--	27	18
Net Gain	**--**	40	47

**This table reports the total K-8 enrollment at each school, which may include a significant number of BSD residents (BCA and St. Francis), or just a few (Visitation).*

Sources: Oregon Department of Education, Fall 2005 and Fall 2006 private school enrollments; interviews with school officials, January 2008 private school enrollments; NWRESD, annual reports; Banks School District, interdistrict transfers.

Neighboring Districts

Table 10 displays several facts about BSD demographic and enrollment trends in comparison to three other nearby school districts. The overall enrollment growth or decline in each district is influenced by housing availability, and also by the district's unique demographics. The table shows that the BSD's multi-family housing share, rural orientation, and small Latino enrollment resembles both the Gaston and Vernonia School Districts, but those districts have been losing enrollment since the late 1990s, while the BSD has grown. Compared with Gaston or Vernonia, the Banks area is more accessible to major job markets, so it has an advantage in attracting and keeping families with school age children.

Most Oregon districts that do not have significant housing growth, a large Latino population, or both, currently have flat or declining enrollments. Reasons for this include

falling birth rates, a shrinking population of child-bearing age due to the 1970s "baby bust," and fewer job opportunities in the traditional resource-based industries. The nearby Forest Grove School District is an example of a district with both a large Latino enrollment and continuous housing growth, and its enrollment has grown in each of the periods shown in the table.

Table 10
Selected School Districts
Demographic and Enrollment Highlights, 1990 to 2006

	Banks	Forest Grove	Gaston	Vernonia
Enrollment growth, **1990-91 to 1995-96**	0%	11%	6%	20%
Enrollment growth, **1995-96 to 2000-01**	15%	10%	-18%	-5%
Enrollment growth, **2000-01 to 2006-07**	6%	15%	-9%	-7%
Latino enrollment, **2006-07**	6%	42%	4%	3%
Grades 9-12 enrollment, **2006-07**	35%	33%	36%	34%
Population growth, **1990 to 2000**	11%	24%	-7%	15%
Multi-family housing share, **2000**	5%	39%	5%	6%
Population age 5 to 17, **1990**	24.1%	20.3%	23.6%	19.8%
Population age 5 to 17, **2000**	22.3%	20.3%	23.1%	22.9%
Population under age 5, **1990**	7.5%	7.6%	8.5%	7.9%
Population under age 5, **2000**	7.2%	7.9%	8.1%	7.6%
Population rural, **2000**	100%	16%	100%	100%

Data assembled by Population Research Center, PSU, from several sources: U.S. Census Bureau; Forest Grove S.D.; Banks S.D.; OR Dept. of Education; U.S. Dept. of Education.

HOUSING DEVELOPMENT AND STUDENT GENERATION

For school districts with the potential for housing growth, understanding the existing demographics of the district is not enough. A common concern is the impact of new residential development on school enrollment. Without a detailed analysis, community members and school officials are often unsure about the impact. Residential developments generally contribute enrollment growth to local schools, but the average number of students in each home is often lower than many people anticipate, and demographic trends in existing homes may either offset or exacerbate the enrollment gains from new housing. Also, the impacts vary by the characteristics of the new housing. In this section, we present estimates of student generation by jurisdiction for new and existing housing in the BSD. These estimates help to inform the enrollment forecasts, and they can be used by District staff on an *ad hoc* basis to estimate potential student generation from future developments as they are proposed or approved.

We estimated the Fall 2007 number of students per unit with a geographic information system (GIS), combining tax lots (polygons) and their associated attributes with BSD student residences (points) and the City of Banks boundaries. Attribute data from the county tax assessor's office included in Metro's RLIS allowed us to determine whether each tax lot included a home and the year that the home was built. Points for student residences were created by matching the student addresses to the tax lot addresses. In all cases, the student records used in this study contain no personally identifiable data such as names or birth dates, and the confidential locations of student residences are reported only in summary form, such as in the tables in this section.

For the District overall in Fall 2007, the average number of K-12 students per housing unit was 0.52, about one student for every two homes. The figure has changed very little since the 2000 Census, when there were an average of 0.53 public school students per

home in the BSD, and it is similar to the number of K-12 public school students per housing unit calculated for neighboring districts based on 2000 Census tabulations.[9]

More detailed analysis of the age, location, and type of housing reveals student generation rates that differ widely from the district-wide average. A summary of the results for the District, the City of Banks, specific large newer developments in the City, and homes built before and after 2000 in the District's unincorporated area is shown in Table 11. There is an average of 0.79 students per home in the City, compared with 0.43 in the unincorporated portion of the District. The City of Banks has about 26 percent of the District's housing stock, but 40 percent of its resident students (excluding those who transfer from outside the District).

Table 11
Average Number of BSD Students per Home, Fall 2007
By Location and Specified Characteristics

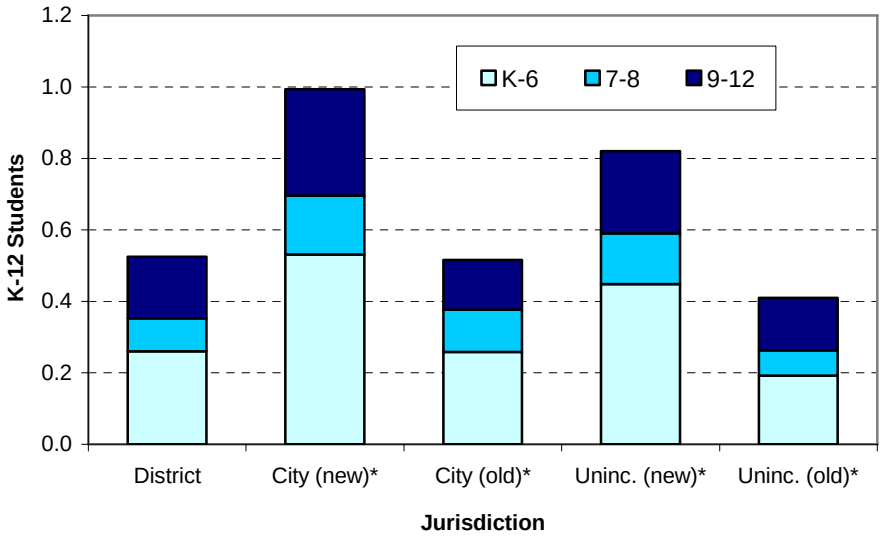
	Grade Level			
Jurisdiction	**K-6**	**7-8**	**9-12**	**K-12**
District Total	0.26	0.09	0.17	**0.52**
City of Banks	0.42	0.14	0.23	**0.52**
Arbor Village single family homes	--	--	--	***1.00***
lot size > 4,500 s.f.	--	--	--	***1.27***
lot size < 4,500 s.f.	--	--	--	***0.69***
Banks Estates	--	--	--	***0.98***
Quail Hollow Apartments	--	--	--	***0.40***
Remainder of City	--	--	--	***0.52***
Unincorporated area	0.20	0.07	0.15	**0.43**
Homes built since 2000	--	--	--	***0.82***
Homes built before 2000	--	--	--	***0.41***

Source: Data compiled by PSU-PRC, using geographic shape files and tax lot attribute data from Metro's Regional Land Inventory System (RLIS). Housing unit counts were determined by PSU-PRC using the attribute data and permit data from Washington County Building Services.

[9]Census 2000 School District Tabulation (STP2), U.S. Census Bureau. The number of children reported attending public schools divided by the total number of housing units was 0.53 in the Banks School District, 0.48 in the Forest Grove School District, 0.55 in the Gaston School District, and 0.46 in the Vernonia School District.

In other rural Oregon school districts, we have also found more students per home within city limits than in unincorporated areas.[10] Relatively more affordable housing and proximity to schools may be two of the factors that result in more young families with school age children living in town. In the BSD, a big part of the difference is also the age of housing, and the fact that the City has a larger share of newer housing than the unincorporated area. We found that the age of housing units is even more closely associated with differences in student generation rates than the location. The 0.99 K-12 students per home in Banks Estates and Arbor Village is nearly double the 0.52 rate for homes in the rest of the City (primarily older housing), and the 0.82 K-12 students per unincorporated area home built since 2000 is double the 0.41 rate for unincorporated area homes built before 2000. These rates are shown in Chart 7 below.

Chart 7
BSD Students per Housing Unit, Fall 2007



**City (new) includes Banks Estates and Arbor Village; Unincorporated (new) includes homes built 2000-2006.*

[10]Our research is not comprehensive, but we have confirmed this result in each of the districts for which we have conducted similar analysis. They are the Amity, North Marion, Junction City, and Rogue River School Districts.

ENROLLMENT FORECASTS

Population and Housing Growth

In the earlier section "Population and Housing Trends, 1990 to 2007," we reported that the City of Banks grew rapidly between 1990 and 2000, but that the BSD's unincorporated area population fell slightly. Since 2002, most of the District's new housing has been in the unincorporated area, but the growth is small, adding less than one half of one percent to the District's housing stock each year.

With the passage of Measure 49 in November, 2007, proposals for large scale housing development outside of the Urban Growth Boundary (UGB) are unlikely at the present time. Future changes to land use laws that would result in more development outside of UGBs are certainly possible, and may impact the District's enrollment in the long run. However, within the ten year horizon of these forecasts, we assume that the unincorporated area will grow slowly, if at all. A limited amount of housing growth occurs due to occasional minor land partitions of two or three lots, and some homes are built on existing lots that were created long ago, but most of the new homes in the unincorporated area are simply replacements for older homes, and therefore do not cause the District's housing stock to increase.

Potential for housing growth is also limited within the City of Banks' existing boundaries. The 2003 update to the City's Buildable Lands Inventory (BLI) identified just 1.46 acres of vacant single family residential land and 7.28 acres of redevelopable single family land (large parcels that could be subdivided to create additional lots), and no vacant or redevelopable multi-family land within the City. Two separate proposals for small subdivisions of five and seven lots involving about two acres of the redevelopable residential land have been brought to the Banks Planning Commission, but both proposals required changes that have not yet been submitted. There is also a proposal from Arbor Custom Homes for a 34 lot planned unit development, which would be the final phase of Arbor Village. Approval of that subdivision would require a land use

change from industrial to residential, as well as new secondary access to the site. If developers resubmit these proposals soon and they are approved by the Planning Commission, or if new proposals for small divisions of redevelopable land are submitted, a small number of new homes could be built in about two to three years.

The greatest potential for new housing in the District involves expansion of the City's UGB, currently under consideration. In 2004, the City Council adopted a long term population forecast of 3,739 persons by the year 2024, expecting average annual growth of 4.5 percent during the 2000 to 2024 period. By late 2005, the City had identified housing needs and updated its comprehensive plan with the objectives of allowing "development of single family and multi-family housing at densities commensurate with future housing needs as projected to year 2024" and permitting "mixed use development that incorporates new housing units … in suitable locations such as the downtown area of Banks."[11] To accommodate the 772 single family homes and 146 multi-family units projected in the housing /land needs model, the City would need to add about 91 acres of residential land.

Before any expansion of the UGB can occur, the City must undertake a planning process that includes coordination with state and county agencies and service providers, community involvement, analysis of alternative boundaries, and several public meetings of the Planning Commission and City Council. Under the current proposed schedule, a UGB plan amendment could be adopted as soon as mid-2009. The earliest potential school enrollment impacts would not occur for at least two to three more years, because annexation to the City, application, approval, and platting of subdivisions or planned unit developments, building infrastructure, and building and selling homes would all have to occur before new residential land in the UGB could be occupied by residents.

If the UGB expansion occurs, 918 new housing units are added in the City of Banks, and net housing growth in the unincorporated area continues at its recent pace of about five units annually, the District's housing stock could increase by 46 percent over its current

[11]"Banks Comprehensive Plan Text Amendment to Update Housing and Residential Land Needs," Ordinance Number 110.30 adopted by Banks City Council December 13, 2005.

number of about 2,200 homes. That level of growth, occurring by the year 2024, is incorporated into our HIGH SCENARIO enrollment forecast. Our LOW SCENARIO enrollment forecast is closer to the status quo. That is the relatively slow growth that has occurred over the past five years, including very little growth in the housing stock.

Because of the potential for timely expansion of the UGB and the long term demand for housing in Washington County, we consider the HIGH enrollment forecasts to be the most likely scenario. However, the LOW enrollment forecasts would be more likely if today's limits on residential development continue. The UGB expansion could be delayed; there could be legal, environmental, or economic constraints to development; a prolonged recession could reduce the demand for housing even if more residential land becomes available. We did not produce a "MID" enrollment forecast scenario, but a range of outcomes between the HIGH and LOW scenarios are possible if development does not proceed as quickly as envisioned in the City's population forecast and housing and residential land needs analysis.

We also consulted population and employment forecasts published by state agencies:

- The Oregon Office of Economic Analysis forecasts that Washington County's population will grow by 47 percent (2.0 percent annually) between 2000 and 2020, from about 445,000 in 2000 to 660,000 in 2020.[12]

- The Oregon Employment Department forecasts that employment in the region is forecast to grow by 14 percent in a ten year period (1.3 percent annually).[13]

Forecast average annual population growth rates for the City of Banks, the Banks School District (incorporating the City's forecast and the expectation of very little growth in the unincorporated area), and Washington County are compared with the 1990 to 2000 growth rates in Table 12 on the next page.

[12]"Forecasts of Oregon's County Populations and Components of Change, 2000 to 2040." Oregon Department of Administrative Services, Office of Economic Analysis, April, 2004.
[13]"Regional Projections by Industry and Occupations, 2006-2016." Oregon Employment Department, Workforce Analysis, November, 2007. Employment in the Multnomah/Washington region was 692,700 in 2006 and grows to 792,200 in the 2016 forecast.

Table 12

Comparison of Population Growth Rates
City of Banks, Banks S.D. and Washington County

Area	1990 to 2000 Historic Avg. Annual Growth Rate	2000 to 2024 Forecast Avg. Annual Growth Rate*
City of Banks[1]	8.5%	4.5%
BSD Unincorporated Area[2]	-0.3%	0.4%
Banks S.D. Overall[3]	2.7%	1.7%
Washington County[4]	3.6%	2.0%

1. City of Banks 2024 forecast of 3,739 from Comprehensive Plan Amendment adopted by Banks City Council in 2004 and approved by Washington County in 2005.

2. Banks S.D. unincorporated area forecast by Population Research Center, PSU based on continuation of estimated 2000 to 2007 change.

3. Banks School District forecast by Population Research Center, PSU, combining city and unincorporated population.

4. Washington County 2024 Forecast of 710,100 based on interpolation between 2020 and 2025 forecasts from "Forecasts of Oregon's County Populations and Components of Change, 2000 to 2040." Oregon Department of Administrative Services, Office of Economic Analysis, April, 2004.

District-wide Enrollment Forecasts

There are three basic links between area population and school enrollment that we evaluated from historic data and incorporated in the enrollment forecasts. They are 1) births occurring to residents of the District, 2) the level of migration of pre-school and school age children, and 3) the District's "capture rates" (the share of school-age children attending District schools).

We estimated District births by grade cohort (children born during a 12 month period between September and August) within the boundaries of the Banks School District. The estimates utilize geocoded birth data from the Oregon Center for Health Statistics to match the District's boundary and the grade cohorts, and are consistent with the data published by zip code and calendar year. Although many children move into and out of the District between birth and age five, we have found a strong relationship between birth trends and subsequent school enrollment trends. In eight of the past 11 years, the direction of change in kindergarten enrollment (increase or decrease) has matched the

direction of change in corresponding births. For example, a recent peak in Kindergarten enrollment in Fall 2005 corresponds to a peak in births in the 2000-01 period.

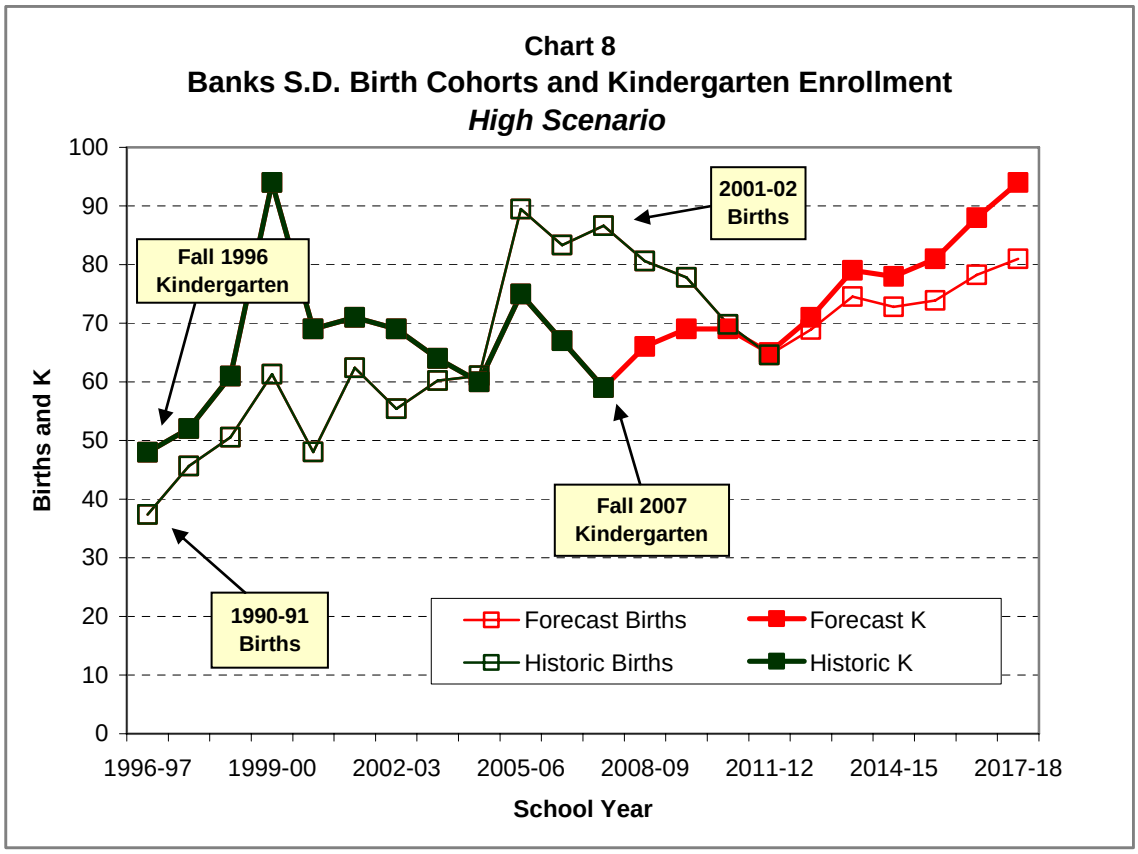
The ratio of kindergarten students to births five years earlier implicitly combines five years of net migration with the unique capture rate for the area. For example, if the District gains 10 percent due to migration between birth and age five and 80 percent of its kindergarten age residents attend District schools, its kindergarten to birth ratio would be 0.88 (1.10 times 0.80).

Migration that occurs after kindergarten, as well as changes in capture rates by grade level, are combined in the District's grade progression rates (GPRs). In the "Enrollment Trends" section, we showed that GPRs for elementary grades have consistently been above 1.00, indicating gains in enrollment due to migration.

HIGH SCENARIO Enrollment Forecast

In the HIGH SCENARIO enrollment forecast, the number of kindergarten students in the District in each of the next four years is slightly higher than the current (Fall 2007) class of 59 students. This occurs in spite of a downturn in the number of births observed after 2002, because we feel that this year's extremely low kindergarten to birth ratio is an outlier, rather than a new standard. By 2012, the number of kindergarten students begins to increase due to the expected housing growth. Chart 8 on the next page compares the historic and HIGH forecast number of births in the District with the historic and HIGH forecast kindergarten enrollment.

The migration rates in the first four years of the HIGH enrollment forecast are similar to those observed in the BSD during the past five years. Migration adds an average of six percent annually to 2nd to 5th grade enrollment between now and 2011-12, just as it has in the slow growth period from 2002-03 to present. In spite of this "growth" due to migration, overall enrollment remains stable during the next four years, as it has during the past five years. This occurs because enrollment each year in incoming kindergarten and 1st grades remains smaller than in upper grades, and the growth due to migration is necessary to keep elementary and overall K-12 enrollment stable.



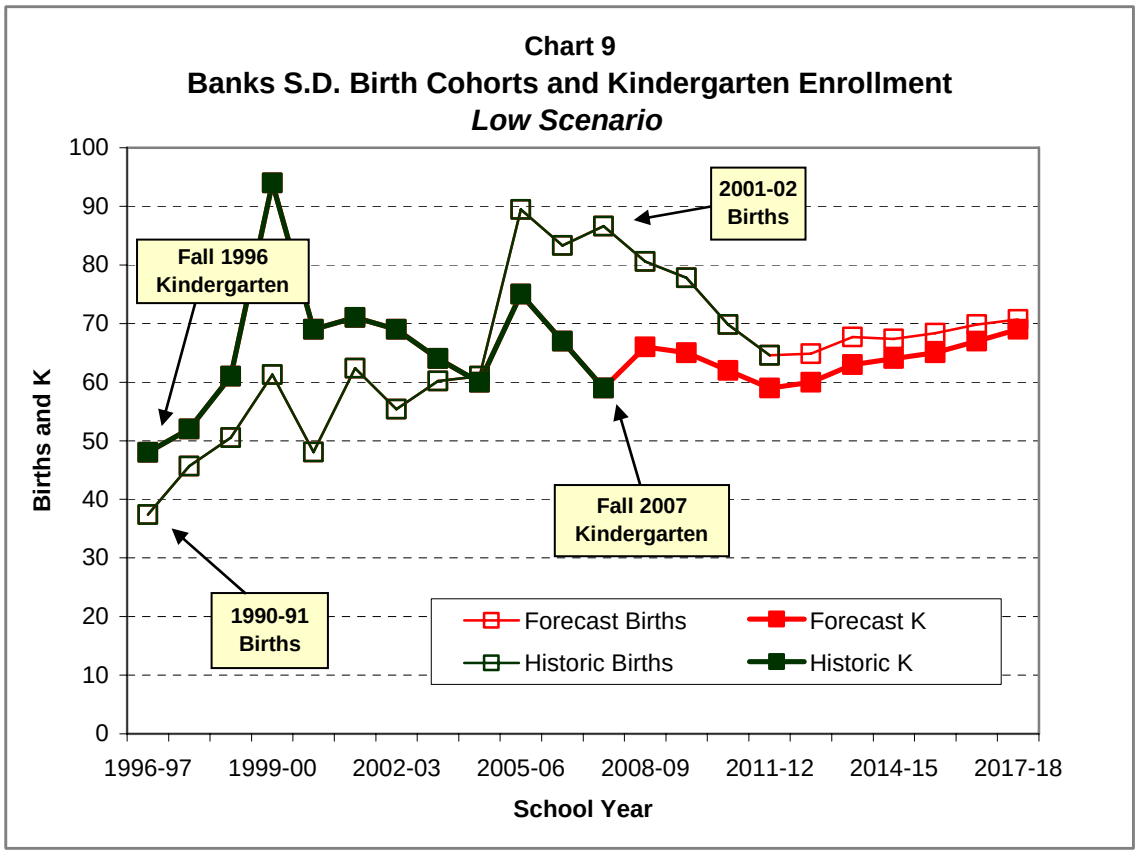
After 2011-12, an increase in migration into the District is expected under the HIGH SCENARIO, adding an average of eight to 11 percent annually to 2nd to 5th grade enrollment. In Chart 6 in the "Enrollment Trends" section we showed rates as high as 13 to 18 percent in a few years during the 1990s. The population base was lower at that time, and our forecast does not predict growth cycles. There may be years when enrollment grows much faster than in the HIGH forecast, and other years when growth is slower.

Table 13 at the end of this section contains grade level HIGH SCENARIO forecasts for the Banks School District for each year from 2008-09 to 2017-18. The forecasts are also summarized by grade level groups (K-6, 7-8, and 9-12). Overall K-12 enrollment is forecast to be stable for the first four years of the forecast, and then grow rapidly after 2011-12, corresponding to increased housing growth expected in an expanded UGB. The overall K-12 enrollment increase is 318 students (27 percent) between 2007-08 and 2017-18. Growth occurs at all school levels, ranging from 95 students at the High School (23

percent growth) to 172 students at the Elementary School (30 percent growth). Although this is nominally a ten year forecast, we extended the forecast to the 2024-25 school year, due to the Facilities Planning Committee's interest in the 2024 horizon corresponding to the City's long range planning. The 2024-25 K-12 enrollment under the HIGH SCENARIO is 664 students (55 percent) higher than 2007-08 enrollment.

LOW SCENARIO Enrollment Forecast

In the LOW SCENARIO enrollment forecast, the number of kindergarten students in the District remains near recent levels (67 students in Fall 2006 and 59 students in Fall 2007) throughout the ten year forecast horizon. As in the HIGH forecast, the LOW forecast treats the ratio of Fall 2007 kindergarten students to 2001-02 births as an anomaly, and kindergarten enrollment increases somewhat in Fall 2008. However, without significant housing growth, the number of births and kindergarten students is expected to grow only slowly, if at all. Chart 9 compares the historic and LOW forecast number of births in the District with the historic and LOW forecast kindergarten enrollment.



The migration rates in the first year of the LOW enrollment forecast are similar to those observed between last year and the current year, when net migration was close to zero and elementary enrollment fell. In the next two years (2009-10 and 2010-11), migration contributes a small amount to the District's enrollment, but overall elementary and K-12 enrollment continue to fall. For the balance of the forecast period (2011-12 to 2017-18), migration rates are near or slightly above the average rates observed over the past five years, consistent with a scenario in which there is limited housing growth, but the District continues to attract families with school age children due to housing turnover.

Table 14 at the end of this section contains grade level LOW SCENARIO forecasts for the Banks School District for each year from 2008-09 to 2017-18. The forecasts are also summarized by grade level groups (K-6, 7-8, and 9-12). Overall K-12 enrollment is forecast to decline for the first three years of the forecast, from 1,200 in 2007-08 to 1,129 in 2010-11. Beginning in 2011-12, small enrollment increases of one to two percent are forecast each year. The overall K-12 enrollment increase is 77 students (six percent) between 2007-08 and 2017-18. We also extended the LOW SCENARIO forecast to the 2024-25 school year, using the assumption that trends from the 2011-12 to 2017-18 period would continue. The 2024-25 K-12 enrollment under the LOW SCENARIO is 164 students (14 percent) higher than 2007-08 enrollment.

Table 13

Banks School District, *HIGH SCENARIO* Enrollment Forecasts, 2008-09 to 2017-18

	Actual	Forecast										
Grade	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	***2024-25***
K	59	66	69	69	65	71	79	78	81	88	94	*115*
1	76	66	73	78	77	74	81	90	87	91	99	*124*
2	86	82	73	79	87	87	84	92	100	97	101	*133*
3	77	94	90	80	87	98	98	95	102	111	107	*144*
4	89	75	97	88	84	93	104	104	99	107	116	*144*
5	93	93	80	101	95	93	103	115	113	107	116	*153*
6	94	93	97	80	106	102	100	110	121	119	113	*153*
7	105	100	101	103	88	118	114	112	121	133	130	*161*
8	108	103	99	99	103	90	121	117	113	122	134	*152*
9	92	112	112	103	109	115	101	135	128	124	134	*153*
10	101	90	111	110	102	110	116	102	134	127	123	*147*
11	123	100	89	110	110	104	112	118	102	134	127	*152*
12	97	113	93	82	102	104	98	106	109	95	124	*133*
Total	**1,200**	**1,187**	**1,184**	**1,182**	**1,215**	**1,259**	**1,311**	**1,374**	**1,410**	**1,455**	**1,518**	***1,864***
K-6	574	569	579	575	601	618	649	684	703	720	746	*966*
7-8	213	203	200	202	191	208	235	229	234	255	264	*313*
9-12	413	415	405	405	423	433	427	461	473	480	508	*585*

	5 Year Growth: 2007-08 to 2012-13		**5 Year Growth: 2012-13 to 2017-18**		**10 Year Growth: 2007-08 to 2017-18**	
	Change	**Pct.**	**Change**	**Pct.**	**Change**	**Pct.**
K-6	44	*8%*	128	*21%*	172	*30%*
7-8	-5	*-3%*	56	*27%*	51	*24%*
9-12	20	*5%*	75	*17%*	95	*23%*
Total	**59**	***5%***	**259**	***21%***	**318**	***27%***

Population Research Center, Portland State University, January 2008.

Table 14

Banks School District, *LOW SCENARIO* Enrollment Forecasts, 2008-09 to 2017-18

	Actual	Forecast										
Grade	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	***2024-25***
K	59	66	65	62	59	60	63	64	65	67	69	*79*
1	76	66	74	73	69	66	67	71	72	73	75	*87*
2	86	77	71	80	81	77	73	74	79	80	81	*94*
3	77	87	84	77	89	90	85	81	82	87	89	*100*
4	89	75	85	82	80	93	94	89	85	86	91	*102*
5	93	89	78	89	89	87	101	102	96	92	93	*106*
6	94	93	89	78	94	94	91	106	107	101	97	*109*
7	105	99	99	94	85	103	103	100	116	117	111	*116*
8	108	103	97	97	94	85	103	103	100	117	118	*113*
9	92	112	107	101	106	103	93	113	113	110	128	*121*
10	101	90	110	105	100	105	102	92	112	112	109	*119*
11	123	99	89	109	105	100	105	102	92	112	112	*117*
12	97	114	91	82	101	97	93	97	95	85	104	*101*
Total	**1,200**	**1,170**	**1,139**	**1,129**	**1,152**	**1,160**	**1,173**	**1,194**	**1,214**	**1,239**	**1,277**	***1,364***
K-6	574	553	546	541	561	567	574	587	586	586	595	*677*
7-8	213	202	196	191	179	188	206	203	216	234	229	*229*
9-12	413	415	397	397	412	405	393	404	412	419	453	*458*

	5 Year Growth: 2007-08 to 2012-13		**5 Year Growth: 2012-13 to 2017-18**		**10 Year Growth: 2007-08 to 2017-18**	
	Change	**Pct.**	**Change**	**Pct.**	**Change**	**Pct.**
K-6	-7	*-1%*	28	*5%*	21	*4%*
7-8	-25	*-13%*	41	*22%*	16	*8%*
9-12	-8	*-2%*	48	*12%*	40	*10%*
Total	**-40**	***-4%***	**117**	***10%***	**77**	***6%***

Population Research Center, Portland State University, January 2008.

FORECAST UNCERTAINTY

By evaluating recent population, housing, and enrollment trends in the Banks School District, modeling population and housing growth scenarios, and producing district-wide enrollment forecasts by grade level, we have completed a study that we believe will be useful for a variety of long-range planning needs of the District.

Overall K-12 enrollment is expected to continue to grow under both scenarios, by 318 students in the next 10 years under the HIGH forecast, or by 77 students under the LOW forecast. The HIGH forecast includes growth approaching the level of the 1996-97 to 2001-02 period, when the District added about 265 students. The LOW forecast is more similar to the 2001-02 to 2007-08 period, when enrollment has been relatively stable.

In spite of both forecasts showing increasing enrollment after 2010-11, there may be years when enrollment declines. There will be cycles of faster and slower economic and population growth in the future which no forecast will be able to predict, so the year-to-year pattern of actual growth will deviate from both the HIGH and LOW forecasts. However, the long-term enrollment changes are consistent with population, employment, and housing growth expected in the region.

The intent of this section is to caution the users of this report on the nature of forecasting in general. Fertility rates are relatively stable, but migration can vary greatly in an uncertain future. The migration assumptions involve judgment and the expectation that future trends will fall neatly into place in alignment with current trends and external forecasts produced by other agencies. We know from past history that unforeseen events can affect these migration expectations.

Another uncertainty in the forecast involves the entry grades, kindergarten and 1st grade. The relationship between births and subsequent kindergarten and 1st grade enrollment five to six years later is affected by two factors — the migration of children during the years prior to enrolling in school, and the capture rate. The Fall 2007 kindergarten

enrollment of 59 students is 32 percent *lower* than our estimate of 87 births to BSD residents between September 2001 and August 2002 (this year's kindergarten cohort).

The ratio of kindergarten enrollment to births has been falling in recent years, as implied by the lines in Charts 8 and 9 in the previous section. It seems unlikely to remain as low as the current 0.68, which suggests either net out-migration between birth and age five (contrary to net in-migration of older children inferred from enrollment data) or a very low public school capture rate. However, if kindergarten enrollments remain at their current level and do not increase in accordance with the forecasts, overall K-12 enrollments may ultimately be lower than forecast.

In general, forecast error varies according to the size of the population being forecast and the length of the forecast horizon. The smaller the population and the longer the forecast period, the larger the error is likely to be. The Banks School District currently has about 6,000 residents, a very small population that may fluctuate beyond the range envisioned in these forecasts.

Because of the uncertainties of forecasts described in this section, it is important to monitor the results and update the forecast as needed, or as new information becomes available. New information may be school enrollment data that diverges from the forecast, new census data, proposals for major new housing development, or land use changes that may result in housing or economic growth that differs significantly from recent and current trends.