

# ROSEVILLE SCHOOL DISTRICT #623

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## ENROLLMENT PROJECTIONS

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# ROSEVILLE SCHOOL DISTRICT ENROLLMENT PROJECTIONS

## Executive Summary

- Roseville Area Schools at a different stage of its enrollment life cycle
  - In the past ten years, that is, since 2006-07:
    - Enrollment is up +1,167 students or 18.4%
    - Net migration added +1,877 students to enrollment although some of this increase resulted from the conveyance of Harambee Elementary School to the Roseville Area Schools
    - Resident enrollment increased 7.3 percent
    - Further, beginning in 2011-12, kindergarten classes have been much larger than previous kindergarten classes
  - Nonresident enrollment increased from 10.7 percent to 19.0 percent of K-12 enrollment
- Many factors suggest that resident enrollment growth will continue
  - The current enrollment by grade has built in growth momentum
  - Resident births in the district are higher than any time in the past 15 years
  - Single-family detached housing units, when sold, have a higher student yield per unit than before they sold (0.35 compared to 0.30)
  - The district has many single-family detached housing units with at least one person 75 years of age or older (1,888 units). Many of these units are likely to “turnover” in the next five to ten years
- Enrollment is projected to increase 15.3 percent to 23.2 percent in the next ten years or from 8,657 to 9,247 compared to 7,506 today
  - Resident enrollment projected to range from 7,543 students to 7,629 students in 2025-26. This compares to 6,078 resident students in 2015-16
  - Nonresident enrollment projected to increase but the percentage of nonresidents may go down
- Roseville Area Schools market share of 72.2 percent is higher than it was in 2006-07 when it was 69.5 percent. Today’s market share is slightly lower than typical for a Twin Cities suburban school district
- Elementary enrollment increases more than 6 percent in the next five years based on the cohort survival method projections. This is only about half the rate of increase of the past five years excluding Harambee. Most schools show enrollment increases with Little Canada Elementary School projected to increase the most

# CHAPTER 1

## DISTRICT-WIDE ENROLLMENT PROJECTIONS

### Introduction

School age population is closely related to other population characteristics of a school district. A prime example is the relationship between the age of adults and the number of births. A larger number of women of prime childbearing age results in more births and larger kindergarten classes five to six years later. Another example is the relationship between the age of adults and the probability of moving (changing one's residence). Older people move less often than younger people. Families with children under 18 years who move from one locale to another can have an effect on school enrollment. Further, in a mobile society, enrollment changes throughout the school year as families and children move. While most population trends find expression in school districts, there are also localized annual fluctuations that are unpredictable.

While population changes affect the total number of school age children residing in a school district, Minnesota students and their families have education choices. These choices also effect enrollment in the district's schools. Therefore, when analyzing public school enrollment, choice must be considered as well as population dynamics. Choice includes nonpublic schools, home schools, and the public options of open enrollment, charter schools and alternative schools. Two others choices exist: a) dropping out of high school, and b) delaying starting kindergarten.

### Enrollment Trends

#### Enrollment in the Roseville Area Schools

##### Current Enrollment/Past Trends

Enrollment trends play out over long periods of time. Over the past ten years, total enrollment increased by 1,167 students or 18.4 percent while resident enrollment increased by 415 students or 7.3 percent. Total enrollment was boosted by the increase in nonresident enrollment which more than doubled during this time. In 2015-16, nonresidents make up 19.0 percent of total enrollment. The percentage of nonresidents was 10.7 percent in 2006-07. The Harambee Elementary School, which was conveyed to the Roseville Area Schools by the East Metro Integration District, accounts for some of this increase in nonresidents.

TOTAL ENROLLMENT									
2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
6,339	6,365	6,446	6,445	6,530	6,716	6,877	7,011	7,431	7,506

Source: Roseville School Area Schools, Fall Enrollment. Excludes Early Childhood and ALC

RESIDENT ENROLLMENT									
2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
5,663	5,676	5,684	5,645	5,636	5,709	5,776	5,873	5,995	6,078

Source: Roseville Area Schools, Fall Enrollment. Excludes Early Childhood and ALC

To better understand resident enrollment change, it is important to understand the components of change. Like all population change, school enrollment change results from two different phenomena—natural increase/decrease and net migration. The difference between the size of the incoming resident kindergarten class and the previous year’s resident Grade 12, called natural increase or decrease, measures the change in past birth numbers or cohort change. For example, the Baby Boom (1946-1964) and the Baby Bust (1965-1976) set in motion cycles of rising and falling enrollment that are reflected as natural increase/decrease. As the next table shows, since 2006-07, Roseville's kindergarten classes have been smaller than the previous year’s Grade 12. This phenomenon accounted for a loss of -710 students in the past ten years.

The other phenomenon affecting school enrollment is migration, an indirectly derived estimate. Migration is the term used when people move across a boundary or border, in this case, the school district boundary. Net migration is calculated by the progression from grade-to-grade of public school students. For example, public school Kindergarten students are moved to Grade 1 in the following year, Grade 1 students to Grade 2, etc. Because the probability of death is very low among children, the same number of students should be in the next higher grade the following year. Therefore, if the number of students changes, migration is assumed to have occurred. A positive number indicates a net flow into the public schools and a negative number reflects a net flow out of the public schools.

COMPONENTS OF ENROLLMENT CHANGE				
Fall to Fall	Total		Natural Increase/Decrease	Net Migration
	#	%		
2006 to 2007	26	0.4	-185	211
2007 to 2008	81	1.3	-67	148
2008 to 2009	-1	---	-106	105
2009 to 2010	85	1.3	-101	186
2010 to 2011	186	2.8	-65	251
2011 to 2012	161	2.4	-34	195
2012 to 2013	134	1.9	-74	208
2013 to 2014	420	6.0	-37	457*
2014 to 2015	75	1.0	-41	116
Total	1,167	---	-710	1,877

\*Effect of Harambee

This method for estimating migration does not distinguish between physical movement across the district’s boundaries and education choices, such as transferring from a nonpublic school to a public school, transferring to a charter school or open enrolling in another public school outside the district.

Further, students who move into or out of a school district but never enroll in the district’s public schools are not reflected in the migration numbers in this report.

Based on the described methodology, net migration was positive every year in the past ten years. The addition of the Harambee Elementary School is evident in the net migration data from 2013-14 to 2014-15. Since 2006-07, net migration added 1,877 students to Roseville’s enrollment. The combination of net migration and natural increase/decrease is the change in enrollment.

### Student Choices in the Roseville School District

The number of education options available affects enrollment in a district's public schools. Nonpublic schools have been an option for many years. More recently, home schools became another option. Since its inception, public school options are attracting more students every year. Open enrollment allows residents of one district to attend public schools in another district. Charter schools are another public option. All these choices mean competition for students.

#### Nonpublic Enrollment and Home Schools

Today, nonpublic enrollment falls into two categories—traditional nonpublic schools and home schools. Most traditional nonpublic schools are associated with religious institutions and many home school curriculums are faith based as well.

NONPUBLIC SETTINGS			
Year	Traditional Nonpublic Schools	Home Schools	Total
2006-07	1,744	126	1,870
2007-08	1,662	131	1,793
2008-09	1,610	101	1,711
2009-10	1,550	108	1,658
2010-11	1,566	91	1,657
2011-12	1,472	101	1,573
2012-13	1,315	108	1,423
2013-14	1,242	127	1,369
2014-15	1,193	108	1,301
2015-16	n.a.	105	n.a.

Source: Roseville Area Schools

In Minnesota, 7.3 percent of all enrolled students were enrolled in traditional nonpublic schools and 1.9 percent of enrolled students were home schooled in 2014-15. In Roseville, 14.4 percent of enrolled students were in traditional nonpublic schools. Home schooled students accounted for 1.3 percent of all enrolled students.

The proportion of ISD #623 residents in nonpublic settings is slightly higher than the statewide percentages. Combining home school students and nonpublic students, 15.7 percent of Roseville district residents were in nonpublic settings. In Minnesota, 9.3 percent were enrolled in nonpublic settings. In the past ten years, traditional nonpublic enrollment decreased statewide while home

schooled children increased. In the Roseville School District, traditional nonpublic enrollment also decreased but so did the number of students home schooled. In the Roseville School District, the number of students in nonpublic setting decreased -30.4 percent since 2006-07.

Public Options

Open Enrollment. Open enrollment allows Minnesota students to attend public schools outside their district of residence. The application to open enroll is made by the student and his/her parents and families generally provide their own school transportation. No tuition is charged.

Some students attend public schools outside their home district because their home district enters into an agreement with another district, usually to provide specialized services. This is called a tuition agreement, but this arrangement is not technically a student choice.

Since its beginning, open enrollment has attracted more and more students statewide and in the Roseville School District. In 2014-15, 1,436 nonresident students enrolled into the Roseville Area Schools while 490 district residents attended public schools elsewhere through open enrollment. In 2015-16, 1,428 nonresidents were enrolled in the Roseville Area Schools while the number of residents attending a public school elsewhere is not available at this time.

PUBLIC OPTIONS					
Year	In	Out			Net
	Open Enrollment	Open Enrollment	Charter Schools	Tuition	
2006-07	676	276	145	194	61
2007-08	689	287	190	209	3
2008-09	762	364	216	215	-33
2009-10	800	439	278	191	-108
2010-11	894	437	305	195	-43
2011-12	1,007	474	333	191	9
2012-13	1,101	511	348	179	63
2013-14	1,138	461	393	162	122
2014-15	1,436*	490	418	94*	434
2015-16	1,428*	n.a.	n.a.	n.a.	n.a.

\*Effect of Harambee

Source: Roseville Area Schools

Nonresident students who enroll in the Roseville Area Schools accounted for 19.3 percent of Roseville's total enrollment in 2014-15. Students leaving the district to attend public schools elsewhere represented 5.9 percent of the district's school age residents. In 2014-15, 7.7 percent of Minnesota students chose open enrollment.

Charter Schools. Charter schools are another public education option. While 5.1 percent of Minnesota students attended charter schools in 2014-15, 5.0 percent of Roseville School District residents attended charter schools.

As the education choice data show, nonpublic settings—traditional nonpublic schools and home schools—attract more resident students than the various public options combined.

### K-12 Market Share of District School Age Residents

To estimate market share, there must be an estimate of a district’s school age population or more precisely, a district’s school age population enrolled in school. A district’s enrolled population can be estimated based on resident students in the district’s schools and then adding district residents attending traditional nonpublic schools, residents being home schooled and residents opting for open enrollment out, charter schools and other public options.

Based on 2006-07 and 2014-15, the estimated resident school age population increased from 8,148 to 8,298 students, an increase of 150 students or 1.8 percent. Resident enrollment in the Roseville Area Schools increased by 332 students or 5.9 percent during the same period. These percentages indicate that the Roseville Area Schools’ market share increased, which is atypical in Minnesota. Based on the estimated 2014-15 enrolled population of 8,298, the Roseville Area Schools (K-12) market share was 72.2 percent of the district’s school age population. In 2006-06, the market share was 69.5 percent. Roseville's current market share is slightly lower than a typical Twin Cities’ suburban school district due to the high percentage of students in nonpublic schools.

ROSEVILLE SCHOOL DISTRICT ESTIMATED RESIDENT SCHOOL AGE POPULATION				
Year	Roseville Public Schools Resident Enrollment	Nonpublic Settings	Public Options	Total
2006-07	5,663	1,870	615	8,148
2007-08	5,676	1,793	686	8,155
2008-09	5,684	1,711	795	8,190
2009-10	5,645	1,658	908	8,211
2010-11	5,636	1,657	937	8,230
2011-12	5,709	1,573	998	8,280
2012-13	5,776	1,423	1,038	8,237
2013-14	5,873	1,369	1,016	8,258
2014-15	5,995	1,301	1,002	8,298
2015-16	6,078	n.a.	n.a.	n.a.

### History of Enrollment by Grade

The history of enrollment contains several patterns with implications for future enrollment. First, the kindergarten class has increased in the past ten years. The increase in the last five years is significant. This trend suggests that the kindergarten class is likely to continue to increase in size, but the question is how fast and how much.

The number of students per grade varies in the Roseville Area Schools. A way of expressing the differences by grade is to look at the “average” number of students per grade. For example, the average elementary grade (K-6) has 588 students. The average middle school grade (7-8) has 524 students and the average high school grade is 585 students. The average high school grade reflects a net inflow between Grade 8 and Grade 9. These differences in average grade sizes point to enrollment increases as long as kindergarten remains near today’s level because the current number of students by grade has “built in” growth.

Minnesota's largest graduating high school class since 1978 graduated in 2009. State wide, graduating classes will be getting smaller. Based on Roseville’s enrollment history, Roseville’s largest recent senior class graduated in 2011.

ENROLLMENT										
Grade	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K	405	384	448	481	472	567	509	527	578	564
1	475	494	458	466	491	483	575	527	601	564
2	450	476	498	462	482	503	501	581	577	610
3	465	443	487	493	463	516	502	518	627	588
4	455	466	463	485	494	479	519	516	576	641
5	441	461	475	460	496	508	493	535	581	566
6	487	461	470	456	463	491	496	513	562	586
7	441	503	469	486	464	485	500	527	517	546
8	501	461	485	481	470	472	509	523	546	502
9	544	554	493	543	558	543	533	549	558	611
10	581	547	568	495	534	575	559	536	556	563
11	525	600	545	564	511	551	580	544	547	557
12	569	515	587	573	632	543	601	615	605	608
Total	6,339	6,365	6,446	6,445	6,530	6,716	6,877	7,011	7,431	7,506

Source: Roseville Area Schools, Fall Enrollment. Excludes Early Childhood and ALC

## Enrollment Projections

### Projection Background

Some factors affecting future school enrollment are known. However, other important factors are less clear. First, the trends around which there is confidence.

#### Trends Where Confidence is High

- Aging. The population in the U.S. and Minnesota is aging. By 2020, 16-17 percent of Minnesota’s population will be 65 years old or older. In 2010, the elderly made up 12.9 percent of the population. There is no historical precedent for this high proportion of older population;



therefore, society is entering uncharted waters as to the effects of this change. However, we know that aging will affect the housing market and reduce geographic mobility because older people move less frequently than younger people.

- Decrease in the school age population per household. From 2000 to 2010, the number of school age children per household decreased sharply as Baby Boomer households empty nested and started to “age in place.” After 2010, households with children will be headed primarily by Generation X parents who are members of a much smaller generation. Gen X (1965-1976) is only 60 percent the size of the Baby Boom (1946-1964) generation, which means the percentage of households with 5-17 year-olds will continue to decrease but more slowly.
- Shift in size of key adult age groups. The size of the Baby Boom generation and the Baby Bust generation will result in significant changes in the size of adult age groups, which in turn will affect the demand for new housing units. The modest increase in the 20-34-year-old population between 2010 and 2020 is especially significant for the demand for “first” homes (including apartments) and the decrease in 35-54 year-olds will affect the “move up” market. Growth in the 55+ year-old markets will create demand for housing for mature adults and seniors; however, these units will not yield school age children.

AGE TWIN CITIES METRO AREA POPULATION (11-COUNTIES)					
Age	2000	2010	2020	Change 2000-2010	Change 2010-2020
20-34 yrs.	629,898	693,040	725,670	63,142	32,630
35-54 yrs.	902,531	981,060	952,870	78,529	-28,190
55-64 yrs.	217,880	359,720	460,080	141,840	100,360
65+ yrs.	275,183	338,110	499,110	62,927	161,000
Sum	2,025,492	2,371,930	2,637,730	346,438	265,800

Source: Minnesota Demographic Center, 2007

These population changes by age point to a future very different from the recent past. Demand for additional housing will slow because the adult population age 20+ will increase more slowly and the 35-54-year-old age group that helped fuel the housing boom will decrease from 2010-2020. Furthermore, about 60 percent of the increase in adults 20 years of age and older will be persons 65+ years of age. There may be more sellers than buyers in the housing market.

- Fertility. Today, completed fertility is near the replacement level. Completed fertility refers to the number of children born per woman throughout her childbearing years. In Minnesota, White non-Hispanic women have below replacement fertility. (Replacement is 2.11 children per female at the end of childbearing.) Fertility rates for Asian and Hispanic women are now near replacement. Black women (African-American and African-born) have the highest fertility level, just below 3, that is, just less than 3 children per woman at the end of childbearing.
- Births. Births fell after 1990 in the U.S. and in Minnesota; however, beginning in 2003 through 2007, births increased. In 2007, births were higher than at any time since 1964; however, 2007 births were well below the peak Minnesota birth year of 1959 (88,000 resident births). In 2008,

2009, 2010 and 2011, births fell in the U.S. and Minnesota, although in Minnesota, births were flat between 2010 and 2011 (+9 births). These declines are attributed to the poor economy and are the result of the decline in the fertility rates of women of color. In 2012, 2013 and 2014, Minnesota resident births increased.

As the history of resident births shows, from 1999 to 2014, resident births in Minnesota increased 6.0 percent while resident births in Ramsey County increased 5.8 percent. In suburban Ramsey County, resident births increased 12.4 percent. In 2013 and 2014, suburban Ramsey County births were significantly higher than earlier.

RESIDENT LIVE BIRTHS			
Calendar Year	Minnesota	Ramsey County	Suburban Ramsey
1999	65,953	7,477	2,500
2000	67,451	7,574	2,481
2001	66,617	7,572	2,434
2002	68,037	7,414	2,299
2003	70,053	7,359	2,323
2004	70,617	7,420	2,312
2005	70,950	7,272	2,236
2006	73,515	7,305	2,140
2007	73,675	7,578	2,362
2008	72,382	7,778	2,481
2009	70,617	7,577	2,484
2010	68,407	7,266	2,330
2011	68,416	7,556	2,485
2012	68,783	7,769	2,573
2013	69,183	7,833	2,623
2014	69,916	7,910	2,810

Source: Minnesota Department of Health

- Enrollment cycles. Births are likely to increase and a third enrollment cycle will occur in the first half of this century. Already, kindergarten classes are increasing in some districts, a sign of the beginning of this third enrollment cycle. The end of the third enrollment cycle is projected to be around 2040. (From start to finish, these cycles last about 30 years.)

Unknowns

The unknowns reflect changes resulting from the collapse of the housing market and tighter credit. Another unknown is the long-term effect of the recession on domestic and international immigration, especially with slower job growth. Furthermore, will attitude and behavior changes prompted by the recession, especially delayed marriage and lower fertility, continue?

- Collapse of the housing market and tighter credit. A high level of mobility was possible with a robust housing market with rapid appreciation and easy credit. This changed with the collapse

of the housing market and tighter credit. Recently, however, home prices have been increasing and there is more new construction. Multi-family unit construction has been robust, although this type of housing does not yield many school age children per unit.

- The recession. Although the recession is over, a sluggish job market slowed population movement between and within states. Minnesota felt the effect of this change as fewer young and middle-aged adults moved to Minnesota, which slowed population growth. Minnesota has outpaced the nation in job growth, but the economy has not returned to its pre-recession levels, in part a result of an aging population and stagnant wages. The recession also increased public school enrollment as some families decided that nonpublic schools were beyond their current financial resources. Further, births to women of color and, hence, their fertility rates, dropped significantly. Whether lower fertility levels will continue for these women is unclear.

### **Cohort Survival Method**

The most common and most robust model for projecting school enrollment is the cohort survival method. The first step in the cohort survival method is aging the population. In a standard cohort survival model, aging the population involves estimating the number of deaths expected in an age group before it reaches the next older age group. When the cohort survival method is used to project school enrollment, the first step is to move a grade to the next higher grade. However, because mortality is so low in the school age population, the entire grade is assumed to “survive” to the next higher grade in the following year.

Once a grade or cohort has been “aged” to the next grade, net migration is added to or subtracted from that grade. Using survival rates accomplishes both “aging” and migration in a single step. Over time, the size of a cohort will increase or decrease as a result of migration as its progresses through the grades. For example, the 2006-07 resident kindergarten class had 472 members. This same resident cohort had 611 members in Grade 9 in 2015-16.

The future size of kindergarten classes is important in long-term enrollment projections because these students will be in school over the life of the projection. If a school census exists, it is a resource for short-term kindergarten projections, i.e., a couple of years. However, school censuses are notoriously inaccurate for children less than four years of age, in part, because the preschool population is more mobile than the school age population.

To project kindergarten, the best theoretical approach, but the least practical, is to project births based on the age of the female population. These birth projections then must be survived to age five and then adjusted for migration to yield kindergarten projections. Determining the age of females in a school district is the first challenge, and then many assumptions must be made, making this approach impractical.

A simpler approach is to use resident births as a proxy for kindergarten five years later. Of course, not every child born in the district will enter the district's kindergarten classes five to six years later. However, some "native born" children who move out before enrolling in kindergarten will be replaced by children born elsewhere who move into the district before entering kindergarten. If the number of "ins" and "outs" are equal, the net effect is zero and the kindergarten class would be 100 percent of resident births. However, no public school system captures all its potential. Some resident kindergarten students attend private schools or are home schooled. Others may attend a charter school

or open enroll at another district. Therefore, a public school's kindergarten to birth ratio is expected to be less than 100 percent. If the ratio is 100 percent or higher, more preschool children are moving into or open enrolling into the district (in migration) than leaving (out migration).

If births are used as a kindergarten proxy, kindergarten projections are available for only a few years into the future. To extend kindergarten projections another five years, Roseville's kindergarten will be projected based on the Minnesota Demographic Center's projections of Minnesota 0-year olds.

#### Kindergarten Assumptions

Upon special request, the Minnesota Department of Health will provide resident births by address so births can be geocoded to a school district's boundaries. However, "out-of-wedlock" births may be withheld because unmarried parents may choose whether to make birth information by address public. This policy results in some under reporting of births by address. As a result, using address data add two additional sources of potential annual fluctuation to resident births—the percentage of "out-of-wedlock" births and the percentage of parents withholding reporting by address. Therefore, the advantage of an additional year of data needs to be evaluated against the potential negative effects of these additional sources of variability.

DISTRICT RESIDENT LIVE BIRTHS SEPTEMBER 1 TO AUGUST 31	
2000-2001	578
2001-2002	547
2002-2003	531
2003-2004	510
2004-2005	504
2005-2006	534
2006-2007	537
2007-2008	521
2008-2009	558
2009-2010	517
2010-2011	550
2011-2012	582
2012-2013	584
2013-2014	604
2014-2015	606

*Source: Minnesota Department of Health*

The above table shows resident live births coded to the district's boundaries and adjusted for the school year, that is, adjusting births so that children are at least age five by September 1 of any given year.

With district births through August 31, 2015, kindergarten classes through 2020-21 can be projected from actual births. Note that district births have been larger beginning in 2010-11 and reached a new high in 2014-15.

The next table shows Roseville’s kindergarten as a percentage of the district kindergarten pool. In the past ten years, Roseville’s kindergarten class as a percentage of the pool increased. Beginning in 2011-12, kindergarten is more than 100 percent of the pool and is 109 percent of the pool in 2015-16. These percentages exceeding 100 percent are a clear indication that net in migration of preschool children has occurred in recent years. Like many other percentages, the percentage of kindergarten students to births five to six years earlier fluctuates. Typically, a more stable trend appears when rates are averaged. (Calculating an average of the kindergarten to birth ratio for two or more years smooths out annual fluctuations and produces a more “typical” ratio for that period.) Applying this reasoning results in the following averages. The average of the past six years is 101.4 percent while the average of the past three years is 104.6 percent. The average of the past five years is 103.0 percent.

ROSEVILLE'S KINDERGARTEN AS A PERCENTAGE OF THE DISTRICT KINDERGARTEN POOL			
Birth Years	District Kindergarten Pool	Percentage	Kindergarten Year
2000; 2001	578	70.1%	2006-07
2001; 2002	547	70.2%	2007-08
2002; 2003	531	84.4%	2008-09
2003; 2004	510	94.3%	2009-10
2004; 2005	504	93.7%	2010-11
2005; 2006	534	106.2%	2011-12
2006; 2007	537	94.8%	2012-13
2007; 2008	521	101.2%	2013-14
2008; 2009	558	103.6%	2014-15
2009; 2010	517	109.1%	2015-16
2010; 2011	550		2016-17
2011; 2012	582		2017-18
2012; 2013	584		2018-19
2013; 2014	604		2019-20
2014; 2015	606		2020-21

A ratio of 109.1 percent seems high for the next ten years. Therefore, to dampen the effect of the most recent year, the average of the past six years (101.4 percent) will be used as the low kindergarten assumption and the average of the past five years (103.0 percent) will be used for the high kindergarten assumption. Both these averages also may be high in the long term.

To extend kindergarten projections beyond 2020-21, projected Minnesota 0-year olds will be used as a guide; however, the number of resident births in 2014 is larger than the projected 0-year olds in 2015. Births may increase more rapidly than projected. Note that the projection of Minnesota 0-year olds is essentially flat between 2016 and 2025.

PROJECTED MINNESOTA 0-YEAR OLDS	
Year	Number
<b>2014</b>	<b>69,919*</b>
2015	69,821
2016	70,149
2017	70,312
2018	70,395
2019	70,373
2020	70,325
2025	70,164

Source: Minnesota Demographic Center

\*Actual births

Suburban Ramsey County resident births have increased as a percentage of Minnesota resident births. Most recently, suburban Ramsey County accounted for 4.02 percent of Minnesota births. At 4.02 percent of Minnesota resident births, suburban Ramsey County would have 2,827 resident births in 2020. This compares to 2,810 in 2014. This 2020 projection is not reasonable. Therefore, suburban Ramsey County's percentage of births will be increased by the rate of recent annual increases. This assumption puts suburban Ramsey County at 4.25 percent of Minnesota births. At this percentage,

DISTRICT KINDERGARTEN POOL	
Year	
<b>2016-17</b>	<b>550</b>
<b>2017-18</b>	<b>582</b>
<b>2018-19</b>	<b>584</b>
<b>2019-20</b>	<b>604</b>
<b>2020-21</b>	<b>606</b>
2021-22	614
2022-23	623
2023-24	631
2024-25	640
2025-26	648

suburban Ramsey County would have 2,989 births in 2020. The suburban Ramsey County resident birth projections resulting from this latter assumption will be converted to a kindergarten pool. In recent years, the district's kindergarten pool averaged 21.7 percent of the suburban Ramsey County pool. The projected district kindergarten pool is shown in the above table.

When the kindergarten to birth ratio is applied to the kindergarten pool, kindergarten projections result. The low kindergarten projection results in 6,167 kindergarten students over ten years while the high projection produces 6,264 kindergarten students over ten years. This compares with 4,935 kindergarten students over the past ten years.

KINDERGARTEN PROJECTIONS		
Year	District Pool	
	@101.4%	@103.0%
<b>2015-16</b>	<b>564</b>	<b>564</b>
2016-17	558	567
2017-18	590	599
2018-19	592	602
2019-20	612	622
2020-21	614	624
2021-22	623	632
2022-23	632	642
2023-24	640	650
2024-25	649	659
2025-26	657	667
Total	6,167	6,264

Through 2020-21, the kindergarten projections are based on actual births. Note that the size of the kindergarten class continues to get larger year after year.

#### Net Migration Assumptions

The concept and method of calculating migration was explained earlier in this report. However, the limitations of the methodology are worth repeating. The method of calculating migration does not distinguish between physical movement across a district's boundaries and education choices, such as transferring from a nonpublic school to a public school, transferring to a charter school or open enrolling in another public school. Further, students who move into or out of a school district but never enroll in the district's public schools are not reflected in the migration numbers in this report.

In the past ten years, annual net migration fluctuated from year to year but was positive every year. From 2013-14 to 2014-15, the large positive number reflects the inclusion of the Harambee Elementary School in Roseville Area Schools' enrollment.

The next table shows net migration aggregated by the elementary grades (Kindergarten-Grade 6), the middle school grades (7-8) and the high school grades. Kindergarten to Grade 6 net migration was positive all but one year in the past ten years. Harambee Elementary was conveyed to the Roseville Area Schools from the East Metro Integration District and the effect of this event resulted in the large net in migration between 2013-14 and 2014-15. At the middle school grades, net migration was also positive in all but three years in the past ten years. The high school grades experienced net in migration every year. Some this net in migration reflects the growth in nonresident students who open enroll into the Roseville Area Schools.

NET MIGRATION SCHOOL YEAR TO SCHOOL YEAR									
	06 to 07	07 to 08	08 to 09	09 to 10	10 to 11	11 to 12	12 to 13	13 to 14	<del>15 to</del> <del>16</del> 14 to 15
K-6	110	127	-7	42	82	30	91	320*	15
7-8	36	-10	28	-8	30	33	54	23	-31
9-12	65	31	84	152	139	132	63	114	132
Total	211	148	105	186	251	195	208	457*	116

\*Effect of Harambee

Net in migration between Kindergarten and Grade 1 has been typical in Minnesota's public schools, although this may change with free all-day kindergarten. In the Roseville Area Schools, net migration between Kindergarten and Grade 1 has been positive every year in the past ten years except for the most recent year. Further, most of the other elementary grades showed positive resident net in migration nearly every year. This reflects changes in the district's population as well as changes in the competitive environment. Like many other Minnesota public schools, there is a net inflow between Grade 8 and Grade 9 when nonpublic students often transfer into the public schools. After Grade 9, the high school grades most often show a net in migration. This pattern is atypical for Minnesota high schools.

NET MIGRATION SCHOOL YEAR TO SCHOOL YEAR									
	06 to 07	07 to 08	08 to 09	09 to 10	10 to 11	11 to 12	12 to 13	13 to 14	14 to 15
K to 1	89	74	18	10	11	8	18	74*	-14
1 to 2	1	4	4	16	12	18	6	50*	9
2 to 3	-7	11	-5	1	34	-1	17	46*	11
3 to 4	1	20	-2	1	16	3	14	58*	14
4 to 5	6	9	-3	11	14	14	16	65*	-10
5 to 6	20	9	-19	3	-5	-12	20	27*	5
6 to 7	16	8	16	8	22	9	31	4	-16
7 to 8	20	-18	12	-16	8	24	23	19	-15
<b>8 to 9</b>	<b>53</b>	<b>32</b>	<b>58</b>	<b>77</b>	<b>73</b>	<b>61</b>	<b>40</b>	<b>35</b>	<b>65</b>
9 to 10	3	14	2	-9	17	16	3	7	5
10 to 11	19	-2	-4	16	17	5	-15	11	1
11 to 12	-10	-13	28	68	32	50	35	61	61
Total	211	148	105	186	251	195	208	457	116
Percent	3.3	2.3	1.6	2.9	3.8	2.9	3.0	6.5	1.6

\*Effect of Harambee

For making projections, migration is converted into survival rates. Survival rates show the percentage change from grade to grade each year. For example, 1.000 indicates no change or 100 percent of the grade progressed to the next highest grade. Any number over 1.000 reflects the



percentage increase while a number below 1.000 reflects the percentage decrease. For example, 0.98 indicates a 2 percent decrease.

SURVIVAL RATES SCHOOL YEAR TO SCHOOL YEAR									
	06 to 07	07 to 08	08 to 09	09 to 10	10 to 11	11 to 12	12 to 13	13 to 14	14 to 15
K to 1	1.220	1.193	1.040	1.021	1.023	1.014	1.035	1.140*	0.976
1 to 2	1.002	1.008	1.009	1.034	1.024	1.037	1.010	1.095*	1.015
2 to 3	0.984	1.023	0.990	1.002	1.071	0.998	1.034	1.079*	1.019
3 to 4	1.002	1.045	0.996	1.002	1.035	1.006	1.028	1.112*	1.022
4 to 5	1.013	1.019	0.994	1.023	1.028	1.029	1.031	1.126*	0.983
5 to 6	1.045	1.020	0.960	1.007	0.990	0.976	1.041	1.050*	1.009
6 to 7	1.033	1.017	1.034	1.018	1.048	1.018	1.063	1.008	0.972
7 to 8	1.045	0.964	1.026	0.967	1.017	1.049	1.046	1.036	0.971
<b>8 to 9</b>	<b>1.106</b>	<b>1.069</b>	<b>1.120</b>	<b>1.160</b>	<b>1.155</b>	<b>1.129</b>	<b>1.079</b>	<b>1.067</b>	<b>1.119</b>
9 to 10	1.006	1.025	1.004	0.983	1.030	1.029	1.006	1.013	1.009
10 to 11	1.033	0.996	0.993	1.032	1.032	1.009	0.973	1.021	1.002
11 to 12	0.981	0.978	1.051	1.121	1.063	1.091	1.060	1.112	1.112

\*Effect of Harambee

COMPARISON OF SURVIVAL RATES AVERAGED		
Grade	Past 5 Years*	Past 3 Years*
K to 1	1.012	1.006
1 to 2	1.022	1.013
2 to 3	1.031	1.027
3 to 4	1.023	1.025
4 to 5	1.018	1.007
5 to 6	1.004	1.025
6 to 7	1.025	1.018
7 to 8	1.021	1.009
<b>8 to 9</b>	<b>1.121</b>	<b>1.099</b>
9 to 10	1.019	1.008
10 to 11	1.004	0.988
11 to 12	1.082	1.086

\*All averages exclude 2013-14 to 2014-15

One of the advantages of the cohort survival method is that it produces projections for every grade, but this requires migration assumptions for every grade. Net migration between 2013-14 and 2014-15 reflects the addition of the Harambee Elementary School, a one-time event, which should not be reflected in projections going forward. While many of the rates look similar, the average of survival rates for the past five years excluding 2013-14 to 2014-15 results in the higher projection in ten years than the average of the past three years excluding 2013-14 to 2014-15. To reflect possibilities, two migration assumptions were constructed. The desired outcome was a low end and a high end of recent

experience. The average of the past three years excluding 2013-14 to 2014-15 will be the low assumption and the average of the past five years excluding 2013-14 to 2014-15 will be the high assumption.

Because net migration will be projected based on survival rates by grade, the percentage change will be the same each year while the actual number of students added or subtracted by grade may change from year to year.

PROJECTED SURVIVAL RATES		
Grade	Low (Past 3 Years)*	High (Past 5 Years)*
K to 1	1.006	1.012
1 to 2	1.013	1.022
2 to 3	1.027	1.031
3 to 4	1.025	1.023
4 to 5	1.007	1.018
<b>5 to 6</b>	1.025	1.004
6 to 7	1.018	1.025
7 to 8	1.009	1.021
<b>8 to 9</b>	<b>1.099</b>	<b>1.121</b>
9 to 10	1.008	1.019
10 to 11	0.988	1.004
11 to 12	1.086	1.082

\*All averages exclude 2013-14 to 2014-15

Projection Results

*The kindergarten and net migration assumptions are trend lines, which remove annual fluctuations. However, the future, like the past, will be characterized by annual fluctuation, sometimes large.* Because there is no reasonable way to forecast when fluctuations around trend lines will occur, it is arbitrary to project them. Furthermore, long-term projections are designed to approximate a future point in time not to yield the best projection for each intervening year between the present and the projection end date. For this reason, long-term projections should not be used for annual budgeting purposes. The district should continue to use its version of the cohort survival methodology for annual enrollment projections.

Four cohort projections are shown in the next table. In ten years, there is a 590 student difference between the lowest projection and the highest projection. The migration assumptions account for a 483-486 student difference in ten years. The kindergarten assumptions account for a 104-107 student difference in the ten years. In these projections, the migration assumptions have a much larger effect on the differences among the projections than the kindergarten assumptions.

The lowest projection is based on the low kindergarten and low migration assumptions. In this projection, enrollment increases by 1,151 students by 2025-26 or 15.3 percent. In five years, enrollment increases by 597 students or 8.0 percent.

The highest projection, based on the high kindergarten and high migration assumptions, shows enrollment increases by 1,741 students or 23.2 percent between 2015-16 and 2025-26. In five years, enrollment increases by 1,035 students.

In between the highest and lowest projections are two other projections. In 2025-26, these two projections differ by 379 students. As a group, the four projections reflect a range of possibilities with all four showing large increases in enrollment.

ENROLLMENT PROJECTIONS				
Year	Low K Low Mig	High K Low Mig	Low K High Mig	High K High Mig
<b>2015-16</b>	<b>7,506</b>	<b>7,506</b>	<b>7,506</b>	<b>7,506</b>
2016-17	7,563	7,572	7,668	7,677
2017-18	7,722	7,740	7,874	7,892
2018-19	7,821	7,849	8,088	8,116
2019-20	7,904	7,943	8,253	8,292
2020-21	8,103	8,152	8,492	8,541
2021-22	8,256	8,315	8,673	8,733
2022-23	8,374	8,444	8,799	8,870
2023-24	8,501	8,582	8,961	9,043
2024-25	8,555	8,648	9,018	9,112
2025-26	8,657	8,761	9,140	9,247

*Excludes Early Childhood and ALC*

Looking at the projections based on the elementary, middle school and high school grades is instructive. K-6 enrollment increases by 160 to 262 students in the first five projection years and continues to increase in the second five projection years. For the first five projection years, kindergarten students have already been born.

ENROLLMENT PROJECTIONS				
	K-6	7-8	9-12	Total
<b>2015-16</b>	<b>4,119</b>	<b>1,048</b>	<b>2,339</b>	<b>7,506</b>
<b>2020-21</b>				
Low K/Low Mig	4,279	1,314	2,510	8,103
High K/Low Mig	4,328	1,314	2,510	8,152
Low K/High Mig	4,331	1,317	2,843	8,492
High K/High Mig	4,381	1,317	2,843	8,541
<b>2025-26</b>				
Low K/Low Mig	4,633	1,338	2,685	8,657
High K/Low Mig	4,705	1,360	2,696	8,761
Low K/High Mig	4,693	1,365	3,081	9,140
High K/High Mig	4,767	1,387	3,093	9,247

*Excludes Early Childhood and ALC*

Middle school enrollment increases by 266 to 269 students in the first five projection years. In the second five projection years, middle school enrollment continues to increase but at a very slow rate so that middle school enrollment is only 24 to 70 students higher than in 2020-21. In the second five projection years, the kindergarten assumptions effect the middle school projections but in the first five years only the current grade size and the migration assumptions are affecting the size of the middle school grades.

High school enrollment is projected to increase by 171 to 504 students in the first five projections years and continues to increase in the second five projection years with 346 to 754 more students than today. The kindergarten assumptions have only a small effect on the high school projections.

In 2025-26, the 2015-16 kindergarten class will be in Grade 10, which means that all the grades below Grade 10 are products of the projection assumptions. Detailed grade by year projections are at the end of this report.

### **Housing Unit Method**

The housing unit method provides another way of projecting population and school enrollment. While the number of dwelling units (housing units) is related to the number of school age children, dwelling units alone do not determine the number of school age children. The number of school age children per unit is also a key variable in the projection equation.

The chief reason to use the housing unit method is to understand the effect of additional housing units on enrollment. It could be said that housing stock is like DNA. It determines the size and characteristics of the resident school age population.

After dwelling unit type, year built and market value emerge as the most important housing characteristics. Year built reflects how families lived in a particular era and is a proxy for square feet and characteristics such as number of bedrooms, number of bathrooms and number of garage spaces. The presence of a master suite, walk-in closets, etc. can also be inferred from year built. Value implies some of these same characteristics plus lot size, location and interior amenities such as kitchen and bathroom appointments and finishes.

The relationship between housing unit characteristics and student numbers and characteristics has been established by work in three states. Findings based on school districts in three states follow.

- *Dwelling unit type affects the school age child per unit yield. Single-family detached units have the highest school age child per unit yield. Single-family attached, such as townhouses, have significantly fewer children per unit than single-family detached units, while apartment units have even fewer school age children per unit, although there are some local exceptions.*

ROSEVILLE AREA SCHOOLS HOUSING TYPE BY STUDENT YIELD			
Housing Type	Units	K-12 Students	K-12 Yield
Single-Family Detached	13,104	4,027	0.31
Single-Family Attached*	1,022	56	0.05
Apartments	n.a.	1,388	n. a
Condos	185	72	0.39
Duplex	282	43	0.15
Mobile Homes	n.a.	308	n.a.
Total	n.a.	5,894	n.a.

\*Townhomes

Note: Resident K-12 enrollment by address is lower than the fall headcount (6,078)

Source: Ramsey County Geographic Information System and Student Information System

Sixty-eight (68.3) percent of resident students live in single-family detached units. In the Roseville School District, single-family detached units yield less than one-third a student per unit (0.31). Nearly 24 (23.5) percent of students reside in apartments, where the student yield per unit is much lower.

- *Newer single-family detached units yield more students per unit than older single-family detached units.*

Like most other districts studied, newer single-family detached units in the Roseville School District have the highest student yield per unit (0.34). The lowest student yield per single-family detached unit is from units built between 1960 and 1979 (0.28).

ROSEVILLE AREA SCHOOLS SINGLE-FAMILY DETACHED RESIDENT STUDENT YIELD BY YEAR BUILT			
Year Built	Units	Resident K-12	
		#	Yield
Post 1980	1,954	658	0.34
1960-79	3,501	995	0.28
1940-59	6,508	2002	0.31
Pre 1940	1,141	372	0.33
Total	13,104	4,027	0.31

Source: Ramsey County Geographic Information System and Student Information System

- *As single-family detached units sell (turnover), student yield usually increases in the newer units. In older units, yield is likely to decrease.*

In the Roseville School District, newly built single-family detached units have the highest per unit student yield (0.47), which is typical. As older units sell, the yield of public school

students increases (0.35 students per unit compared to 0.30 students). Therefore, the Roseville Area Schools see an increase in K-12 students as single-family units sell.

ROSEVILLE AREA SCHOOLS SINGLE-FAMILY DETACHED UNITS BY SALES STATUS (Sold January 1, 2014 to December 31, 2015)		
Status	Units	K-12 Yield
New*	119	0.47
Existing (pre 2010)		
Not Sold	12,006	0.30
Sold	979	0.35
Total	13,104	0.31

\*Built 2010-2015

Source: Ramsey County Geographic Information System and Student Information System

- *The market value of single-family detached units affects the school age child per unit yield. Moderately priced to higher priced units yield more school age children than the lowest priced units.*

Like many other school districts, in the Roseville School District, the highest yield per unit of public school students comes from the most expensive single-family detached units.

ROSEVILLE AREA SCHOOLS SINGLE-FAMILY DETACHED RESIDENT STUDENT YIELD BY MARKET VALUE			
Estimated Market Value	Single-Family Units	Resident K-12	
		#	Yield
\$300,000+	2,122	764	0.36
\$200,000-\$299,999	5,895	1,806	0.31
\$0-\$199,999	5,087	1,457	0.29
Total	13,104	4,027	0.31

Source: Ramsey County Geographic Information System and Student Information System

- *Different racial/ethnic groups and/or major language groups have different housing patterns by unit type.*

In the Roseville School District, White students overwhelmingly live in single-family detached units (87 percent) and only 12 percent live in multi-family units of some type. Minority students live in a wide variety of units. Fifty (50) percent live in single-family detached homes but 49 percent live in multi-family units of some type.

ROSEVILLE AREA SCHOOLS HOUSING TYPE BY RACE/ETHNICITY OF RESIDENT STUDENTS										
Resident Minority Students										
Attendance Area	Total		Single-Family Detached		Single-Family Attached		Multi-Family		Other	
	#	%	#	%	#	%	#	%	#	%
District wide	2,977	100%	1,479	50%	28	1%	1,136	38%	334	11%
Resident White Students										
	#	%	#	%	#	%	#	%	#	%
District wide	2,917	100%	2,548	87%	28	1%	252	9%	89	3%

Source: Ramsey County Geographic Information System and Student Information System

- As the population ages, more dwelling units are being built for mature adults (55+ years) and for seniors. These units will have zero school age children per unit.

Currently, 51 percent of the district’s single-family detached units contain at least one person age 55+, while only 16 percent of single-family detached units contain a Roseville Area Schools student. The percentage of the 55+ population is high in the Roseville School District reflecting the aging population.

Looking further at the age of at least one adult in single-family detached units shows that 3,916 (29.9 percent) have at least one person age 65 or above. More than fourteen (14.4) percent of single-family units (1,888) have at least one person age 75 or above. About four (4.1) percent of single-family detached units (537) have at least one person 85 years of age or above. These percentages provide some clues for future turnover of single-family units.

ROSEVILLE SCHOOL DISTRICT SINGLE-FAMILY DETACHED HOMES WITH ROSEVILLE PUBLIC SCHOOL K-12 STUDENTS OR REGISTERED VOTERS AGE 55+					
Attendance Area	Single-Family Detached	With K-12 Roseville Public School Students	Percentage with K-12 Roseville Public School Students	With Registered Voter 55+	Percentage with Registered Voter 55+
District wide	13,104	2,182	16%	6,689	51%

Source: Ramsey County Geographic Information System and Student Information System

Projections

In 2016, the Roseville School District is estimated to have more than 24,000 dwelling units. Single-family detached units account for 13,104 or 55 percent of all units. Not all dwelling units are occupied at any point in time; however, for the purposes of calculating public school yield per unit, all units are assumed to be occupied.

### Dwelling Unit Growth

It is difficult to project residential development more than a few years into the future. The table below shows projected development through 2018. The Roseville School District is fully developed so the number of new units projected is very small. Even a relative large number of units for seniors is not likely to have a huge ripple effect on school enrollment.

PROJECTED DEVELOPMENT FOR NEXT THREE YEARS			
City	Single-Family Detached	Townhomes	Apartments*
Arden Hills	0	0	0
Falcon Heights	2	4	0
Lauderdale	0	0	0
Little Canada	0	0	0
Maplewood	0	0	0
Roseville	23	0	0
Shoreview	0	0	0
<b>TOTAL</b>	<b>25</b>	<b>0</b>	<b>0</b>

\*Market rate and low income (excludes senior housing)

The table immediately below provides information on the component parts of the district. Note how K-12 student yield varies by municipality.

ROSEVILLE AREA SCHOOLS RESIDENT STUDENT YIELD BY MINOR CIVIL DIVISION				
Minor Civil Division	Single-Family Detached Homes	Median Value of Single-Family Detached Homes	K-12 Students	K-12 Student Yield
Arden Hills	100	\$306,750	25	0.25
Falcon Heights	1,135	\$252,000	373	0.33
Lauderdale	480	\$175,500	95	0.20
Little Canada	1,633	\$217,500	515	0.32
Maplewood	1,544	\$171,200	741	0.48
Roseville	7,550	\$218,400	2,103	0.28
Shoreview	662	\$247,000	175	0.26
<b>Total</b>	<b>13,104</b>		<b>4,027</b>	<b>0.31</b>

Source: Ramsey County Geographic Information System and Student Information System



## CHAPTER 2

### ENROLLMENT PROJECTIONS BY ELEMENTARY SCHOOL

Projecting K-6 enrollment by school is fraught with potential errors because the enrollment at any one school is small, which magnifies annual fluctuations. For this reason, along with the short time that existing students are part of the K-6 student body, projections will be made for five years rather than ten years. This chapter focuses on the eight Roseville elementary schools and the six elementary attendance areas.

#### Past Trends

The following three tables show a five-year history by school of K-6 enrollment, kindergarten enrollment, and net migration. Since 2010-11, district-wide K-6 enrollment increased by 758 students or 22.6 percent. This large increase resulted from the conveyance of Harambee Elementary School to the Roseville Area Schools. Without Harambee, K-6 enrollment would have increased by 399 students or 11.9 percent, which is still significant growth in five years. K-6 enrollment increased at every elementary school except Central Park. The largest increase at any one elementary school occurred at Little Canada where enrollment increased by 218 students or 63.6 percent. Brimhall, Edgerton, and Parkview had modest enrollment growth ranging from 5.9 percent to 8.7 percent. (Parkview is a K-8 school; however, in the next several tables, only the K-6 enrollment is shown.) ED Williams increased by only nine students or 1.8 percent. Central Park's enrollment decreased by -37 students or -8.4 percent.

ENROLLMENT GRADES K-6						
School	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Parkview K-6	572	575	573	582	572	606
Brimhall	647	692	696	709	686	703
Central Park	441	483	472	488	412	404
Edgerton	451	475	480	497	485	485
Falcon Heights	403	454	454	480	496	488
Little Canada	343	365	406	466	531	561
ED Williams	498	501	509	494	520	507
Harambee					400	361
Sum	3,355	3,545	3,590	3,716	4,102	4,115
District-wide	3,361	3,547	3,595	3,717	4,102	4,119

Note the small differences between the sum of the schools and the district-wide total. These differences result from a few K-6 students not at the schools shown in the table

District-wide, kindergarten increased by 92 students or 19.5 percent. More than half of this increase can be attributed to Harambee. Of the kindergarten increase not attributed to Harambee, virtually all of the increase occurred at Little Canada and Falcon Heights (65 students). Brimhall's

kindergarten increased by eight students. All the other elementary schools had a decline in the number of kindergarten students.

KINDERGARTEN						
School	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Parkview	78	82	75	77	73	76
Brimhall	103	103	100	108	106	111
Central Park	59	75	46	62	58	50
Edgerton	64	68	49	62	53	57
Falcon Heights	52	100	69	73	63	66
Little Canada	43	61	92	86	98	94
ED Williams	67	76	73	59	73	59
Harambee					54	49
Sum	466	565	504	527	578	562
District-wide	472	567	509	527	578	564

Note the small differences between the sum of the schools and the district-wide total. These differences result from a few K-6 students not at the schools shown in the table

District-wide, K-6 net migration has been positive every year prior to the year Harambee was incorporated into the district. Harambee becoming a part of the district resulted in a small net out migration from the other seven elementary schools from 2013-14 to 2014-15. The large district-wide net in migration is the effect of Harambee. From 2014-15 to 2015-16, Harambee showed a net out migration, which greatly reduced the district-wide net migration compared to previous years. Most of the net out migration from Harambee occurred among nonresidents.

NET MIGRATION GRADES K-6					
School	2010-11 to 2011-12	2011-12 to 2012-13	2012-13 to 2013-14	2013-14 to 2014-15	2014-15 to 2015-16
Parkview K-6	6	12	13	4	44
Brimhall	17	-11	-8	-47	1
Central Park	16	16	11	-51	16
Edgerton	31	22	31	21	23
Falcon Heights	9	-9	10	13	-18
Little Canada	17	3	32	22	-4
ED Williams	-8	-1	-1	13	-4
Harambee					-45
Sum	88	32	88	-25	13
District-wide	82	30	91	320*	15

\*Reflects the conveyance of Harambee to the Roseville Area Schools

Note the small differences between the sum of the schools and the district-wide total prior to Harambee and in the most recent year. These differences result from a few K-6 students not at the schools shown in the table

## K-6 Projections

### Individual Elementary Schools

Individual school projections will be made using the cohort survival method. The advantage of this method is that it begins by aging the student population. Therefore, any differences in grade sizes are reflected in the projections as these classes leave elementary school. Further, this method is sensitive to the number of births in the immediate past. However, with the cohort survival method, it is very difficult to calibrate migration rates to reflect new housing units, which is a disadvantage. However, so few new units are expected in the Roseville School District that the cohort survival method should perform very well.

#### Kindergarten

PERCENT OF KINDERGARTEN AT EACH SCHOOL							
School	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Projection
Parkview	16.7	14.5	14.9	14.6	12.6	13.5	13.1
Brimhall	22.1	18.2	19.8	20.5	18.3	19.8	19.1
Central Park	12.7	13.3	9.1	11.8	10.0	8.9	9.5
Edgerton	13.7	12.0	9.7	11.8	9.2	10.1	9.7
Falcon Heights	11.2	17.7	13.7	13.8	10.9	11.8	11.4
Little Canada	9.2	10.8	18.3	16.3	17.0	16.7	16.9
ED Williams	14.1	13.5	14.5	11.2	12.6	10.5	11.6
Harambee	---	---	---	---	9.4	8.7	8.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

For kindergarten projections by school, kindergarten students will be allocated to the individual schools based on each school's share. Each school's share is shown in the previous table. For kindergarten projections by school, the average of the past two years' shares was used for all schools except Harambee where the 2015-16 share was used. The following table shows projected kindergarten by school.

KINDERGARTEN PROJECTIONS BY SCHOOL						
HIGH KINDERGARTEN						
School	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Parkview	76	74	78	79	81	82
Brimhall	111	108	115	115	119	119
Central Park	50	54	57	57	59	59
Edgerton	57	55	58	58	61	61
Falcon Heights	66	65	68	69	71	71
Little Canada	94	96	101	102	105	106
ED Williams	59	66	70	70	72	72
Harambee	49	49	52	52	54	54
Sum	562	567	599	602	622	624
Total	564	567	599	602	622	624

Migration

Averaging survival rates removes some of the year to year fluctuations, although the average may not be the actual rate in any future year. The average of the past five years’ survival rates minus the 2013-14 to 2014-15 year will be used in the individual school projections. (This is the same assumption as the high migration assumption in the district-wide projections.) Harambee has only one year of net migration, which showed net out migration at every grade. Using these values resulted in a large enrollment decline at Harambee in five years; therefore, all the migration rates for Harambee were set at 0.955.

SURVIVAL RATES USED IN THE PROJECTIONS						
School	K to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6
Parkview	1.028	0.988	1.071	1.042	1.073	1.035
Brimhall	1.010	1.045	1.007	0.985	0.968	0.988
Central Park	1.059	0.994	1.046	1.035	1.045	1.070
Edgerton	1.108	1.057	1.049	1.060	1.090	1.051
Falcon Heights	0.926	1.066	1.014	0.980	0.965	1.035
Little Canada	1.047	0.999	1.090	1.068	1.054	0.995
ED Williams	1.029	0.993	0.996	1.032	0.972	0.932
Harambee	0.955	0.955	0.955	0.955	0.955	0.955

Projection Results

Enrollment projections by school will extend for five years into the future. The 2015-16 kindergarten will be in Grade 5 in 2020-21. Therefore, enrollment in the last couple of projection years is largely derived from the assumptions. A summary of the cohort survival projections by school is shown in the next table and annual projections are in a following table. (Background data are in the Appendix.)

COHORT SURVIVAL METHOD PROJECTION BY SCHOOL				
GRADES K-6				
School	2015-16	2020-21	Change	
			#	%
Parkview K-6	606	602	-4	-0.7%
Brimhall	703	811	108	15.4%
Central Park	404	430	26	6.4%
Edgerton	485	504	19	3.9%
Falcon Heights	488	455	-33	-6.8%
Little Canada	561	788	227	40.5%
ED Williams	507	485	-22	-4.3%
Harambee	361	317	-44	-12.2%
Sum	4,115	4,392	277	6.7%
District-wide	4,119	4,381	262	6.4%
Parkview K-8	770	799	29	3.8%

District-wide, K-6 enrollment is 262 students or 6.4 percent higher in 2020-21 than in 2015-16. In 2020-21, the sum of the individual school projections is +11 students higher than the high kindergarten/high migration district-wide projection. Therefore, the independently projected individual school projections are a good fit with the district-wide projections. The sum of kindergarten by school equals the district-wide high kindergarten projection; however, other grades by school will not necessarily equal the district-wide projection for those grades.

The majority of the individual school projections look reasonable. However, Little Canada shows a large increase. This projected increase is largely the result of several high survival rates that do not appear to be related to any single event. Further, the kindergarten projection increases the size of the incoming grades later in the projection period. Little Canada showed a large enrollment increase from 2010-11 to 2015-16 as well. Enrollment growth is supported by the annual rate of sales in single-family units and the K-6 student yield per sold single-family unit in the Little Canada attendance area.

The large projected increase at Brimhall results from larger grades replacing smaller grades during the projection period. The cause of this larger than typical increase is understandable.

Harambee's projected enrollment is worthy of attention. As mentioned earlier, the survival rates for the past year were all negative and resulted in enrollment falling to 277 students in 2020-21. To overcome what might be the result of a single atypical year, each grade's survival rate was set at 0.955. Even using these modified survival rates, the projections suggest that future enrollment at Harambee may call for enrollment strategies. Most of the decline in the one-year survival rates was concentrated among nonresidents.

COHORT SURVIVAL METHOD PROJECTIONS BY SCHOOL BY YEAR						
GRADES K-6						
HIGH/HIGH						
School	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Parkview K-6	606	607	608	604	604	602
Brimhall	703	712	725	746	785	811
Central Park	404	407	413	411	419	430
Edgerton	485	502	510	508	518	504
Falcon Heights	488	473	482	458	464	455
Little Canada	561	622	698	762	771	788
ED Williams	507	492	489	472	479	485
Harambee	361	347	339	324	319	317
Sum	4,115	4,162	4,264	4,285	4,359	4,392
District-wide	<b>4,119</b>	4,165	4,261	4,274	4,347	4,381
Difference	<b>-4</b>	-3	+3	+11	+12	+11
Parkview K-8	<b>770</b>	782	792	797	800	799

### Attendance Area Projections

Attendance area projections will be made using the housing starts method. These projections show the potential of each attendance area to produce resident K-6 students. The housing starts method shows the effect of new housing units and the sale of existing units. The method's weakness is that it doesn't reflect changes in grade size or in births because the yields per unit remain at today's level throughout the projection period.

#### Method

The Housing Occupancy and Enrollment Study for the Roseville School District provides resident K-6 yields for existing units and new units. Yield data for existing units are specific for recently sold units and units that did not turnover. The housing starts method will be calculated as follows:

$$\text{New Single-Family Detached Units} \times \text{K-6 yield} = \text{Projected students (A)}$$

$$\text{Existing Single-Family Detached Units} \times \text{Percent Sold Annually} = \text{Units with movers (new residents) and units with non-movers (no change)}$$

$$\text{--Existing Single-Family Detached Units (not sold)} \times \text{K-6 yield} = \text{Projected students (B)}$$

$$\text{--Existing Single-Family Detached Units (sold)} \times \text{K-6 yield} = \text{Projected students (C)}$$

$$\text{Add Projected Students from A, B and C} = \text{Projected students from Single-Family Detached Units}$$

$$\text{Add Projected Students from Single-Family Detached Units to Projected Students from Non Single-Family Detached Units} = \text{K-6 Resident Students by Attendance Area}$$

The increase in single-family detached units is projected to be modest in the next three years. Only 25 additional single-family housing units are projected to be built in this fully developed school district.

PROJECTED NEW SINGLE-FAMILY DETACHED UNITS						
Attendance Area	2016	2017	2018	2019	2020	Total
Brimhall	2	0	0			2
Central Park	6	0	0			6
Edgerton	0	0	0			0
Emmet D. Williams	8	9	0			17
Falcon Heights	0	0	0			
Little Canada	0	0	0			
District	16	9	0			25

The next two tables show estimated annual single-family detached unit sales and the K-6 Roseville Public School yields by attendance area. The sales data are based on sales from January 1, 2014 through December 31, 2015.

The annual rates of sales by attendance area are the same for the Brimhall, Central Park, Edgerton and ED Williams attendance areas (3.5 percent). The highest annual rate of sales was 4.5 percent in the Falcon Heights attendance area. Annual rates of 4 percent or more are high rates of annual sales for established areas in the Twin Cities.

PERCENT OF EXISTING SINGLE-FAMILY DETACHED UNITS WITH TURNOVER ANNUALLY (January 1, 2014-December 31, 2015)	
Attendance Area	%
Brimhall	3.5%
Central Park	3.5%
Edgerton	3.5%
Falcon Heights	4.5%
Little Canada	4.0%
ED Williams	3.5%
Total	4.0%

K-6 RESIDENT STUDENT YIELD FROM SINGLE-FAMILY UNITS						
Attendance Area	Existing Units (pre 2010)				New Units (2010-2014)	
	Non Movers		Movers (New Residents)			
	#	Yield	#	Yield	#	Yield
Brimhall	2,369	0.14	192	0.13	5	0.60
Central Park	2,415	0.12	177	0.18	4	0.75
Edgerton	2,195	0.14	172	0.23	59	0.31
Falcon Heights	2,131	0.17	213	0.31	9	1.11
Little Canada	1,482	0.14	114	0.33	37	0.16
ED Williams	1,414	0.24	111	0.32	5	0.00
Total	12,006	0.15	979	0.24	119	0.34

The K-6 yield per unit for units that were not sold is quite low, but comparable to other Twin Cities developed suburbs. The ED Williams attendance area is the exception. In every attendance area with the exception of Brimhall when units turnover (sell), yield is higher in the sold units than in units that did not turnover. Therefore, the sale of existing units adds resident K-6 students immediately. (The data do not reflect any preschool children who may be present.) As the above table shows, new units

have an even higher resident K-6 yield per unit than existing units, except for the Little Canada and ED Williams attendance areas, although the yields vary by attendance area.

RESIDENT STUDENT YIELD BY DWELLING UNIT TYPE				
Dwelling Type	Number	K-6 Yield	7-8 Yield	9-12 Yield
Single-Family Detached	13,104	0.16	0.04	0.10
Townhomes, et.al.*	1,022	0.02	0.01	0.02

\*Townhomes, split-duplex, condominiums

The table above shows yields for the middle school and high school grades as well as the elementary grades for various unit types. Note the difference in single-family detached yields compare to other units types at all levels.

Students also reside in non-single-family detached units. Rather than trying to project resident students from non-single-family detached units, the 2015-16 student numbers will be used throughout the projection period. This assumption has some weaknesses, but overall is less problematic than trying to project students in these units.

STUDENTS FROM OTHER DWELLING UNIT TYPES* 2015-16	
Attendance Area	K-6 Resident Students
Brimhall	234
Central Park	375
Edgerton	115
Falcon Heights	41
Little Canada	184
ED Williams	203
District wide	1,152

\*Townhomes, Duplexes, Split duplexes, Condos, Mobile Homes and Apartments

The housing unit method projections show the K-6 resident potential of current and projected new units. With this method, the district total is the sum of the attendance area projections. In 2015-16, there were 3,347 resident K-6 students. However, by address, there were only 3,263 K-6 resident students. This difference makes attendance area projections highly problematic.

Based on 2015-16 address data, there were 2,111 resident K-6 students residing in single-family detached units with another 1,152 resident K-6 students living in other unit types for a total of 3,263 resident K-6 students.



HOUSING UNIT METHOD PROJECTIONS RESIDENT K-6 ROSEVILLE PUBLIC SCHOOL STUDENTS BY ATTENDANCE AREA 2018-19			
Attendance Area	Resident K-6 Students		
	Single-Family Units	All Other Units	Total
Brimhall	358	234	592
Central Park	344	375	719
Edgerton	385	115	500
Falcon Heights	477	41	518
Little Canada	284	184	468
ED Williams	386	203	589

The housing unit method projects an increase of 123 resident students living in single-family units. Because the number of students from other types of units is projected to remain at the 2015-16 level, resident enrollment increases by 123 students. Although the 2018-19 projections do not increase the number of resident students residing in existing other housing types, more students could be living in these units in the future. Further, as more units turn over, the yield per unit is also likely to increase.

HOUSING UNIT METHOD RESIDENT K-6 ROSEVILLE PUBLIC SCHOOL STUDENTS BY ATTENDANCE AREA 2015-16 AND 2018-19				
Attendance Area	2015-16		2018-19	
	Single-Family	Total	Single-Family	Total
Brimhall	<b>351</b>	<b>585</b>	358	592
Central Park	<b>325</b>	<b>700</b>	344	719
Edgerton	<b>378</b>	<b>493</b>	385	500
Falcon Heights	<b>437</b>	<b>478</b>	477	518
Little Canada	<b>255</b>	<b>439</b>	284	468
ED Williams	<b>365</b>	<b>568</b>	386	589
<b>Total</b>	<b>2,111*</b>	<b>3,263*</b>	2,234	3,386

\*Lower than 2015-16 fall resident headcount

While the housing unit method shows 3,386 resident K-6 students in 2018-19, the cohort survival method shows resident K-6 students ranging from 3,525 to 3,550. Absent a large number of new housing units, the housing unit method produces static results while the cohort survival method is more dynamic.

### School and Attendance Area Projections

The individual school cohort projections will differ from the attendance area projections because the individual school projections reflect both resident and nonresident students. Further, residents who do not attend the elementary school in the attendance area in which they live also add to the difference between these sets of projections. The next table shows the number and percentage of students attending the school in their attendance area.

ROSEVILLE AREA SCHOOLS K-6 STUDENTS BY ATTENDANCE AREA AND SCHOOL ATTENDED							
School	Attendance Area						Total
	Brimhall	Central Park	Edgerton	Falcon Heights	Little Canada	ED Williams	
Brimhall	479	55	16	25	3	11	589
Central Park	0	321	4	1	5	1	332
Edgerton	2	10	354	15	6	2	389
Falcon Heights	13	32	1	362	1	7	416
Little Canada	19	43	32	9	315	48	466
ED Williams	6	39	1	2	6	423	477
Parkview	60	175	52	59	79	71	496
Harambee	6	25	33	5	24	5	98
Total	585	700	493	478	439	568	3,263*
% in Area	81.9	45.9	71.8	75.7	71.8	74.4	---

\*Resident enrollment by address is lower than the resident fall headcount

## CHAPTER 3

### RESIDENTS

Resident enrollment was projected independently. The same migration assumptions were used for resident enrollment as for total enrollment, that is, the average of the survival rates of the past three years minus the 2013-14 to 2014-15 year (low) and the average of the past five years minus the 2013-14 to 2014-15 year (high). Resident enrollment was also effected by the addition of Harambee because resident students who had been attending Harambee appear as net in migration after the transfer.

The kindergarten assumption, however, was tailored to the resident population. Based on the table below, the average of the past five years is 85.7 percent and the average of the past three years is 86.9 percent.

The resident kindergarten projections are shown in the second table.

ROSEVILLE'S RESIDENT KINDERGARTEN AS A PERCENTAGE OF THE DISTRICT KINDERGARTEN POOL			
Birth Years	District Kindergarten Pool	Percentage	Kindergarten Year
2000; 2001	578	60.2%	2006-07
2001; 2002	547	60.7%	2007-08
2002; 2003	531	71.6%	2008-09
2003; 2004	510	82.0%	2009-10
2004; 2005	504	79.2%	2010-11
2005; 2006	534	89.1%	2011-12
2006; 2007	537	79.0%	2012-13
2007; 2008	521	85.6%	2013-14
2008; 2009	558	83.3%	2014-15
2009; 2010	517	91.7%	2015-16
2010; 2011	550		2016-17
2011; 2012	582		2017-18
2012; 2013	584		2018-19
2013; 2014	604		2019-20
2014; 2015	606		2020-21

RESIDENT KINDERGARTEN PROJECTIONS		
Year	District Pool	
	@85.7%	@86.9%
<b>2015-16</b>	<b>474</b>	<b>474</b>
2016-17	471	478
2017-18	499	506
2018-19	500	507
2019-20	518	525
2020-21	519	527
2021-22	526	534
2022-23	534	541
2023-24	541	548
2024-25	548	556
2025-26	555	563
Total	5,211	5,285

The increase in resident kindergarten is substantial when compared to the past ten years when resident kindergarten added 4,162 students.

RESIDENT ENROLLMENT PROJECTIONS				
Year	Low K Low Mig	Low K High Mig	High K Low Mig	High K High Mig
<b>2015-16</b>	<b>6,078</b>	<b>6,078</b>	<b>6,078</b>	<b>6,078</b>
2016-17	6,198	6,202	6,205	6,209
2017-18	6,355	6,365	6,369	6,379
2018-19	6,523	6,530	6,544	6,551
2019-20	6,680	6,686	6,709	6,715
2020-21	6,887	6,892	6,924	6,930
2021-22	7,050	7,045	7,096	7,091
2022-23	7,190	7,177	7,245	7,232
2023-24	7,337	7,326	7,399	7,389
2024-25	7,421	7,412	7,493	7,484
2025-26	7,543	7,546	7,626	7,629

*Excludes Early Childhood and ALC*

The resident enrollment projections show that the difference between the low and high migration rate is minimal, that is, 3 students in ten years. Choosing different recent time periods to project migration doesn't have much effect. However, the kindergarten assumption makes a difference. The kindergarten assumptions result in an 83 student difference in ten years.

Looking at resident projections by grade configuration show that the high resident migration assumption actually results in a smaller high school population than the low resident migration assumption in ten years.

RESIDENT ENROLLMENT PROJECTIONS				
	K-6	7-8	9-12	Total
<b>2015-16</b>	<b>3,347</b>	<b>881</b>	<b>1,850</b>	<b>6,078</b>
<b>2020-21</b>				
Low K/Low Mig	3,642	1,115	2,131	6,887
Low K/High Mig	3,661	1,076	2,155	6,892
High K/Low Mig	3,679	1,115	2,131	6,924
High K/High Mig	3,699	1,076	2,155	6,930
<b>2025-26</b>				
Low K/Low Mig	3,985	1,200	2,358	7,543
Low K/High Mig	4,014	1,183	2,349	7,546
High K/Low Mig	4,042	1,217	2,367	7,626
High K/High Mig	4,071	1,200	2,358	7,629

*Excludes Early Childhood and ALC*

When resident enrollment projections are compared to total enrollment projections, nonresident enrollment is inferred. The number of nonresidents is projected to increase, but the percentage may decrease. In 2015-16, there were 1,428 nonresident students or 19.0 percent of total enrollment. In 2025-26 the lowest resident projection shows nonresidents increasing to 1,770 students or 20.4 percent of total enrollment. The highest resident projection shows nonresidents increasing to 1,618 students or 17.5 percent of total enrollment.

Projecting the number of nonresident kindergarten students is difficult; however, recent nonresident migration supports slower resident enrollment growth in the future. Will the change in direction from 2014-15 to 2015-16 continue and result in more modest nonresident net migration?

ROSEVILLE AREA SCHOOLS NONRESIDENT NET MIGRATION Fall to Fall					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015
K-6	2	7	3	251*	-34
7-8	11	13	25	21	-31
9-12	95	72	36	36	85
Total	108	92	64	308*	20

\*Effect of Harambee

## APPENDIX

ROSEVILLE AREA SCHOOLS BRIMHALL ELEMENTARY SCHOOL ENROLLMENT						
Grade	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K	103	103	100	108	106	111
1	102	104	110	98	100	104
2	99	110	110	117	81	98
3	85	109	104	101	103	86
4	93	87	107	101	104	99
5	90	94	78	102	97	105
6	75	85	87	82	95	100
Total	647	692	696	709	686	703

BRIMHALL ELEMENTARY SCHOOL NET MIGRATION FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	1	7	-2	-8	-2
1 to 2	8	6	7	-17	-2
2 to 3	10	-6	-9	-14	5
3 to 4	2	-2	-3	3	-4
4 to 5	1	-9	-5	-4	1
5 to 6	-5	-7	4	-7	3
Total	17	-11	-8	-47	1

BRIMHALL ELEMENTARY SCHOOL SURVIVAL RATES FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	1.010	1.068	0.980	0.926	0.981
1 to 2	1.078	1.058	1.064	0.827	0.980
2 to 3	1.101	0.945	0.918	0.880	1.062
3 to 4	1.024	0.982	0.971	1.030	0.961
4 to 5	1.011	0.897	0.953	0.960	1.010
5 to 6	0.944	0.926	1.051	0.931	1.031

ROSEVILLE AREA SCHOOLS CENTRAL PARK ELEMENTARY SCHOOL ENROLLMENT						
Grade	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K	59	75	46	62	58	50
1	61	62	76	57	52	54
2	77	61	63	73	53	52
3	72	84	66	60	60	56
4	52	75	84	67	58	65
5	71	53	80	86	57	62
6	49	73	57	83	74	65
Total	441	483	472	488	412	404

CENTRAL PARK ELEMENTARY SCHOOL NET MIGRATION FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	3	1	11	-10	-4
1 to 2	0	1	-3	-4	0
2 to 3	7	5	-3	-13	3
3 to 4	3	0	1	-2	5
4 to 5	1	5	2	-10	4
5 to 6	2	4	3	-12	8
Total	16	16	11	-51	16

CENTRAL PARK ELEMENTARY SCHOOL SURVIVAL RATES FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	1.051	1.013	1.239	0.839	0.931
1 to 2	1.000	1.016	0.961	0.930	1.000
2 to 3	1.091	1.082	0.952	0.822	1.057
3 to 4	1.042	1.000	1.015	0.967	1.083
4 to 5	1.019	1.067	1.024	0.851	1.069
5 to 6	1.028	1.075	1.038	0.860	1.140

ROSEVILLE AREA SCHOOLS EDGERTON ELEMENTARY SCHOOL ENROLLMENT						
Grade	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K	64	68	49	62	53	57
1	63	68	76	53	72	62
2	56	68	74	71	66	81
3	63	61	66	84	73	66
4	65	71	62	68	77	78
5	65	73	77	73	64	75
6	75	66	76	86	80	66
Total	451	475	480	497	485	485

EDGERTON ELEMENTARY SCHOOL NET MIGRATION FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	4	8	4	10	9
1 to 2	5	6	-5	13	9
2 to 3	5	-2	10	2	0
3 to 4	8	1	2	-7	5
4 to 5	8	6	11	-4	-2
5 to 6	1	3	9	7	2
Total	31	22	31	21	23

EDGERTON ELEMENTARY SCHOOL SURVIVAL RATES FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	1.063	1.118	1.082	1.161	1.170
1 to 2	1.079	1.088	0.934	1.245	1.125
2 to 3	1.089	0.971	1.135	1.028	1.000
3 to 4	1.127	1.016	1.030	0.917	1.068
4 to 5	1.123	1.085	1.177	0.941	0.974
5 to 6	1.015	1.041	1.117	1.096	1.031



ROSEVILLE AREA SCHOOLS FALCON HEIGHTS ELEMENTARY SCHOOL ENROLLMENT						
Grade	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K	52	100	69	73	63	66
1	68	51	91	67	79	53
2	53	76	55	97	71	79
3	52	56	74	61	96	65
4	61	53	52	75	59	92
5	59	58	56	47	72	56
6	58	60	57	60	56	77
Total	403	454	454	480	496	488

FALCON HEIGHTS ELEMENTARY SCHOOL NET MIGRATION FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	-1	-9	-2	6	-10
1 to 2	8	4	6	4	0
2 to 3	3	-2	6	-1	-6
3 to 4	1	-4	1	-2	-4
4 to 5	-3	3	-5	-3	-3
5 to 6	1	-1	4	9	5
Total	9	-9	10	13	-18

FALCON HEIGHTS ELEMENTARY SCHOOL SURVIVAL RATES FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	0.981	0.910	0.971	1.082	0.841
1 to 2	1.118	1.078	1.066	1.060	1.000
2 to 3	1.057	0.974	1.109	0.990	0.915
3 to 4	1.019	0.929	1.014	0.967	0.958
4 to 5	0.951	1.057	0.904	0.960	0.949
5 to 6	1.017	0.983	1.071	1.191	1.069

ROSEVILLE AREA SCHOOLS LITTLE CANADA ELEMENTARY SCHOOL ENROLLMENT						
Grade	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K	43	61	92	86	98	94
1	41	48	63	101	97	92
2	42	40	51	61	102	96
3	48	51	40	55	59	109
4	62	49	48	51	55	61
5	51	62	54	57	60	51
6	56	54	58	55	60	58
Total	343	365	406	466	531	561

LITTLE CANADA ELEMENTARY SCHOOL NET MIGRATION FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	5	2	9	11	-6
1 to 2	-1	3	-2	1	-1
2 to 3	9	0	4	-2	7
3 to 4	1	-3	11	0	2
4 to 5	0	5	9	9	-4
5 to 6	3	-4	1	3	-2
Total	17	3	32	22	-4

LITTLE CANADA ELEMENTARY SCHOOL SURVIVAL RATES FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	1.116	1.033	1.098	1.128	0.939
1 to 2	0.976	1.063	0.968	1.010	0.990
2 to 3	1.214	1.000	1.078	0.967	1.069
3 to 4	1.021	0.941	1.275	1.000	1.034
4 to 5	1.000	1.102	1.188	1.176	0.927
5 to 6	1.059	0.935	1.019	1.053	0.967

ROSEVILLE AREA SCHOOLS ED WILLIAMS ELEMENTARY SCHOOL ENROLLMENT						
Grade	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K	67	76	73	59	73	59
1	72	72	79	74	66	72
2	78	68	71	80	68	68
3	62	78	67	74	87	65
4	80	61	86	65	80	93
5	74	82	60	82	78	74
6	65	64	73	60	68	76
Total	498	501	509	494	520	507

ED WILLIAMS ELEMENTARY SCHOOL NET MIGRATION FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	5	3	1	7	-1
1 to 2	-4	-1	1	-6	2
2 to 3	0	-1	3	7	-3
3 to 4	-1	8	-2	6	6
4 to 5	2	-1	-4	13	-6
5 to 6	-10	-9	0	-14	-2
Total	-8	-1	-1	13	-4

ED WILLIAMS ELEMENTARY SCHOOL SURVIVAL RATES FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	1.075	1.039	1.014	1.119	0.986
1 to 2	0.944	0.986	1.013	0.919	1.030
2 to 3	1.000	0.985	1.042	1.088	0.956
3 to 4	0.984	1.103	0.970	1.081	1.069
4 to 5	1.025	0.984	0.953	1.200	0.925
5 to 6	0.865	0.890	1.000	0.829	0.974

ROSEVILLE AREA SCHOOLS HARAMBEE ELEMENTARY SCHOOL ENROLLMENT						
Grade	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K					54	49
1					55	49
2					58	52
3					69	54
4					55	59
5					66	49
6					43	49
Total					400	361

HARAMBEE ELEMENTARY SCHOOL NET MIGRATION FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1					-5
1 to 2					-3
2 to 3					-4
3 to 4					-10
4 to 5					-6
5 to 6					-17
Total					-45

HARAMBEE ELEMENTARY SCHOOL SURVIVAL RATES FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1					0.907
1 to 2					0.945
2 to 3					0.931
3 to 4					0.855
4 to 5					0.891
5 to 6					0.742

ROSEVILLE AREA SCHOOLS PARKVIEW ELEMENTARY SCHOOL ENROLLMENT						
Grade	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K	78	82	75	77	73	76
1	84	78	80	77	80	78
2	77	80	77	82	78	84
3	81	77	85	82	80	87
4	81	83	80	89	88	93
5	86	86	88	88	87	94
6	85	89	88	87	86	94
7	78	85	86	88	81	87
8	79	75	79	83	85	77
Total	729	735	738	753	738	770

PARKVIEW ELEMENTARY SCHOOL NET MIGRATION FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	0	-2	5	3	5
1 to 2	-4	-1	-3	1	4
2 to 3	0	5	8	-2	9
3 to 4	2	3	-5	6	13
4 to 5	5	5	8	-2	6
5 to 6	3	2	0	-2	7
6 to 7	0	-3	-2	-6	1
7 to 8	-3	-6	-7	-3	-4
Total	3	3	4	-5	41

PARKVIEW ELEMENTARY SCHOOL SURVIVAL RATES FALL TO FALL					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013-2014	2014-2015
K to 1	1.000	0.976	1.067	1.039	1.068
1 to 2	0.952	0.987	0.963	1.013	1.050
2 to 3	1.000	1.063	1.104	0.976	1.115
3 to 4	1.025	1.039	0.941	1.073	1.163
4 to 5	1.062	1.060	1.100	0.978	1.068
5 to 6	1.035	1.023	1.000	0.977	1.080
6 to 7	1.000	0.966	0.977	0.931	1.012
7 to 8	0.962	0.929	0.919	0.966	0.951

ROSEVILLE AREA SCHOOLS RESIDENT ENROLLMENT											
Grade	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K		348	332	380	418	399	476	424	446	465	474
1		412	430	400	396	425	415	489	445	479	444
2		394	312	421	410	412	431	432	496	457	486
3		408	393	417	415	412	446	428	446	495	475
4		404	410	415	417	418	418	443	445	470	518
5		402	419	418	410	427	432	428	465	458	470
6		456	427	418	408	410	431	421	435	453	480
7		399	470	431	433	405	424	432	437	428	465
8		468	415	449	434	417	410	443	445	446	416
9		485	496	434	476	462	444	431	455	455	476
10		525	489	500	436	457	466	444	437	457	455
11		455	544	479	496	446	456	468	429	445	443
12		507	439	522	496	546	460	493	492	487	476
Total		5,663	5,676	5,684	5,645	5,636	5,709	5,776	5,873	5,995	6,078

*Excludes Early Childhood and ALC*

ROSEVILLE AREA SCHOOLS RESIDENT NET MIGRATION Fall to Fall					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015
K-6	80	23	88	69	46
7-8	19	20	29	2	0
9-12	44	60	27	78	47
Total	143	103	144	149	96

ROSEVILLE AREA SCHOOLS RESIDENT NET MIGRATION BY GRADE Fall to Fall					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015
K to 1	16	13	21	33	-21
1 to 2	6	17	7	12	4
2 to 3	34	-3	14	-1	18
3 to 4	6	-3	17	24	23
4 to 5	14	10	22	13	0
5 to 6	4	-11	7	-12	22
6 to 7	14	1	16	-7	12
7 to 8	5	19	13	9	-12
<b>8 to 9</b>	<b>27</b>	<b>21</b>	<b>12</b>	<b>10</b>	<b>30</b>
9 to 10	4	0	6	2	0
10 to 11	-1	2	-15	8	-14
11 to 12	14	37	24	58	31
Total	143	103	144	149	96

ROSEVILLE AREA SCHOOLS RESIDENT SURVIVAL RATES Fall to Fall					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015
K to 1	1.040	1.027	1.050	1.074	0.955
1 to 2	1.014	1.041	1.014	1.027	1.015
2 to 3	1.083	0.993	1.032	0.998	1.039
3 to 4	1.015	0.993	1.040	1.054	1.046
4 to 5	1.033	1.024	1.050	1.029	1.000
5 to 6	1.009	0.975	1.016	0.974	1.048
6 to 7	1.034	1.002	1.038	0.984	1.026
7 to 8	1.012	1.045	1.030	1.021	0.972
<b>8 to 9</b>	<b>1.065</b>	<b>1.051</b>	<b>1.027</b>	<b>1.022</b>	<b>1.067</b>
9 to 10	1.009	1.000	1.014	1.004	1.000
10 to 11	0.998	1.004	0.966	1.018	0.969
11 to 12	1.031	1.081	1.051	1.135	1.070

ROSEVILLE AREA SCHOOLS NONRESIDENT ENROLLMENT											
Grade	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
K						73	91	85	81	113*	90
1						66	68	86	82	122*	120
2						70	72	69	85	120*	124
3						51	70	74	72	132*	113
4						76	61	76	71	106*	123
5						69	76	65	70	123*	96
6						53	60	75	78	109*	106
7						59	61	68	90	89	81
8						53	62	66	78	100	86
9						96	99	102	94	103	135
10						77	109	115	99	99	108
11						65	95	112	115	102	114
12						86	83	108	123	118	132
Total						894	1,007	1,101	1,138	1,436	1,428

*Excludes Early Childhood and ALC*

\*Effect of Harambee

ROSEVILLE AREA SCHOOLS NONRESIDENT NET MIGRATION Fall to Fall					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015
K-6	2	7	3	251*	-34
7-8	11	13	25	21	-31
9-12	95	72	36	36	85
Total	108	92	64	308*	20

\*Effect of Harambee



ROSEVILLE AREA SCHOOLS NONRESIDENT NET MIGRATION BY GRADE Fall to Fall					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015
K to 1	-5	-5	-3	41*	7
1 to 2	6	1	-1	38*	2
2 to 3	0	2	3	47*	-7
3 to 4	10	6	-3	34*	-9
4 to 5	0	4	-6	52*	-10
5 to 6	-9	-1	13	39*	-17
6 to 7	8	8	15	11	-28
7 to 8	3	5	10	10	-3
<b>8 to 9</b>	<b>46</b>	<b>40</b>	<b>28</b>	<b>25</b>	<b>35</b>
9 to 10	13	16	-3	5	5
10 to 11	18	3	0	3	15
11 to 12	18	13	11	3	30
Total	108	92	64	308	20

\*Effect of Harambee

ROSEVILLE AREA SCHOOLS NONRESIDENT SURVIVAL RATES Fall to Fall					
Grade	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015
K to 1	0.932	0.945	0.965	1.506*	1.062
1 to 2	1.091	1.015	0.988	1.463*	1.016
2 to 3	1.000	1.028	1.043	1.553*	0.942
3 to 4	1.196	1.086	0.959	1.472*	0.932
4 to 5	1.000	1.066	0.921	1.732*	0.906
5 to 6	0.870	0.987	1.200	1.557*	0.862
6 to 7	1.151	1.133	1.200	1.141	0.743
7 to 8	1.051	1.082	1.147	1.111	0.966
<b>8 to 9</b>	<b>1.868</b>	<b>1.645</b>	<b>1.424</b>	<b>1.321</b>	<b>1.350</b>
9 to 10	1.135	1.162	0.971	1.053	1.049
10 to 11	1.234	1.028	1.000	1.030	1.152
11 to 12	1.277	1.137	1.098	1.026	1.294

\*Effect of Harambee