

ANALYSIS OF ENROLLMENT PROJECTIONS

Fall 2014

Prepared for:
El Rancho Unified School District

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El Rancho Unified School District

Executive Summary

Enrollment Projections - Fall 2014

DecisionInsite is pleased to present this report of findings to the Board of Education and Executive Staff of El Rancho Unified School District.

Both a Moderate and a Conservative projection have been generated for the district. Assuming district revenue is generated on a per pupil basis, the Conservative projections are more suitable for budget planning purposes; the Moderate projections more suitable for facilities planning purposes.

Kindergarten Enrollment

In general, Kindergarten enrollment over the past three years has been somewhat erratic. The data also show that the difference between the graduating cohort and the incoming cohort has been relatively stable.

Note that both studies project an increase at the Kindergarten level in the ten year future.

Cohort Patterns

A typical student cohort ages from grade to grade relatively unchanged from the previous year. Historically, only one cohort shows more than a 5% annual change.

District-wide Enrollment Projection

Both projections forecast a significant decline across the 10 year period based upon the historical enrollment trends.

More Information

A richer and more comprehensive review of these two studies is contained in the Final Report accompanying this Executive Summary. A wealth of more detailed information and analysis regarding these two studies is quickly and easily accessible online.

Respectfully Prepared and Submitted by:

The DecisionInsite Team

May 11, 2014

El Rancho Unified School District

District Enrollment Projections

Recent Changes in Enrollment

Familiarity with recent historical enrollment patterns and trends establishes the foundation for understanding projected enrollment.

Percentages in the table below compare the current year enrollment to that of three years ago.

4 Year History Change	
Kindergarten	100%
Gr K-5	90%
Gr 6-8	90%
Gr 9-12	88%
District	90%

[Kindergarten calculation based on a 12 month cohort equivalent.]

Figure: 1

Kindergarten Impact

Kindergarten enrollment is often the most significant driver of overall future district-wide enrollment. A trend at Kindergarten from year to year, or a trend in the difference between the district's graduating cohort in a given year and the Kindergarten cohort the subsequent year, will eventually be reflected in the total district enrollment count. These projections reflect changes in age eligibility for California Kindergarten. The result is a diminished Kindergarten cohort in years 2012-2014, with similar reductions in other grade levels as those cohorts age through the system.

In general, Kindergarten enrollment over the past three years has been somewhat erratic. The data in the table below also show that the difference between the graduating cohort and the incoming cohort has been relatively stable.

[More details: Reports > History > District-wide > History Years Enrollment]

Percent Change of Previous Year			
	2011	2012	2013
Kindergarten	94%	108%	99%
Grade 12 to K'tn	72%	80%	84%
Total K-12	96%	97%	96%

[Kindergarten calculations in first two rows based on a 12 month cohort equivalent.]

Figure: 2

Transition K enrollment is forecast as a separate grade level. Transition K is projected to be as much as three times the enrollment of the first year of the program, but never to exceed 25% of the projected Kindergarten enrollment.

[All data in this report excludes Transition K unless specifically noted. More details: Reports > Projections > District-wide > Transition Kindergarten]

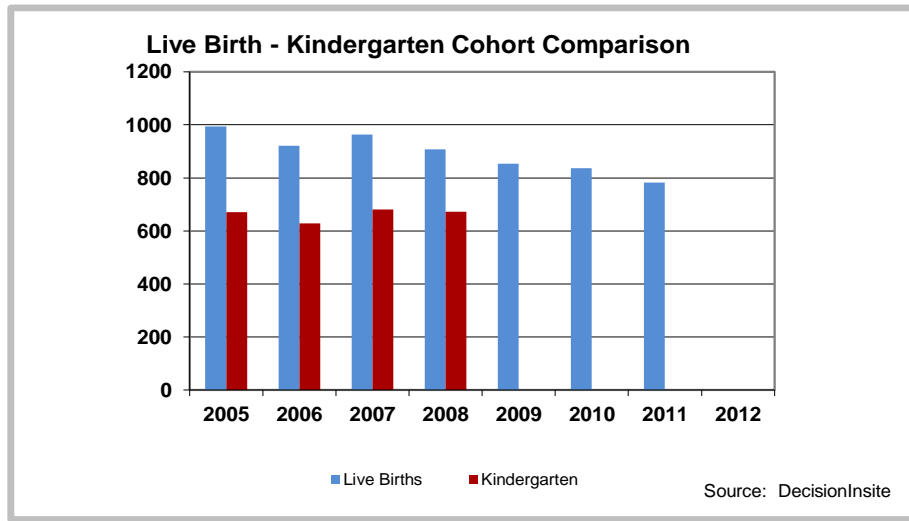
Live Birth Trends

Live birth trends have an impact in large geographies, and on long range projections. However, in smaller areas of study, such as a school district, population mobility is often a mitigating if not an overriding factor, thereby reducing the effectiveness of live births as a predictor of enrollment.

In projecting Kindergarten enrollment, live births are allowed to have a positive impact on the early projected years if there is an increasing trend in live births over several recent years. The average percent change in live births over the last five years in sub-geographies served by the district is -3.2%.

The chart below displays in the years shown, cumulative live births in sub-geographies served by the district. (Note that the sub-geographies may not be coterminous with district boundaries.) The Kindergarten bar on the graph shows the number of Kindergarten students enrolled 5 years later.

[More details: Reports > History > District-wide]



[Kindergarten calculation based on a 12 month cohort equivalent.]

Figure: 3

The Live Birth Enrollment Rate is the percentage of live births in sub-geographies served by the district that enroll as Kindergarten students five years later. The district's average Live Birth Enrollment Rate for the last 5 years is 70%.

Cohort Impact

A typical student cohort ages from grade to grade relatively unchanged from the previous year. By contrast, the cohort matriculating from Kindergarten to Grade 1 is a common example of a cohort increase, typically attributable to students returning from a private school Kindergarten.

In the following table, cohort changes with more than a 2% variance from static are marked accordingly. Those with more than a 5% changed are marked as 'Significant'.

Average Cohort Change Past Three Years			
Cohort	Percent	+/-	Significant
K > 1	101%		
1 > 2	99%		
2 > 3	98%		
3 > 4	97%	----	
4 > 5	97%	----	
5 > 6	97%	----	
6 > 7	101%		
7 > 8	98%	----	
8 > 9	93%	----	SSSS
9 > 10	99%		
10 > 11	98%	----	
11 > 12	103%	++++	

Figure: 4

Incoming Out-of-District Transfer Impact

The number of students served from outside the district boundaries can impact enrollment. It is a factor over which the district may have some control. For the past two years, the number of out-of-district students served annually has been approximately 200, and has been increasing.

[More details: Reports > History > District-wide > Out of District]

Key Variables in Projecting District Enrollment

Both a Moderate and a Conservative projection have been generated for the district. The Conservative projections are more suitable for budget planning purposes; the Moderate projections more suitable for facilities planning purposes.

As a matter of standard practice, DecisionInsite does not typically include in the Enrollment Projections specialized schools or programs such as Home and Hospital Programs, Community Day Schools or Independent Study Programs. Our work is focused on projecting grade level enrollment for typical schools that are reported to the state.

The major variables that distinguish the Conservative projection from the Moderate are described in the table below.

Key Variables Controlling the Projection Algorithm	
Kindergarten Enrollment Change	Applies the lesser or greater of 3-4 year history trend in each studyblock to the appropriate study.
Cohort Change	Applies the lesser or greater of 3-4 year history trend in each studyblock to the appropriate study.
K Enrollment Change Cap	Restricts the effect of anomalous spikes in Kindergarten history.
K Enrollment Change Floor	Restricts the effect of anomalous dips in Kindergarten history.
Incoming Out-of-District Transfers	For each grade level span, applies the lesser or greater of 1-2 year history to the lograde; ages through existing students.
Dwelling Units	Moderate study assumes developer's phasing calendar. Conservative study shifts the developer's calendar toward the out-years.
Student Generation Rates	Typical of recent history by product type.

Figure: 5

Projected Enrollment Changes by Level

The tables below display the five year district-wide projections by grade level, and allow a comparison to enrollment in the current year.

Conservative 5 Year District-wide Projection by Grade Level

Grade	2013	2014	2015	2016	2017	2018
TK	87	130	129	128	128	126
K	617	613	663	661	661	648
1	640	627	623	674	671	671
2	645	631	618	614	665	667
3	662	633	620	605	602	658
4	691	641	614	600	587	593
5	661	667	621	594	582	576
6	663	642	647	608	578	564
7	698	661	637	643	604	576
8	727	678	641	619	624	594
9	664	674	635	596	580	585
10	689	649	660	624	585	573
11	764	669	630	642	606	577
12	744	773	675	638	649	609
Subtotals:	8952	8688	8413	8246	8122	8017
Pct Chg:	-2.7%	-2.9%	-3.2%	-2.0%	-1.5%	-1.3%

Figure: 6

Moderate 5 Year District-wide Projection by Grade Level

Grade	2013	2014	2015	2016	2017	2018
TK	87	132	133	134	134	132
K	617	626	687	689	689	683
1	640	637	643	706	708	708
2	645	638	635	640	703	707
3	662	639	633	628	634	700
4	691	646	624	617	614	627
5	661	673	631	610	604	605
6	663	655	666	631	605	599
7	698	667	657	668	632	606
8	727	682	652	642	653	624
9	664	685	650	616	605	616
10	689	655	677	645	610	601
11	764	673	640	662	631	603
12	744	779	686	653	675	636
Subtotals:	8952	8787	8614	8541	8497	8447
Pct Chg:	-2.7%	-1.8%	-2.0%	-0.8%	-0.5%	-0.6%

Figure: 7

As the following graph illustrates, both projections forecast a significant decline across the 10 year period based upon the historical enrollment trends .

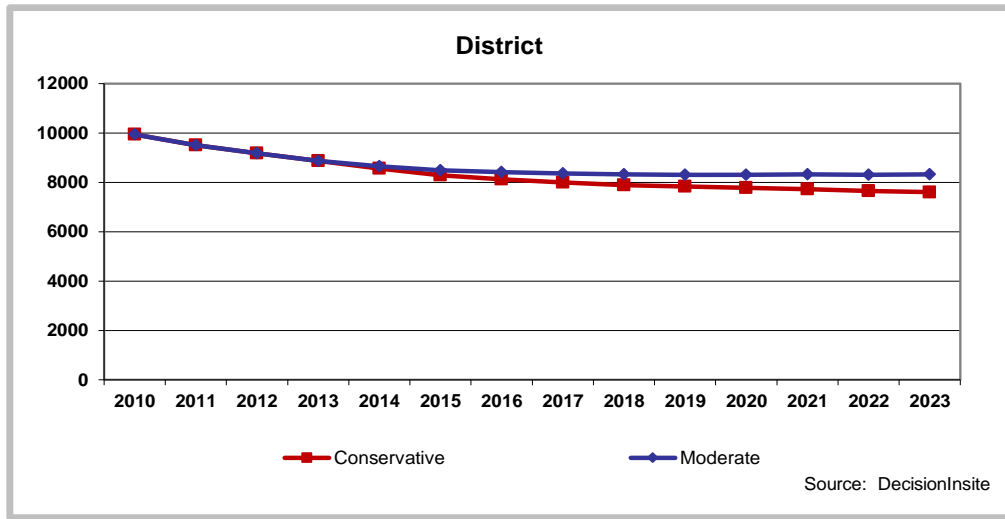


Figure: 8

The tables below compare the Conservative and Moderate enrollment projections by key grade level groupings.

Projected changes in enrollment at Kindergarten or lower grade level groupings will eventually impact total district enrollment.

5 Year Enrollment Trends: Moderate and Conservative Compared

Change by Level	Conservative	Moderate
Kindergarten Only	648	683
Change	105%	111%
Gr K-5	3813	4030
Change	97%	103%
Gr 6-8	1734	1829
Change	83%	88%
Gr 9-12	2344	2456
Change	82%	86%
District	7891	8315
Change	89%	94%

Figure: 9

Note that considered together; both studies project an increase at the Kindergarten level.

The table below compares the ten year projections. In the ten year future at Kindergarten, both studies, viewed together, project a relatively stable trend.

10 Year Enrollment Trends: Moderate and Conservative Compared

Change by Level	Conservative	Moderate
Kindergarten Only	586	650
Change	95%	105%
Gr K-5	3685	4048
Change	94%	103%
Gr 6-8	1850	2025
Change	89%	97%
Gr 9-12	2069	2243
Change	72%	78%
District	7604	8316
Change	86%	94%

Figure: 10

The graphs below compare the Conservative and Moderate enrollment projections by key grade level groupings.

Elementary School Level

The change projected by both studies over the ten year period represents a relatively stable trend.

[More details: Reports > Projections > Individual Schools > Projections > All Elementary Schools]

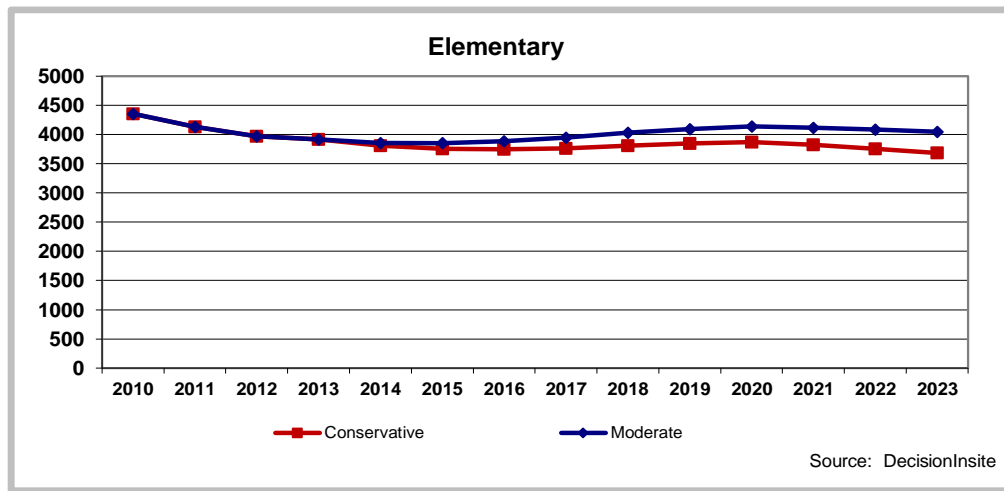


Figure: 11

Middle School Level

Over the ten year period, projected middle school enrollment shows a decline.

[More details: Reports > Projections > Selected Schools > All Middle Schools]

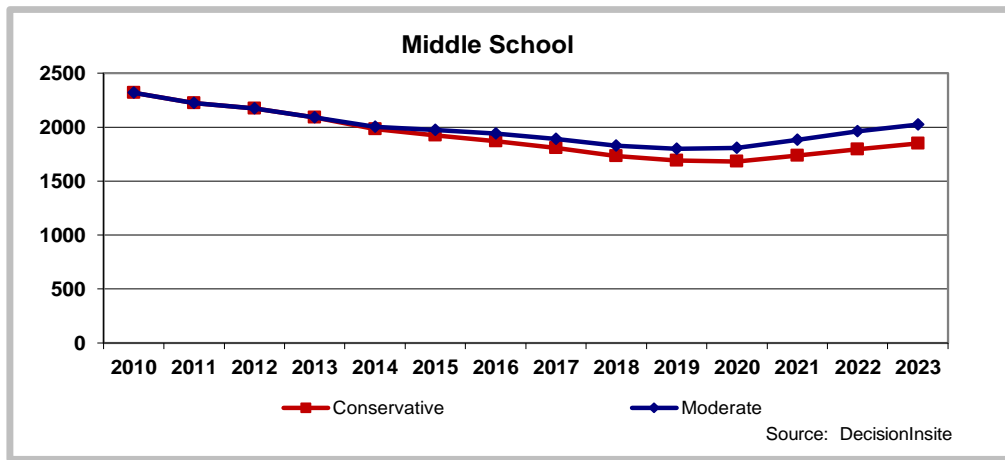


Figure: 12

High School Level

At the high school level, a significant decline is projected in the ten year future.

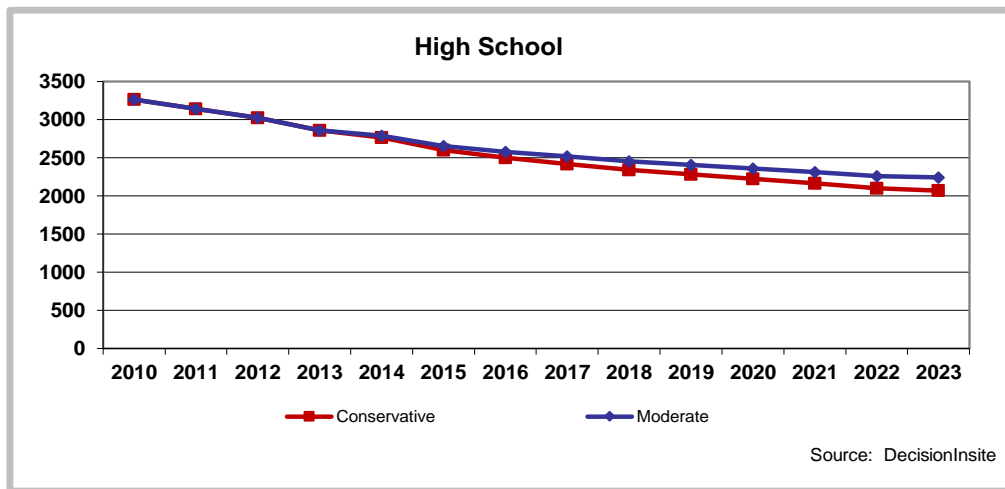


Figure: 13

Summary of District Projections by Year

The complete district-wide projection table for each study is available online. Click on the Client Login tab at: <http://www.decisioninsite.com>. Each district-wide projection has its corresponding set of individual School Projections.

The tables below present a more detailed annual view of projected changes by grade level clusters for both the Moderate and Conservative Projections.

The “Pct Previous Year” row represents the percent of the previous year’s enrollment in each grade cluster that is projected in the subsequent year.

The “Five Year Change” row represents the percent change projected over the enrollment five years prior.

Conservative Projection

Change by Level	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Kindergarten Only	617	613	663	661	661	648	635	622	610	598	586
Pct Previous Year	99%	99%	108%	100%	100%	98%	98%	98%	98%	98%	98%
Five Year Change						105%					90%
Gr K-5	3916	3812	3759	3748	3768	3813	3852	3869	3823	3759	3685
Pct Previous Year	99%	97%	99%	100%	101%	101%	101%	100%	99%	98%	98%
Five Year Change						97%					97%
Gr 6-8	2088	1981	1925	1870	1806	1734	1690	1681	1737	1796	1850
Pct Previous Year	96%	95%	97%	97%	97%	96%	97%	99%	103%	103%	103%
Five Year Change						83%					107%
Gr 9-12	2861	2765	2600	2500	2420	2344	2283	2226	2167	2100	2069
Pct Previous Year	95%	97%	94%	96%	97%	97%	97%	98%	97%	97%	99%
Five Year Change						82%					88%
District	8865	8558	8284	8118	7994	7891	7825	7776	7727	7655	7604
Pct Previous Year	97%	97%	97%	98%	98%	99%	99%	99%	99%	99%	99%
Five Year Change						89%					96%

NOTE: Gray column most recent history year.

Figure: 14

Moderate Projection

Change by Level	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Kindergarten Only	617	626	687	689	689	683	676	669	663	656	650
Pct Previous Year	99%	101%	110%	100%	100%	99%	99%	99%	99%	99%	99%
Five Year Change						111%					95%
Gr K-5	3916	3859	3853	3890	3952	4030	4098	4144	4121	4087	4048
Pct Previous Year	99%	99%	100%	101%	102%	102%	102%	101%	99%	99%	99%
Five Year Change						103%					100%
Gr 6-8	2088	2004	1975	1941	1890	1829	1799	1806	1883	1960	2025
Pct Previous Year	96%	96%	99%	98%	97%	97%	98%	100%	104%	104%	103%
Five Year Change						88%					111%
Gr 9-12	2861	2792	2653	2576	2521	2456	2406	2358	2312	2258	2243
Pct Previous Year	95%	98%	95%	97%	98%	97%	98%	98%	98%	98%	99%
Five Year Change						86%					91%
District	8865	8655	8481	8407	8363	8315	8303	8308	8316	8305	8316
Pct Previous Year	97%	98%	98%	99%	99%	99%	100%	100%	100%	100%	100%
Five Year Change						94%					100%

NOTE: Gray column most recent history year.

Figure: 15

Grade Level Profile Comparison

Another view of grade level enrollment can be seen in the chart below. The current grade level enrollment profile is compared with the projected grade level profile in the five and ten year future.

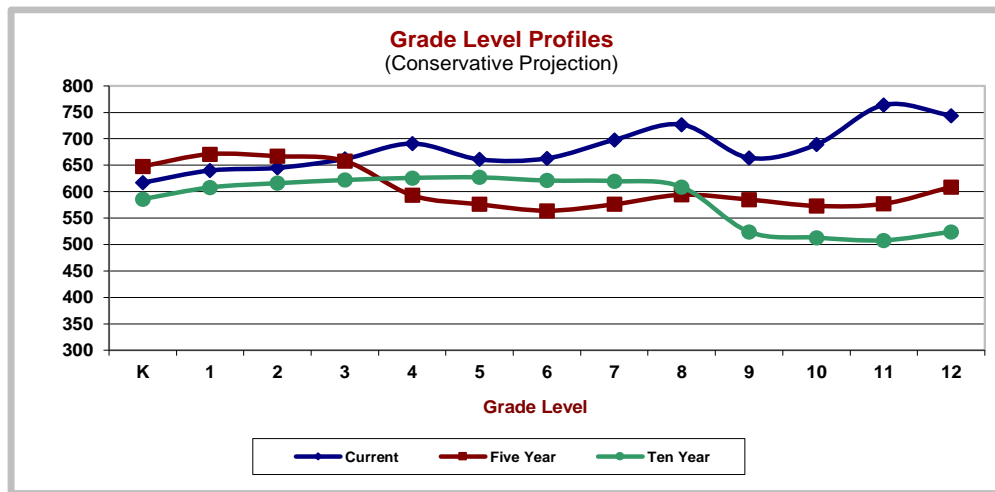


Figure: 16

Projecting School Enrollment

School projections are primarily a function of the proportion of district students who enroll at a given school, modified by intra-district transfers within a given school level that may occur subsequent to initial enrollment, and augmented by inter-district transfer students.

School Draw Impact

A draw rate is the percentage of students who enroll at a particular grade level in a given school from a specified geographic area. Open enrollment among district schools is projected using this concept. Except for changes in school boundaries or other changes in policy, historical draw rates from a given geographic area to a specific school (including out-of-district students) are assumed in the projections.

Intra-district Transfers

Transfers within the district are incorporated into the projections in order to anticipate the movement of students from one district school to another within the same level, e.g., transfer from a neighborhood school to a special school. Recent historical transfer patterns are typically assumed in the projections.

[More details: [Enrollment History > All Schools > Open Enrollment](#)]

Inter-district Transfers

Transfers into the district by out-of-district students, sometimes referred to as 'permit students', are an integral part of the district and school projections. Recent historical transfer patterns are typically assumed in the projections.

[More details: [Reports > Projections > All Schools > Projections](#)]

Individual School Projection Tables

The complete set of individual school projection tables for each study is available online.

[More details: [Reports > Projections > All Schools > Projections](#)]

MySchoolLocator

MySchoolLocator is a web-based service accessible to DecisionInsite clients. This service allows Internet users to enter a residential address, and find out which district schools are assigned to serve them. Access is by the District's web site.

The URL for integration into your district's website can be found by selecting the appropriate Locator study. Once open, select Locator from the District Admin menu. Locator will open, and the link can be copied from the browser.

Specialized district users have access to customize the messages seen by those accessing the MySchoolLocator.

NOTE: All projections are based on assumptions, and when read or shared are best prefaced with the phrase, "Based on these assumptions....", or "Based on these historical trends...." Particularly for projections more than 5 years out, "Enrollment Trend" is a far more accurate descriptor.

Impact of the Projections on School Capacity

Facility challenges, if any, may manifest differently in the Moderate or Conservative projections. The Moderate projection shows 7 schools with a potential capacity challenge.

[More details: Reports > Projections > All Schools > Over Capacity]

The table below lists up to five schools that are projected to experience the most change in enrollment in the 5 year future based on the Conservative projection.

[More details: Reports > Projections > All Schools > Ten Percent Change]

School	Five Year Percent Change	Ten Year Percent Change
Osburn Burke MS	-29%	-15%
Ruben Salazar HS	-24%	-35%
North Park MS	-24%	-14%
El Rancho HS	-17%	-27%
Rio Vista ES	-17%	-21%

Figure: 17

Impact of SDC Students on Capacity

Relative to the impact of SDC students on school capacity, note that SDC students are not included in the grade level counts, but are included in the capacity calculation as taking up one seat each.

Analyzing/Studying/Reviewing the Enrollment Projections

The projections of district and school enrollment are based on a complex mix of historical data, the projection of recent trends, and specific assumptions regarding the future. At DecisionInsite, we strongly encourage our clients to actively engage with the data with the aim of better understanding, further refining, and using the results to inform decisions about to be made. We believe increased effectiveness for both the district and DecisionInsite comes with increased and welcome dialogue.

Graphs or tables may be copied from the PDF version of this document using the Snapshot Tool inside PDF Reader. Please do not hesitate to contact DecisionInsite regarding any questions or suggestions that may arise regarding these studies.

Respectfully Prepared and Submitted by:

The DecisionInsite Team

May 11, 2014

Appendix

Assumptions and Methodology

Three major factors drive district-wide student enrollment projections. These include:

1. recent kindergarten enrollment trends, modified by live birth data, if applicable,
2. changes in the grade level cohorts of students served as they age through, and
3. changes in the number of residential units within the district

District-wide projections are disaggregated to school projections based on the historical patterns of:

1. the rates at which each school draws enrollment from various sections of the district, and
2. the pattern of transfers within the district at a given level from one school to another.

District Projections

Studyblocks

For demographic analysis and enrollment projections, the district is divided into studyblocks. A studyblock is a custom unit of geography created by DecisionInsite for the purpose of generating reliable projections. They are based either upon Census Bureau blockgroups or census tracts or some combination thereof. A studyblock serves as the basis for the analysis of students served by the district and by schools. The objective is to do analysis with a small enough geographic unit to sense small area changes but large enough to allow for reliable projection. Studyblocks typically encompass 500–1000 students.

Kindergarten Enrollment

The projected Kindergarten enrollment is a key variable in projecting K–12 enrollment. The base Kindergarten projection is determined by the trend of Kindergartners served in each studyblock in the previous 3 or 4 years. Depending on the circumstances, a growth trend in Kindergarten enrollment may be capped. Steep straight-line trends are mathematically moderated to avoid unrealistic results.

School Capacities

School capacities provided by the district are compared to projected enrollments. Districts are invited to calculate school capacities in a manner that best serves the enrollment projection environment, and enter them into the DI System.

A Special Day Class (SDC) student at the elementary level is calculated by default as requiring 1 seat. This value, at district option, may be changed to 3, on the assumption that a class of 10 SDC students will occupy a typical classroom.

Students in the Projections

Enrollment projections are limited to typical K–12 students. SDC students are projected as a stable percentage of the typical population unless all SDC students are mainstreamed. Excluded from the projections are students enrolled in Pre-Kindergarten, Adult High School, Home School, Adult Ed, Independent Study programs and other special schools.

Attendance Boundaries

Attendance boundaries are assumed to remain constant, unless otherwise noted by the district.

Closed Schools

Opportunities for open enrollment (intra-district) are assumed to remain unchanged, unless otherwise noted by the district.

Inter-district Enrollment

Students enrolled from other school districts are treated in aggregate in separate studyblocks. Students in Kindergarten, grades 1-3, and the initial grade at each level, are projected only to the extent they exist in recent years. Students enrolled in other grade level cohorts are aged through to the highest grade at each level. These defaults may be modified at district request.

Cohort Percent Change

Cohort percentage changes are calculated in order to assure sensitivity to perennial changes in students served by the district as they age from one grade level to the next. If every cohort were stable as it ages, the cohort percent change, from one grade to the next in each studyblock, would be calculated as 100%. For each studyblock, a cohort weighted average percent change over a defined number of years is calculated based on the change in the enrollment served as it ages from the previous grade level.

Average cohort percentages above 100% might, for example, reflect students returning from private schools. Cohort percentages below 100% might reflect drop-outs.

Growth studyblocks are those showing unusually high increases in elementary grade enrollment and/or cohort percent change in recent years—due, typically, to new housing development. Once growth studyblocks are identified, their default cohort percent change rate is set to 100% so as not to over-project new residential growth. By default, growth is not predicted to continue unless new occupied dwelling units are projected.

Dwelling Unit Impact

The predicted impact of new dwelling units on school enrollment is based on three factors: 1) new dwelling units, 2) the student generation rate for each unit type, and 3) the grade level distribution of newly generated students.

1. Dwelling Units

New dwelling units are categorized into 3 housing types: Single Family Detached, Single Family Attached, and Multifamily. Developers and builders are contacted for information relative to their plans for occupancy of new dwelling units.

2. Student Generation

Student generation rates are determined for each product type for each level: elementary, middle school and high school. Student generation rates are based on similar products types where such exist; otherwise, a default generation rate is used.

3. Grade Level Distribution

For each level, students generated by new dwelling units are distributed across grade levels. These percentages are based on historical patterns where they exist; otherwise, default percentages are used.

School Projections

Projecting enrollment at the school level is based on the concept of a school draw rate, i.e., the percent of students from a given studyblock who enroll in a given school at its lowest grade. Draw rates reflect the impact of open enrollment within a district. For example, if one-half the sixth-graders from a given studyblock enroll in a particular 6–8 middle school, that school has a draw rate of 50% from that studyblock.

The draw rate for the most recent year is applied by default to the projected district enrollment for that grade from a given studyblock. The draw rate ages with the cohort. In this way, if the underlying cohort changes, the number of students enrolled at the school will change accordingly.

Draw rates can be adjusted if necessary. Manipulation of draw rates is used, for example, to project the impact of changes in attendance boundaries, or the impact of closing a school to open enrollment.

Intra-district Transfers

Grade-level transfers within or across schools are included in the projections to accommodate fluctuations like retention, transfer to continuation school, or any other special programs a district may offer that result in students changing schools at other than the typical grade configuration shifts. Transfers are calculated by applying the percent of a grade level population at one school that is transferred in the following year to another school, or continued at the same grade level at a given school in the following year.

Caveats on Projections and Methodology

On Projections

Enrollment projections are based upon two critical factors: the student and school data from the school district and the mathematical formulas that are applied to those data. Projections fundamentally look at recent history as reflected in the student data and assume that past patterns and trends will continue into the future. The calculations assume that the historical data provided is at one year intervals based on enrollment at the beginning of each school year.

DecisionInsite takes great care in preparing a district's projections. A range of unpredicted anomalies, however, can cause reality to vary from the historical patterns. These include, but are not limited to, rapid changes in the economy, mortgage interest rates, the housing market, the job market, residential development plans, rental rates, etc. Anomalous changes that occur between the last set of student data and the first projection are not reflected in the projections unless the district works with DecisionInsite to amend the projections.

In the projections, calculations are mathematically precise. Each result is rounded to a whole number for ease of reading. This rounding sometimes results in the displayed whole numbers in a column not adding exactly to the displayed total of the column. This phenomenon, which is a result of rounding and not of any inaccuracy in the calculations, occurs both in the enrollment projections and in the community demographics.

On Student Data

DecisionInsite obtains historical student data files from the district. To the extent that the student data files are internally inconsistent from year to year, or the count of students in the files does not reflect the count of actual enrollees, errors are introduced to the projection calculations. For optimum results, the student data files must also consistently capture the same categories of students annually.

The calculations assume that the historical data provided is at one year intervals based on enrollment at the beginning of each school year. It is important that the student files obtained from the district are close to a common date each year, typically near the beginning of the school year. The snapshot of historical data near the beginning of the school year is best suited to our goal of projecting enrollment for the beginning of subsequent school years. To the extent the historical student data provided is not at one year intervals, or is not at a common date near the beginning of the school year, projections may reflect monthly fluctuations in enrollment that will diminish the accuracy of the projections.