

DECISIONINSITE 

Enrollment Impact Specialists




Annual Enrollment Projection Report

Strategic
Decision
Support
for School
Districts

ANALYSIS OF ENROLLMENT PROJECTIONS

FALL 2018

PREPARED FOR:
WEST CONTRA COSTA USD

PREPARED BY:
DECISIONINSITE 
Enrollment Impact Specialists
101 PACIFICA, SUITE 380
IRVINE, CA

SUBMITTED: DECEMBER 22, 2017

TABLE OF CONTENTS

Executive Summary..... 4

District Enrollment Projections 5

 Recent Changes in Enrollment 5

 Kindergarten Impact 5

 Live Birth Trends 6

 Cohort Impact 6

 Incoming Out-of-District Transfer Impact..... 6

Key Variables in Projecting District Enrollment 6

Impact of Projected New Dwelling Units 7

 Projected Occupancy 7

 Students Generated 8

 Student Generation Rates..... 9

Projected Enrollment Changes by Level 9

 Conservative 5 Year District-wide Projection by Grade Level..... 9

 Moderate 5 Year District-wide Projection by Grade Level 10

 5 Year Enrollment Trends: Moderate and Conservative Compared..... 11

 10 Year Enrollment Trends: Moderate and Conservative Compared..... 11

 Elementary School Level 12

 Middle School Level 12

 High School Level 13

Summary of District Projections by Year 14

 Conservative Projection 14

 Moderate Projection..... 15

 Grade Level Profile Comparison 16

Projecting School Enrollment..... 16

 School Draw Impact 16

 Intra-district Transfers 16

 Inter-district Transfers 16

 Individual School Projection Tables 17

MySchoolLocator 17

Impact of the Projections on School Capacity	17
Impact of SDC Students on Capacity.....	17
Analyzing/Studying/Reviewing the Enrollment Projections	17
Appendix A.....	19
Assumptions and Methodology.....	19
District Projections.....	19
School Projections.....	20
Caveats on Projections and Methodology	21
Appendix B.....	22
Impact of Charter Schools.....	22

WEST CONTRA COSTA USD

EXECUTIVE SUMMARY

ENROLLMENT PROJECTIONS - FALL 2018

DecisionInsite is pleased to present this report of findings to the Board of Education and Executive Staff of West Contra Costa USD. Both a Conservative and Moderate projection have been generated for the district. Assuming district revenue is generated on a per pupil basis, the Conservative projection is more suitable for budget planning purposes while the Moderate projection is more suitable for facilities planning purposes.

KINDERGARTEN ENROLLMENT

In general, Kindergarten enrollment over the past three years has been relatively stable. The data also show that the difference between the graduating cohort and the incoming cohort has been increasing. Note that both studies project a slight increase at the Kindergarten level.

COHORT PATTERNS

A typical student cohort ages from grade to grade relatively unchanged from the previous year. Historically, 2 cohorts show more than a 5% annual change.

NEW HOUSING DEVELOPMENT

Approximately 4,200 new residential units are projected to be occupied over the next 10 years. During that period, the annual impact in any given year, based on the Moderate Study, is estimated in peak years to be 351 students.

DISTRICT-WIDE ENROLLMENT PROJECTION

Overall the projections forecast a slight increase across the 10-year period based upon the historical enrollment trends and any projected new residential development.

MORE INFORMATION

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

Respectfully Prepared and Submitted by:

The **DecisionInsite** Team

December 22, 2017

WEST CONTRA COSTA USD

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	99%
Gr K-6	97%
Gr 7-8	93%
Gr 9-12	101%
District	98%

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

FIGURE 1

KINDERGARTEN IMPACT

Kindergarten enrollment is a 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. (Note that 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 relatively stable. The data in the table below also show that the difference between the graduating cohort and the incoming cohort has been increasing.

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

	Percent Change of Previous Year		
	2015	2016	2017
Kindergarten	93%	102%	105%
Grade 12 to K	117%	114%	117%
Total K-12	98%	100%	100%

[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. Consequently, DecisionInsite has found that recent Kindergarten enrollment trends by sub-geographies to be a better, more reliable predictor of future Kindergarten enrollment.

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.

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	103%	++++	
1 > 2	99%		
2 > 3	98%	----	
3 > 4	99%		
4 > 5	95%	----	
5 > 6	93%	----	SSSS
6 > 7	89%	----	SSSS
7 > 8	99%		
8 > 9	99%		
9 > 10	102%		
10 > 11	101%		
11 > 12	100%		

FIGURE 3

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 266, and has been increasing.

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

KEY VARIABLES IN PROJECTING DISTRICT ENROLLMENT

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

As a matter of standard practice, DecisionInsite does not typically include specialized schools or programs such as Home and Hospital Programs, Community Day Schools or Independent Study Programs in the Enrollment

Projections. 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 Projections 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 spikes 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 4

IMPACT OF PROJECTED NEW DWELLING UNITS

PROJECTED OCCUPANCY

Approximately 4,200 new residential units are projected to be occupied over the next 10 years. The tables below show the mix of proposed units across the three dwelling unit types. The Moderate table summarizes the plans described by developers while the Conservative table estimates a more likely scenario based on anticipated market conditions. The most recent residential research was completed in November 2017 by Hayley Rigali.

[More details: Residential > Reports > Proposed Dwelling Units]

New Dwelling Units Projected to be Occupied by Year (Moderate)										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Multi-family	27		180	95		439				
Attached	128	270	547	740	772	828				
Detached	144		95		14					
Totals:	299	270	822	835	786	1267	0	0	0	0

FIGURE 5

New Dwelling Units Projected to be Occupied by Year (Conservative)										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Multi-family	19	8	126	116	33	285	154			
Attached	90	226	448	628	502	561	411	376	43	
Detached	101	43	67	28	9	5				
Totals:	210	277	641	772	544	851	565	376	43	0

FIGURE 6

The graph below depicts visually the differences between the phasing projected in the Moderate and Conservative studies.

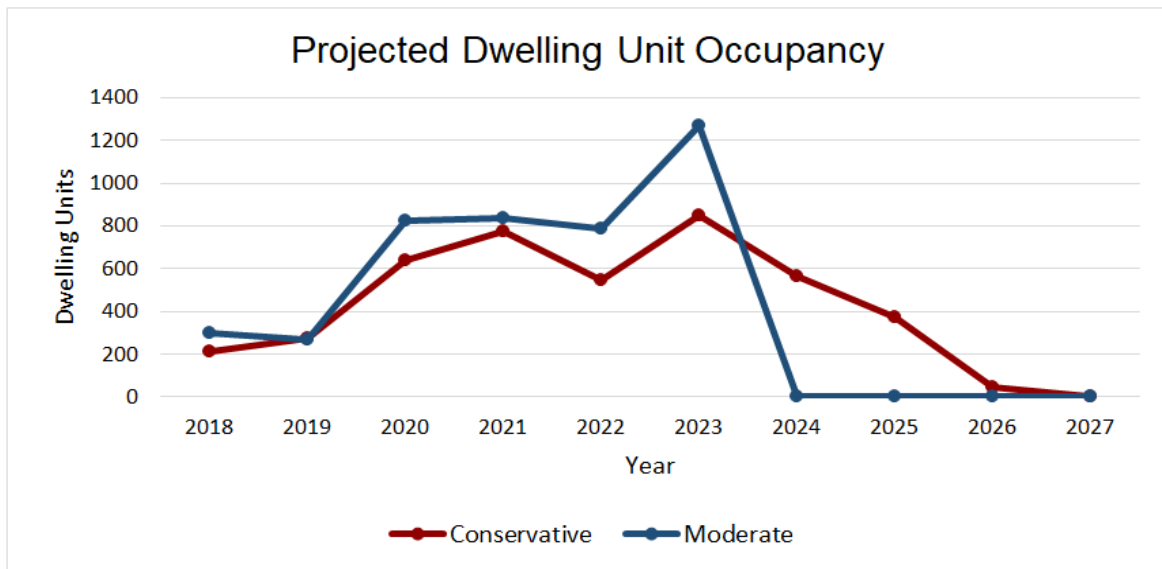


FIGURE 7

STUDENTS GENERATED

Over the period of years during which these units will become occupied, the impact, based on the Moderate scenario, is shown in the table below. The "Annual" row projects the number of students new to the district from these units, in a given year. The "Aggregate" row projects the accumulated increase in students served by the district through the year indicated.

Students Generated by Residential Development (Moderate)										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Aggregate		257	608	740	853	1025	1030	1031	1044	1068
Annual	85	172	351	132	113	172	5	1	13	24

FIGURE 8

The table below reflects the students generated using the Conservative estimate of projected Dwelling Units.

Students Generated by Residential Development (Conservative)										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Aggregate		204	496	680	762	877	957	1018	1040	1059
Annual	60	144	292	184	82	115	80	61	22	19

FIGURE 9

STUDENT GENERATION RATES

Moderate student generation rates are typical of students enrolled from existing developments of similar product type. Conservative student generation rates, if different, are designed to anticipate a diminution in family size.

[More details: Residential > Reports > Student Generation Rates]

A complete report regarding new residential development is available online in the DI System under 'Reports > District Documents > Residential Research Summary xxxx' where xxxx is the projection year the report is associated with. This report includes a map of proposed dwelling unit projects, the phasing by dwelling unit type in each project, students generated by new development by studyblock, student generation rates. Additional individual reports can be found online in the DI system under 'Residential > Reports'.

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	2017	2018	2019	2020	2021	2022
TK	351	316	320	324	326	321
K	2370	2327	2357	2388	2403	2363
1	2318	2442	2414	2448	2469	2475
2	2306	2286	2414	2399	2423	2456
3	2273	2253	2240	2381	2357	2401
4	2335	2255	2241	2242	2374	2352
5	2309	2219	2149	2144	2142	2265
6	2101	2151	2071	2017	2004	1992
7	1861	1859	1900	1847	1782	1781
8	1886	1825	1824	1871	1813	1763
9	1874	1902	1861	1853	1892	1833
10	2018	1884	1918	1893	1873	1899
11	1978	2022	1893	1939	1903	1880
12	2023	1948	1991	1868	1914	1889
Subtotals:	28003	27689	27593	27614	27675	27670
Pct Chg:	-0.4%	-1.1%	-0.3%	0.1%	0.2%	0.0%

FIGURE 10

MODERATE 5 YEAR DISTRICT-WIDE PROJECTION BY GRADE LEVEL

Grade	2017	2018	2019	2020	2021	2022
TK	351	324	335	342	344	342
K	2370	2387	2468	2521	2533	2518
1	2318	2467	2500	2590	2622	2634
2	2306	2314	2467	2516	2585	2625
3	2273	2278	2292	2462	2490	2577
4	2335	2279	2289	2320	2473	2500
5	2309	2248	2200	2219	2237	2369
6	2101	2189	2134	2103	2106	2087
7	1861	1897	1975	1942	1889	1908
8	1886	1840	1877	1961	1916	1876
9	1874	1915	1892	1927	1996	1956
10	2018	1907	1958	1952	1966	2020
11	1978	2047	1941	2007	1981	1989
12	2023	1969	2038	1938	2001	1978
Subtotals:	28003	28061	28366	28800	29139	29379
Pct Chg:	-0.4%	0.2%	1.1%	1.5%	1.2%	0.8%

FIGURE 11

As the following graph illustrates, overall the projections forecast a slight increase across the 10-year period based upon the historical enrollment trends and any projected new residential development.

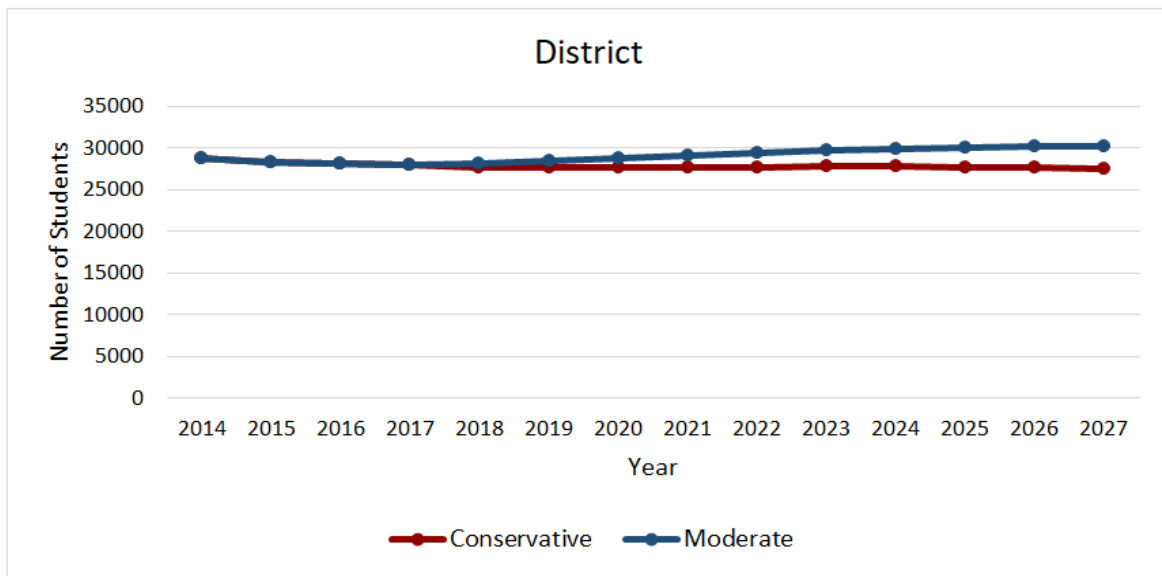


FIGURE 12

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	Cnsv	Mod
Kindergarten	2363	2518
Change	100%	106%
Gr K-6	16304	17310
Change	102%	108%
Gr 7-8	3544	3784
Change	95%	101%
Gr 9-12	7501	7943
Change	95%	101%
District	27349	29037
Change	99%	105%

FIGURE 13

Note that an averaging of both studies project a slight increase at the Kindergarten level.

The table below compares the ten-year projections. In the 10-year future at Kindergarten, both studies, averaged together, project a slight decline.

10 YEAR ENROLLMENT TRENDS: MODERATE AND CONSERVATIVE COMPARED

Change by Level	Cnsv	Mod
Kindergarten	2166	2414
Change	91%	102%
Gr K-6	15932	17543
Change	100%	110%
Gr 7-8	3929	4325
Change	105%	115%
Gr 9-12	7388	8053
Change	94%	102%
District	27249	29921
Change	99%	108%

FIGURE 14

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

ELEMENTARY SCHOOL LEVEL

The projected elementary school enrollment shows a slight increase.

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

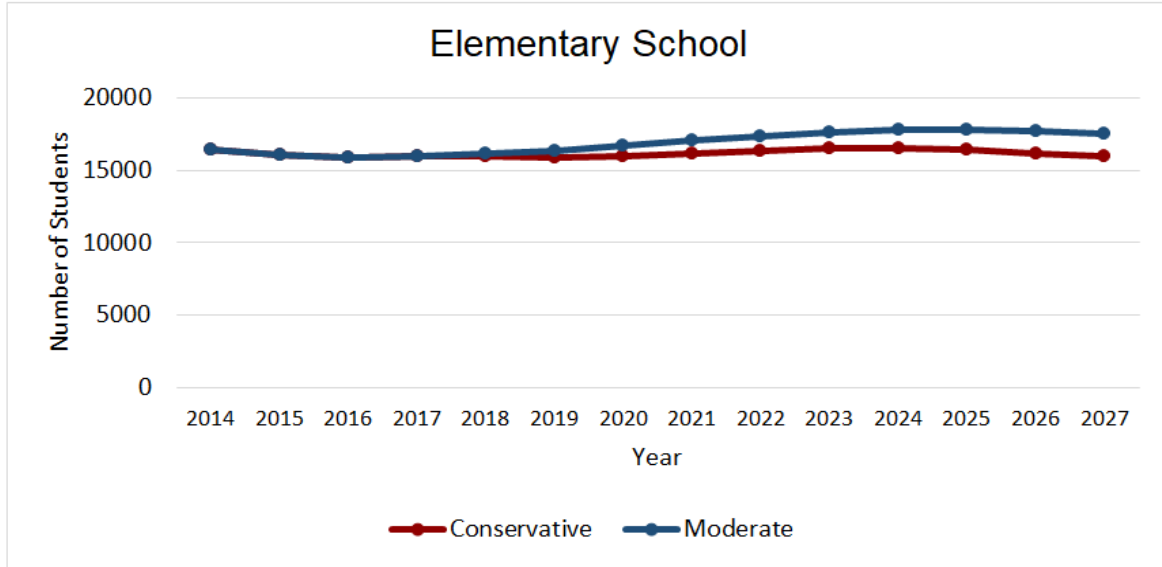


FIGURE 15

MIDDLE SCHOOL LEVEL

The projected middle school enrollment shows a significant increase.

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

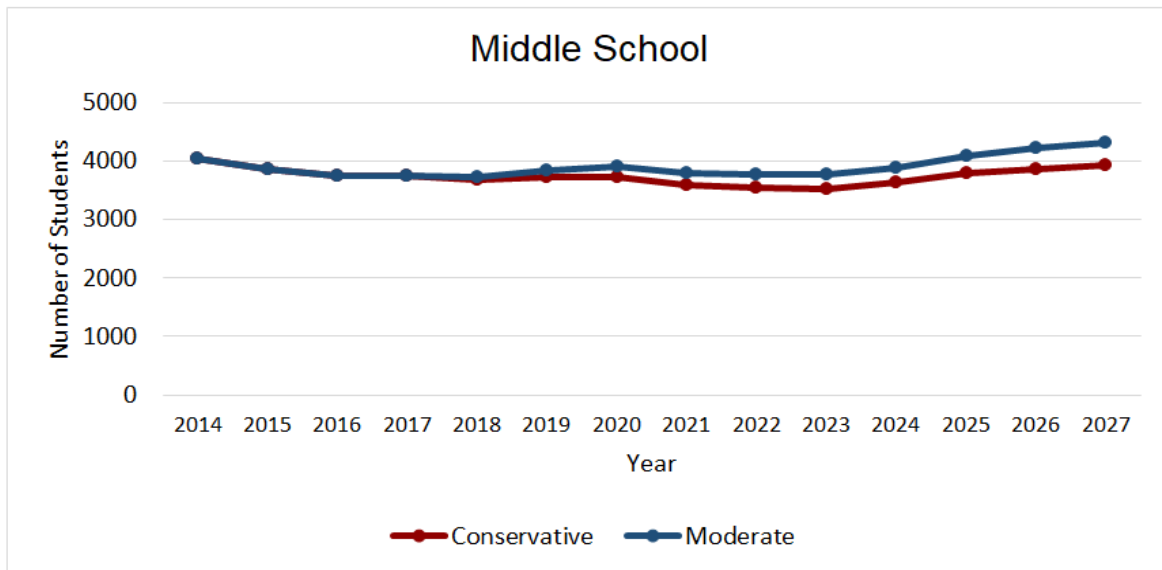


FIGURE 16

HIGH SCHOOL LEVEL

The projected high school enrollment shows a relatively stable trend.

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

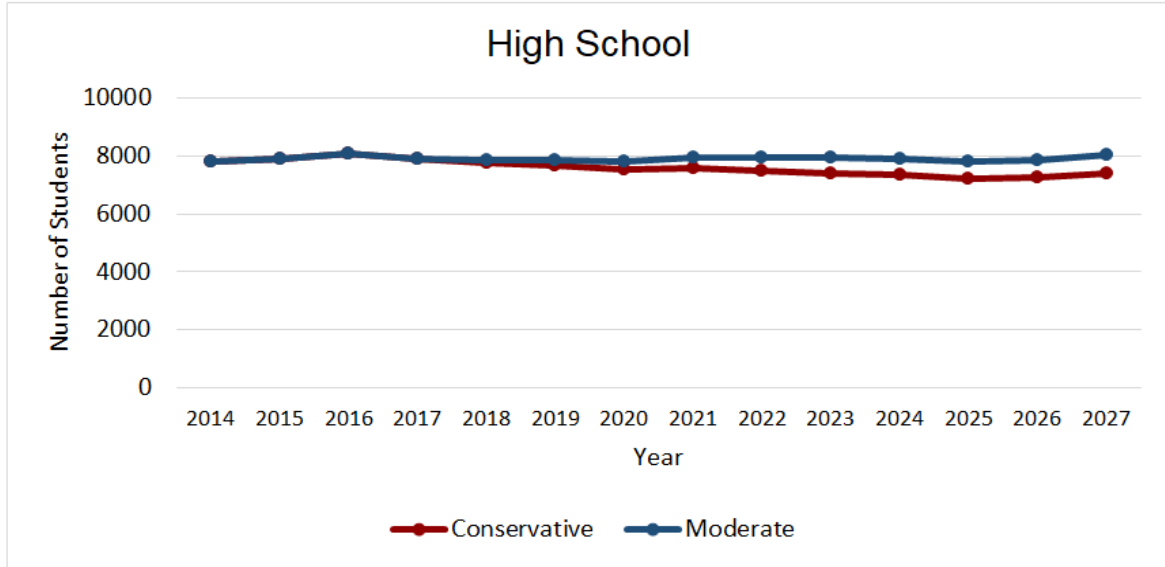


FIGURE 17

SUMMARY OF DISTRICT PROJECTIONS BY YEAR

The complete district-wide projection table for each study is available online. Corresponding sets of individual School Projections are available online as well.

The tables below present a more detailed annual view of projected changes by grade level clusters for both 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	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Kindergarten	2370	2327	2357	2388	2403	2363	2328	2290	2251	2208	2166
Pct Prev Yr	105%	98%	101%	101%	101%	98%	99%	98%	98%	98%	98%
5-Yr Change						100%					92%
Gr K-6	16012	15933	15886	16019	16172	16304	16484	16492	16399	16201	15932
Pct Prev Yr	101%	100%	100%	101%	101%	101%	101%	100%	99%	99%	98%
5-Yr Change						102%					98%
Gr 7-8	3747	3684	3724	3718	3595	3544	3525	3636	3797	3872	3929
Pct Prev Yr	100%	98%	101%	100%	97%	99%	99%	103%	104%	102%	101%
5-Yr Change						95%					111%
Gr 9-12	7893	7756	7663	7553	7582	7501	7417	7341	7217	7265	7388
Pct Prev Yr	98%	98%	99%	99%	100%	99%	99%	99%	98%	101%	102%
5-Yr Change						95%					98%
District	27652	27373	27273	27290	27349	27349	27426	27469	27413	27338	27249
Pct Prev Yr	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%
5-Yr Change						99%					100%

NOTE: Gray column most recent history year.

FIGURE 18

MODERATE PROJECTION

Change by Level	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Kindergarten	2370	2387	2468	2521	2533	2518	2509	2485	2461	2438	2414
Pct Prev Yr	105%	101%	103%	102%	100%	99%	100%	99%	99%	99%	99%
5-Yr Change						106%					96%
Gr K-6	16012	16162	16350	16731	17046	17310	17662	17782	17787	17692	17543
Pct Prev Yr	101%	101%	101%	102%	102%	102%	102%	101%	100%	99%	99%
5-Yr Change						108%					101%
Gr 7-8	3747	3737	3852	3903	3805	3784	3779	3889	4092	4234	4325
Pct Prev Yr	100%	100%	103%	101%	97%	99%	100%	103%	105%	103%	102%
5-Yr Change						101%					114%
Gr 9-12	7893	7838	7829	7824	7944	7943	7961	7913	7795	7865	8053
Pct Prev Yr	98%	99%	100%	100%	102%	100%	100%	99%	99%	101%	102%
5-Yr Change						101%					101%
District	27652	27737	28031	28458	28795	29037	29402	29584	29674	29791	29921
Pct Prev Yr	100%	100%	101%	102%	101%	101%	101%	101%	100%	100%	100%
5-Yr Change						105%					103%

NOTE: Gray column most recent history year.

FIGURE 19

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.

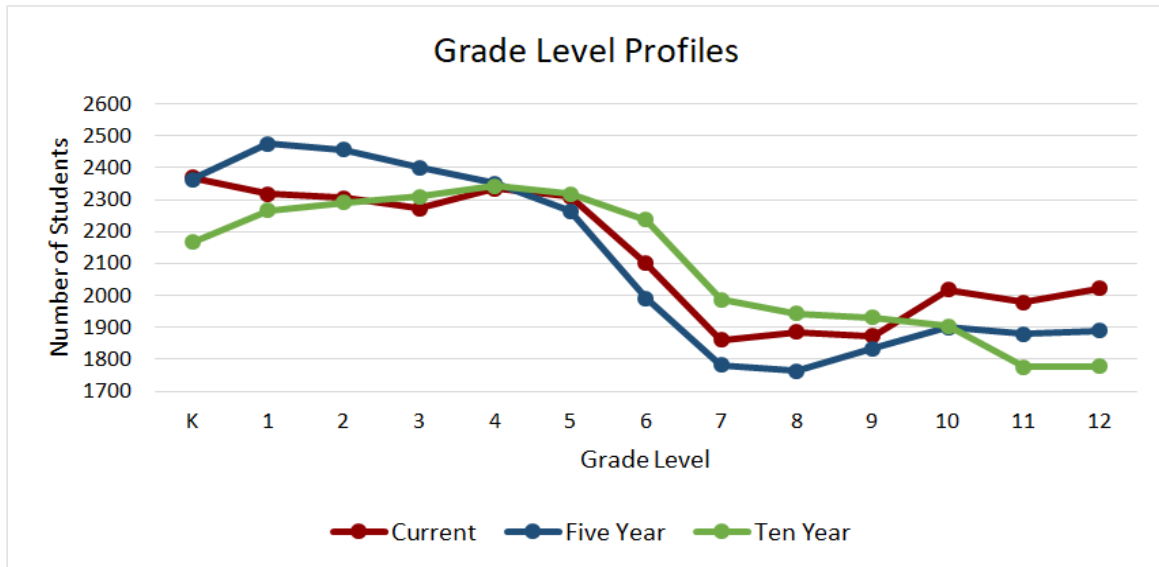


FIGURE 20

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: Reports > 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 > History > District-wide > Out of District]

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. Public access to MySchoolLocator is via a unique URL on the District's web site. The URL for integration into your district's website can be found by opening the appropriate Locator study from within the DI system. Once open, select "Run MySchoolLocator" from the District Admin menu. The MySchoolLocator app will open in a new browser window and the link can be copied from the address bar in the browser. Specialized district users have access to customize the messages seen by those using MySchoolLocator.

IMPACT OF THE PROJECTIONS ON SCHOOL CAPACITY

Facility challenges, if any, may exist if projected numbers exceed the current school capacity data. These challenges may also manifest differently in a Moderate or Conservative projection. Because school capacity data has not yet been entered into the system, all schools are shown as exceeding capacity.

[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	5-Yr Pct Change	10-Yr Pct Change
Tara Hills	-27%	-35%
Harding	26%	24%
Stege	23%	20%
Chavez	-23%	-26%

FIGURE 21

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

December 22, 2017

APPENDIX A

ASSUMPTIONS AND METHODOLOGY

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.

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 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 generally based on elementary boundaries or some portion 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 Non-Public School (NPS), 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 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 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.

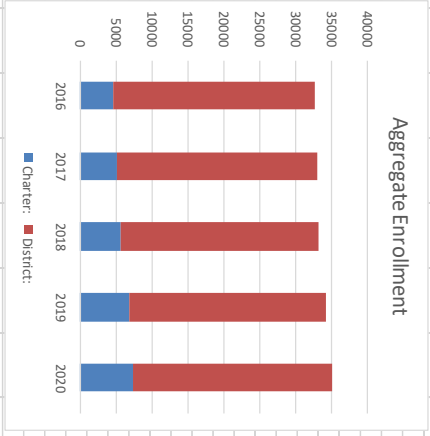
The calculations assume that the historical data provided is at one year intervals based on enrollment at the beginning of each school year. It is important that the student files obtained from the district are close to a common date each year, typically near the beginning of the school year. The snapshot 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.

APPENDIX B

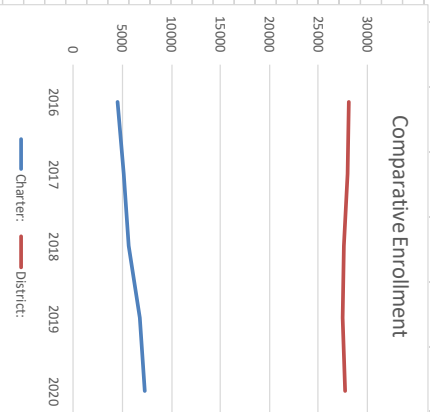
IMPACT OF CHARTER SCHOOLS

West Contra Costa USD (Ws/Cntr18Mod) (DU Sep 2018)	2014	2015	2015 F5ch	2016	2016 F5ch	ch net	dist net	2017	2017 F5ch	ch net	dist net	2018	2018 F5ch	ch incr	dist net	2019	2019 F5ch	ch incr	dist net	2020	2020 F5ch	ch incr	dist net
Transk	406	382	98	366	23	-75	-16	351	23	0	-15	324	23	0	324	335	155	132	229	342	155	100	262
1	2431	2219	249	2259	307	58	40	2370	309	2	111	2387	365	56	2342	2468	527	162	2338	2821	527	224	2342
2	2545	2342	245	2256	278	31	77	2318	279	1	59	2467	335	56	2422	2500	433	98	2422	2590	489	168	2456
3	2452	2404	245	2310	261	16	-32	2306	297	-1	10	2314	297	0	2314	2467	451	154	2344	2516	451	112	2426
4	2428	2368	196	2404	288	92	0	2335	263	2	17	2278	263	0	2278	2292	359	96	2215	2462	415	168	2328
5	2376	2281	209	2267	337	128	-101	2309	245	-2	25	2248	245	0	2248	2200	307	62	2150	2219	358	51	2178
6	2032	2198	432	2122	357	-75	-159	2101	418	61	-166	2279	421	3	2187	2134	424	3	2132	2103	424	0	2103
7	2011	1889	483	1915	557	74	-283	1881	670	113	-261	1897	809	139	1736	1975	800	-9	1982	1942	800	0	1942
8	2030	1998	397	1836	488	91	-33	1886	637	149	-29	1840	643	6	1835	1877	817	174	1738	1961	817	0	1961
9	1987	1937	331	1990	377	60	-8	1874	530	139	38	1915	638	128	1813	1892	649	-9	1899	1927	777	128	1825
10	1988	2012	330	1995	377	47	48	2018	406	29	28	1907	532	126	1806	1958	639	107	1872	1952	639	0	1952
11	1949	1996	267	2079	277	10	67	1978	368	91	-7	2047	385	17	2033	1941	500	115	1849	2007	602	102	1925
12	1902	1973	267	2092	297	-10	36	2023	383	96	-56	1969	372	19	1954	2038	335	-37	2068	1938	488	153	1816
Subtotals:	28730	28240	3996	28117	4496	500	-369	28003	5084	588	-341	28061	5634	550	27621	28366	6774	1140	27454	28800	7315	1313	27749.6
Pct Chg:		-1.7%		-0.4%	12.5%		-7.4%	-0.4%	13.1%		-58%		10.8%		-1.4%		20.2%		-0.6%		8.0%		1.1%
Projected Res Dev																							
Year:	2015	2016	2017	2018	2019	2020																	
Charter:	3996	4496	5084	5634	6774	7315																	
District:	28240	28117	28003	27621	27454	27750																	
Aggregate:	32236	32613	33087	33255	34228	35065																	
Agg Sans Res Dev:	32236	32613	33001	32999	33619	34325																	
Observations:	<p>In Fall 16, Charter added 500; district loss was 369 or 74% of Charter increase</p> <p>In Fall 17, Charter added 588; district loss was 341 or 58% of Charter increase</p> <p>Projected Res Dev is compensating for some of the Charter School loss</p> <p>Incoming cohorts at K and Gr1 are higher than graduating cohorts</p>																						

Aggregate Enrollment



Comparative Enrollment





DECISIONINSITE 
Enrollment Impact Specialists

101 Pacifica, Suite 380
Irvine CA 92618
(877) 204-1392

www.decisioninsite.com