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# ANALYSIS OF ENROLLMENT PROJECTIONS

FALL 2023

PREPARED FOR:  
CUPERTINO UNION SCHOOL DISTRICT

PREPARED BY:



SUBMITTED: DECEMBER 9, 2022

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# CUPERTINO UNION SCHOOL DISTRICT

## EXECUTIVE SUMMARY

### ENROLLMENT PROJECTIONS - FALL 2023

PowerSchool Predictive Enrollment Analytics is pleased to present this report of findings to the Board of Education and Executive Staff of Cupertino Union School District. 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 four years has been somewhat erratic. The data also show that the difference between the graduating cohort and the incoming cohort has been decreasing. Note that both studies project a significant decline 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 3,800 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 176 students.

### DISTRICT-WIDE ENROLLMENT PROJECTION

Overall the projections forecast a significant decline 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 Predictive Enrollment Analytics Team

December 9, 2022

# CUPERTINO UNION SCHOOL DISTRICT

## HISTORICAL ANALYSIS

### 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	75%
Gr K-5	79%
Gr 6-8	82%
District (K-8)	80%

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.

In general, Kindergarten enrollment over the past four 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 decreasing.

[More details: Enrollment > Historical > District-Wide > History Years Enrollment]

	Percent Change of Previous Year		
	2020	2021	2022
Kindergarten	86%	97%	90%
Grade 8 to K	70%	69%	68%
Total K-8	94%	90%	94%

FIGURE 2

Transition K enrollment is forecast as a separate grade level. These projections include an expansion of TK from 3 months to 12 months starting in 2022 through 2025.

[All data in this report excludes Transition K unless specifically noted.]

### 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, PowerSchool Predictive Enrollment Analytics 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	101%		
1 > 2	97%	----	
2 > 3	95%	----	
3 > 4	94%	----	SSSS
4 > 5	95%	----	
5 > 6	95%	----	SSSS
6 > 7	96%	----	
7 > 8	96%	----	

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 291, and has been declining.

[More details: Enrollment > Historical > 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, PowerSchool Predictive Enrollment Analytics 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 end of the project.
Student Generation Rates	Typical of recent history by product type.

FIGURE 4

## IMPACT OF PROJECTED NEW DWELLING UNITS

### PROJECTED OCCUPANCY

Approximately 3,800 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 #VALUE! by Rebecca Noren-Matz.

[More details: Enrollment > Residential > District-Wide > Proposed Dwelling Units]

New Dwelling Units Projected to be Occupied by Year (Moderate)										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Multi-family	49	200	273	34	400	500	500	500	502	
Attached	39	379	391		62					
Detached										
Totals:	88	579	664	34	462	500	500	500	502	0

FIGURE 5

New Dwelling Units Projected to be Occupied by Year (Conservative)										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Multi-family	40	160	245	105	356	450	450	450	450	252
Attached	30	337	330	112	45	17				
Detached										
Totals:	70	497	575	217	401	467	450	450	450	252

FIGURE 6

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

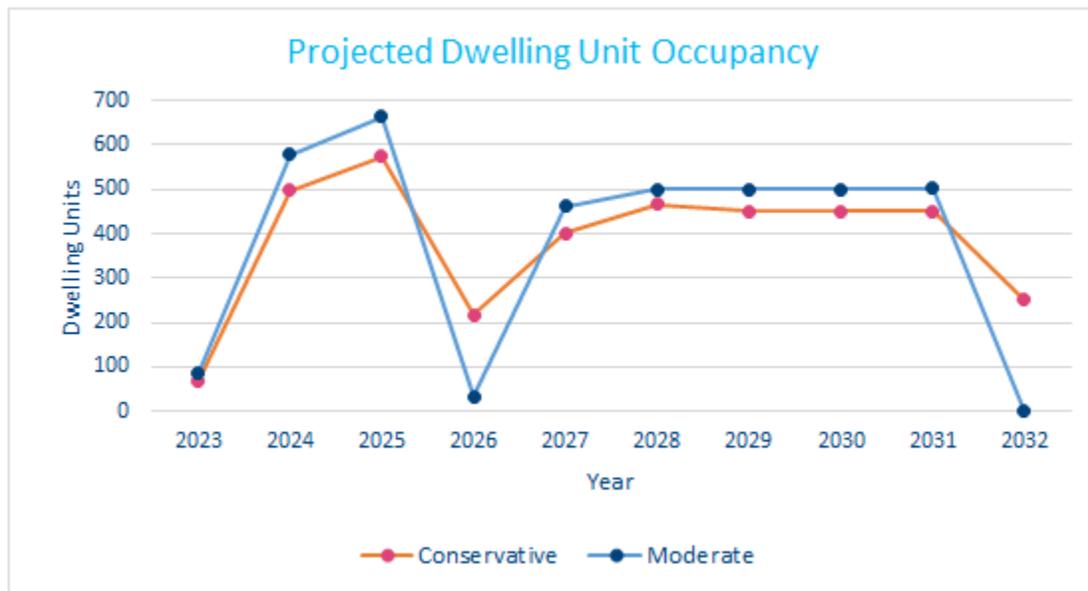


FIGURE 7

### 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 each year. The “Aggregate” row projects the accumulated increase in students served by the district through the year indicated and includes matriculation through and eventually out of the district for students introduced in previous years.

Students Generated by Residential Development (Moderate)										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Aggregate		168	344	368	475	593	707	819	930	942
Annual	21	147	176	24	107	118	114	112	111	12

FIGURE 8

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

Students Generated by Residential Development (Conservative)										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Aggregate		144	296	361	458	567	671	770	867	924
Annual	17	127	152	65	97	109	104	99	97	57

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: Enrollment > Residential > District-Wide > Student Generation Rates]

A complete report regarding new residential development is available online in our platform under “Home > Administration and Tools > District Documents”. 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 under “Enrollment > Residential”.

### PROJECTED ENROLLMENT CHANGES BY GRADE 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	2022	2023	2024	2025	2026	2027
TK	326	409	532	636	699	695
K	1165	1034	951	879	805	801
1	1324	1181	1068	985	901	829
2	1326	1286	1167	1062	970	901
3	1406	1264	1240	1131	1024	960
4	1490	1326	1207	1187	1080	1009
5	1497	1418	1273	1161	1138	1065
6	1562	1426	1377	1232	1122	1099
7	1630	1502	1379	1338	1195	1112
8	1520	1568	1451	1335	1292	1180
Subtotals:	13246	12414	11645	10946	10226	9651
Pct Chg:	-4.5%	-6.3%	-6.2%	-6.0%	-6.6%	-5.6%
SDC:	203	184	168	158	146	136
Totals:	13449	12598	11813	11104	10372	9787

FIGURE 10

### MODERATE 5 YEAR DISTRICT-WIDE PROJECTION BY GRADE LEVEL

Grade	2022	2023	2024	2025	2026	2027
TK	326	422	555	673	741	745
K	1165	1066	993	930	854	858
1	1324	1194	1113	1040	954	888
2	1326	1298	1193	1118	1025	960
3	1406	1289	1276	1178	1087	1022
4	1490	1328	1233	1225	1120	1072
5	1497	1429	1287	1195	1178	1109
6	1562	1430	1394	1253	1153	1140
7	1630	1509	1391	1363	1217	1146
8	1520	1575	1466	1356	1319	1206
Subtotals:	13246	12540	11901	11331	10648	10146
Pct Chg:	-4.5%	-5.3%	-5.1%	-4.8%	-6.0%	-4.7%
SDC:	203	186	171	162	150	142
Totals:	13449	12726	12072	11493	10798	10288

FIGURE 11

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

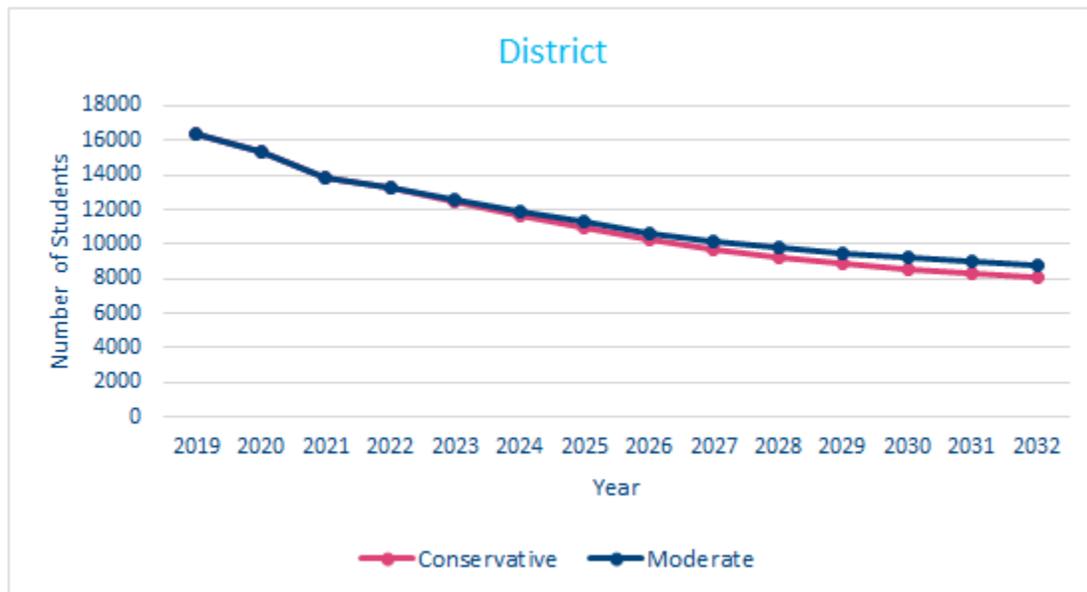


FIGURE 12

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
<b>Kindergarten</b>	801	858
Change	69%	74%
<b>Gr K-5</b>	5565	5909
Change	68%	72%
<b>Gr 6-8</b>	3391	3492
Change	72%	74%
<b>District (K-8)</b>	8956	9401
Change	69%	73%

FIGURE 13

Note that an averaging of both studies project a significant decline 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 significant decline.

### 10 YEAR ENROLLMENT TRENDS: MODERATE AND CONSERVATIVE COMPARED

Change by Level	Cnsv	Mod
<b>Kindergarten</b>	783	871
Change	67%	75%
<b>Gr K-5</b>	4823	5325
Change	59%	65%
<b>Gr 6-8</b>	2528	2713
Change	54%	58%
<b>District (K-8)</b>	7351	8038
Change	57%	62%

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 significant decline.

[More details: Enrollment > Projections > Selected Schools > All Elementary Schools]

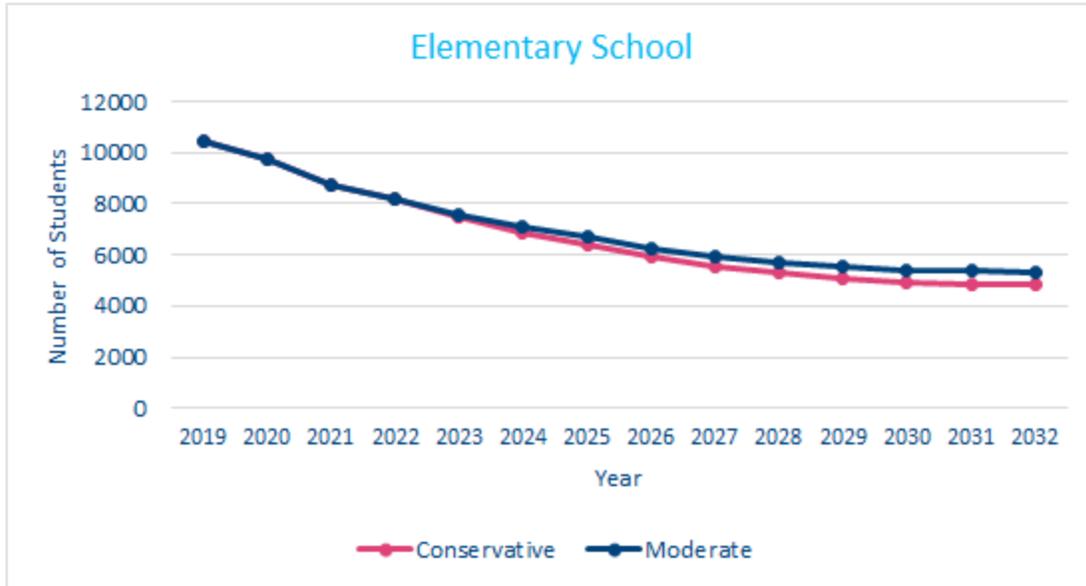


FIGURE 15

### MIDDLE SCHOOL LEVEL

The projected middle school enrollment shows a significant decline.

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

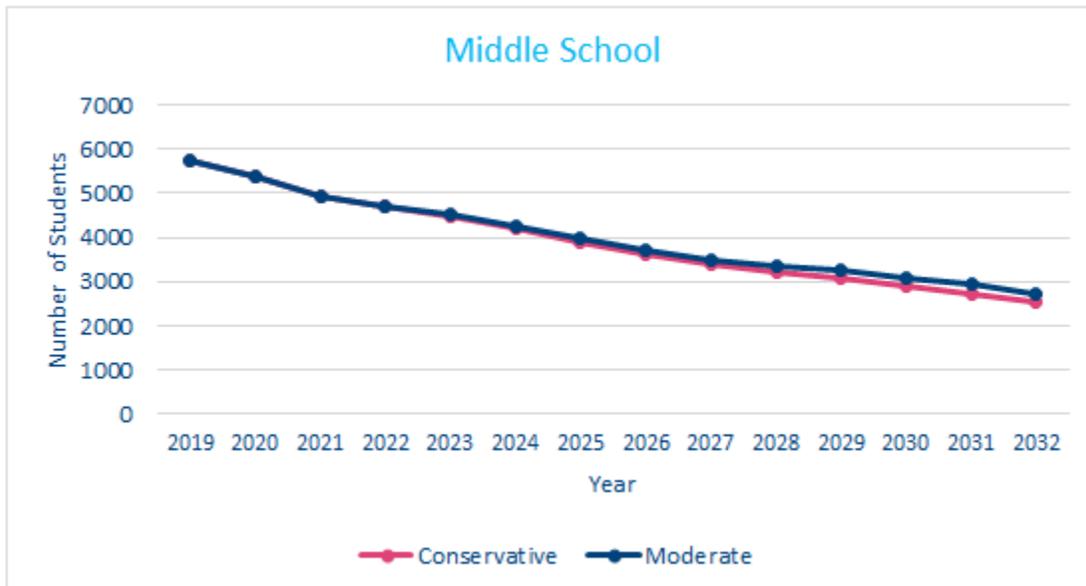


FIGURE 16

## 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 Prev Yr” row represents the percent of the previous year’s enrollment in each grade cluster that is projected in the subsequent year. The “5-Yr Change” row represents the percent change projected over the enrollment five years prior.

### CONSERVATIVE PROJECTION

Change by Level	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>Kindergarten</b>	1165	1034	951	879	805	801	799	796	793	790	783
Pct Prev Yr	90%	89%	92%	92%	92%	100%	100%	100%	100%	100%	99%
5-Yr Change						69%					98%
<b>Gr K-5</b>	8208	7509	6906	6405	5918	5565	5297	5094	4948	4866	4823
Pct Prev Yr	94%	91%	92%	93%	92%	94%	95%	96%	97%	98%	99%
5-Yr Change						68%					87%
<b>Gr 6-8</b>	4712	4496	4207	3905	3609	3391	3226	3082	2903	2722	2528
Pct Prev Yr	96%	95%	94%	93%	92%	94%	95%	96%	94%	94%	93%
5-Yr Change						72%					75%
<b>District (K-8)</b>	12920	12005	11113	10310	9527	8956	8523	8176	7851	7588	7351
Pct Prev Yr	94%	93%	93%	93%	92%	94%	95%	96%	96%	97%	97%
5-Yr Change						69%					82%

*NOTE: The gray column is the most recent history year.*

FIGURE 17

MODERATE PROJECTION

Change by Level	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>Kindergarten</b>	1165	1066	993	930	854	858	863	868	873	878	871
Pct Prev Yr	90%	92%	93%	94%	92%	100%	101%	101%	101%	101%	99%
5-Yr Change						74%					102%
<b>Gr K-5</b>	8208	7604	7095	6686	6218	5909	5680	5505	5400	5364	5325
Pct Prev Yr	94%	93%	93%	94%	93%	95%	96%	97%	98%	99%	99%
5-Yr Change						72%					90%
<b>Gr 6-8</b>	4712	4514	4251	3972	3689	3492	3348	3237	3079	2920	2713
Pct Prev Yr	96%	96%	94%	93%	93%	95%	96%	97%	95%	95%	93%
5-Yr Change						74%					78%
<b>District (K-8)</b>	12920	12118	11346	10658	9907	9401	9028	8742	8479	8284	8038
Pct Prev Yr	94%	94%	94%	94%	93%	95%	96%	97%	97%	98%	97%
5-Yr Change						73%					86%

NOTE: The gray column is the most recent history year.

FIGURE 18

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.

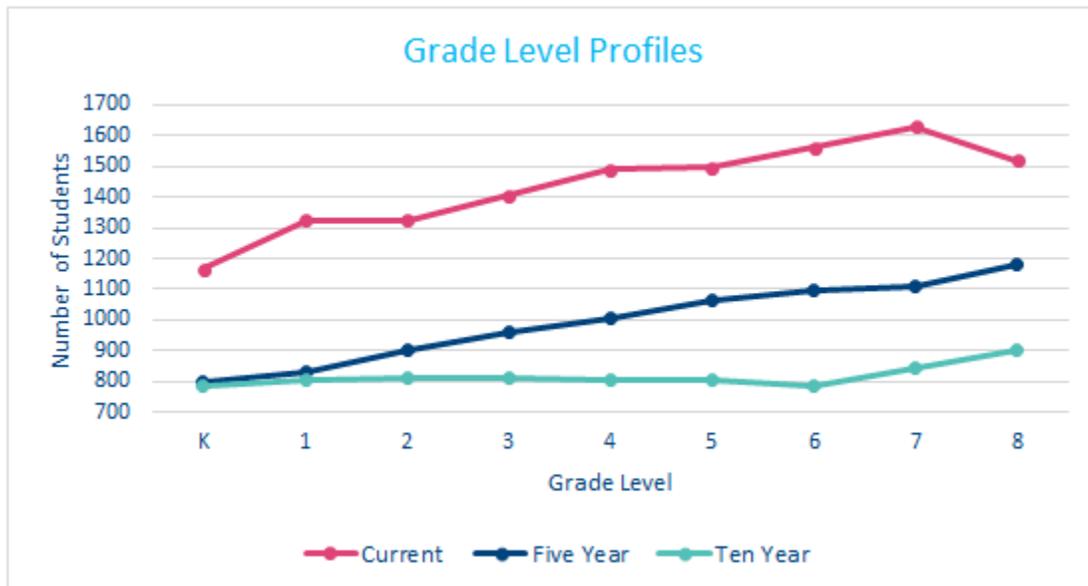


FIGURE 19

## 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 after initial enrollment, and augmented by inter-district transfer students.

### SCHOOL DRAW IMPACT

A draw rate is the percentage of students who enroll in a grade level in a 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 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](#) > [Historical](#) > [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: [Enrollment](#) > [Historical](#) > [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: [Enrollment](#) > [Projections](#) > [All Schools](#) > [Projections](#)]

## MY SCHOOL LOCATOR

MySchoolLocator is a web-based service accessible to PowerSchool Predictive Enrollment Analytics clients. This service allows online 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 requested via Support at any time. Additionally, requests can be submitted to apply custom messages for various geographies which will then be 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: [Enrollment](#) > [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: Enrollment > Projections > All Schools > Ten Percent Change]

School	5-Yr Pct Change	10-Yr Pct Change
Private School	98%	215%
Home/Hospital	-76%	-100%
Sedgwick Elementary School	-66%	-70%
Stockmeir Elementary School	-53%	-62%
Lincoln Elementary School	-40%	-54%

FIGURE 20

#### 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. 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 PowerSchool Predictive Enrollment Analytics 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 PowerSchool Predictive Enrollment Analytics regarding any questions or suggestions that may arise regarding these studies.

Respectfully Prepared and Submitted by:

The PowerSchool Predictive Enrollment Analytics Team

December 9, 2022

## APPENDIX

### 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,
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 PowerSchool Predictive Enrollment Analytics 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 provide them to us via Support for entry into the platform.

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 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 dropouts.

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 product 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 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. The calculations assume that the historical data provided is at one-year intervals based on enrollment at the beginning of each school year.

PowerSchool Predictive Enrollment Analytics 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, global pandemics, 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 PowerSchool Predictive Enrollment Analytics 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, residential reports, and community demographics.

#### *On Student Data*

PowerSchool Predictive Enrollment Analytics 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 near 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.