Program on Applied Demographics

CORNELL POPULATION CENTER

Demographic Analysis and School Building Asset Review for Ithaca City School District

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Executive Summary

Ithaca City School District (ICSD) is at a pivotal point where long-term demographic trends and facility costs necessitate strategic planning. Over the past decade, K-12 enrollment in ICSD has edged downward (about 265 fewer students in 2025 than in 2015) despite a resident population in Tompkins County that has remained relatively stable. This enrollment decline is principally driven by a significant drop in local birth rates (a **35% decrease since 2010**), that is not offset by migration patterns. Fewer incoming kindergarteners each year translate to smaller cohorts progressing through ICSD schools. At the same time, the district maintains a large infrastructure of school buildings – many of them aging and underutilized – which incurs substantial operating and maintenance costs. This report provides an analysis of these population and enrollment trends, ten-year enrollment forecasts, and the financial footprint of ICSD's facilities. Using these data, we outline options for possible school consolidation to optimize resources while continuing to serve students effectively.

Key findings include: (1) projected **enrollment declines of 20–27%** over the next decade, (2) excess capacity emerging at nearly all elementary schools, and (3) potential cost savings of **$1.6–2.8 million annually for each consolidated school** given existing staffing, building operations, and avoided capital expenditures. We present several scenario-based options for merging smaller elementary schools or reconfiguring grade spans, that could help ICSD maintain educational quality in a more fiscally sustainable footprint.

Population and Enrollment Trends

Persistent Enrollment Decline: ICSD's student enrollment has steadily declined over the past decade (Figure 1). Total K-12 enrollment fell from about 5,080 in 2015 to 4,817 in 2025. In percentage terms, this is a modest ~5% decline, but is inconsistent with prior expectations that assumed growth of ~5%.[1] Every grade level has been affected by smaller incoming cohorts, a trend exacerbated by the Covid-19 pandemic period when families presumably sought alternatives (reflected in especially low grade progression ratios during 2020-2022). Notably, all but one elementary school (South Hill) saw enrollment drops from 2015 to 2025 (Figure 2). Middle school enrollment in aggregate declined, though one campus (DeWitt) grew slightly, as did Ithaca High School. The overall result is that ICSD is serving fewer students now than a decade ago.

Figure 1: ICSD School Enrollment, 2015-2025

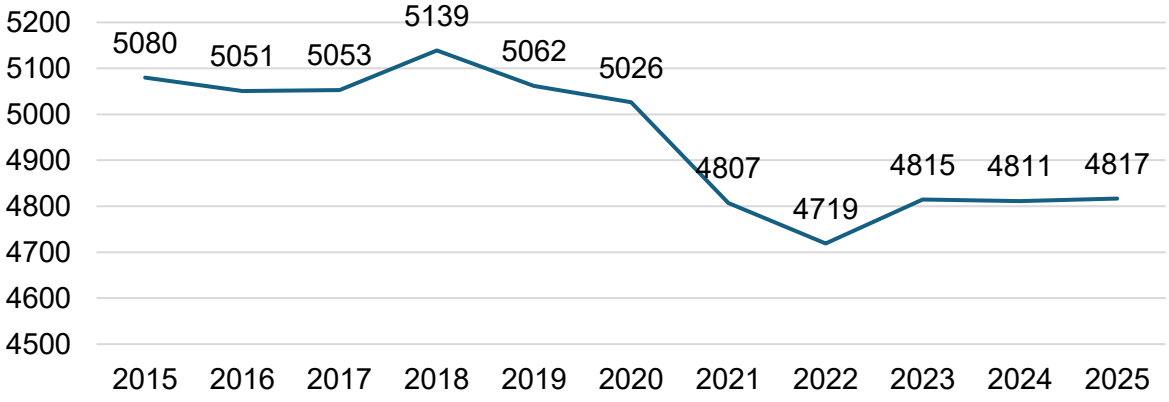
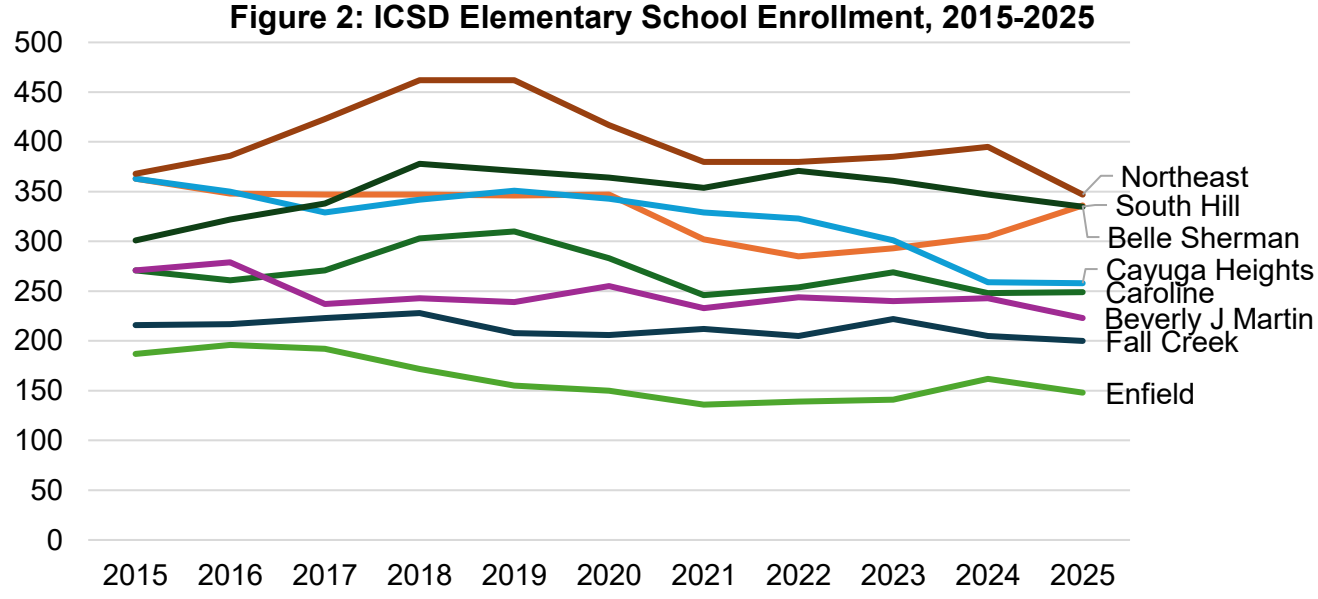


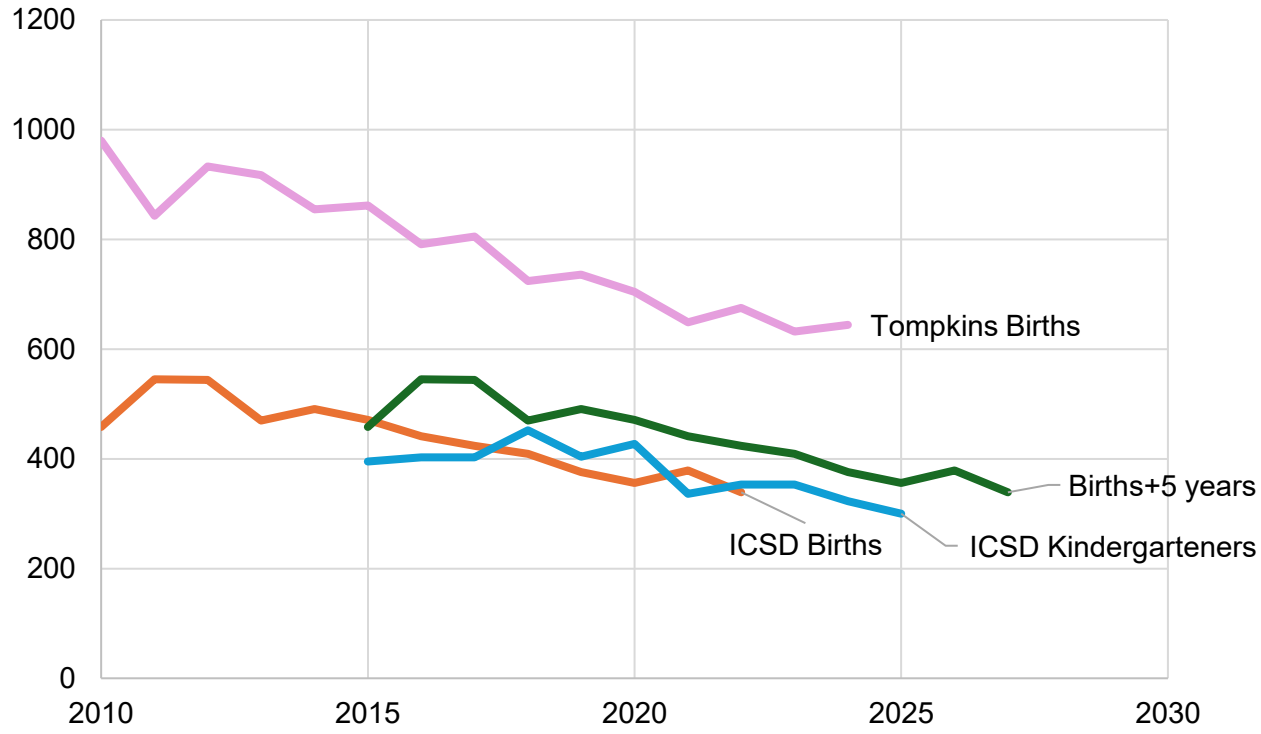
Figure 2: ICSD Elementary School Enrollment, 2015-2025



[1] Cropper GIS and McKibben Demographics. 2018. "Ithaca City School District Demographic Study."

Fertility and Kindergarten Entrants: Underlying the enrollment decline is a significant drop in local births. The number of births within ICSD's area has declined steadily over the last two decades; between 2007 and 2022, **annual births dropped 38%,** from 555 to 339 (Figure 3).[2] There is a strong relationship between local fertility and kindergarten matriculation: historically, about 85% of children born in the district show up for kindergarten five years later (ratio of the blue to green lines). With fewer babies being born, the pool of future students has contracted. Every single year since 2015, the actual number of kindergarteners has been lower than the number of births five years prior. While birth data for ICSD is only available through 2022, estimates for Tompkins County reveal that fertility since 2022 has remained low (or further declined). The 2025 kindergarten class had about 300 students, down from cohorts of 400+ a decade ago. These smaller incoming classes will progressively move through the system and reduce total enrollment in upper grades in coming years.

Figure 3: Births and Kindergarten enrollment, 2010-2025



Granular data on fertility within each of ICSD's elementary catchment areas is not available, but Census data on the under-5 population in each area suggests that all areas are experiencing fertility decline. Between 2010 and 2020, only one elementary area (Belle Sherman) experienced an increase in the share of its population under age 5 (Table 1). Mirroring broader national trends, these declines in the child population

[2] Using birth counts to calculate general fertility rates shows a decline in ICSD from 34.8 to 20.8 births per 1,000 women (aged 15-50), between the 2009-2013 and 2019-2023 periods. This is steeper than declines in the TST BOCES region (41.0 to 32.3) and for Upstate districts overall (48.5 to 51.2).

reflect declines in fertility behavior and not necessarily in the share of the female population of reproductive age, which has held steady or slightly increased in almost all of the catchment areas (Table 1).

Table 1: Young Child Population by School Catchment Area, 2010 & 2020

	Share Aged < 5			Share Women 25-44		
	2010	2020	Change	2010	2020	Change
Belle Sherman	2.0%	2.4%	+0.4	10.3%	10.9%	+0.6
Beverly J. Martin	5.1%	4.2%	-0.9	17.8%	18.6%	+0.8
Caroline	5.7%	4.4%	-1.3	14.7%	15.4%	+0.7
Cayuga Heights	2.4%	2.3%	-0.1	7.8%	7.8%	0.0
Enfield	5.8%	4.6%	-1.2	13.4%	12.4%	-1.0
Fall Creek	3.4%	3.4%	0.0	15.0%	16.6%	+1.6
Northeast	6.4%	4.8%	-1.6	16.9%	17.6%	+0.7
South Hill	2.7%	2.5%	-0.2	7.7%	7.8%	+0.1

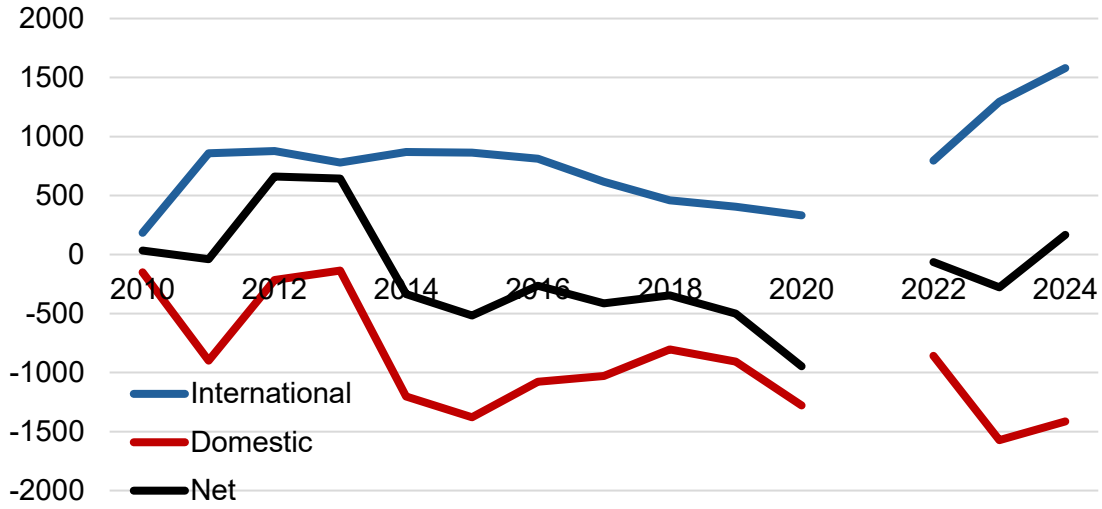
Source: 2010 and 2020 Decennial Censuses

Migration Patterns: ICSD's population is dynamic, relative to other districts. In the 2019-2023 period, about **20% of the working-age (18-64) resident population in ICSD had moved in from out-of-state or abroad**, substantially higher than the ~2-3% average in Upstate districts. With two institutions of higher education located within the area, large share of this turnover presumably comes from the university-aged population. ICSD also has higher in-migration of children, with rates (4.0%) twice as high as Upstate districts overall. While out-migration rates for school districts are not readily available, data for Tompkins County indicate that it has the highest levels of turnover in New York State (174 movers per 1,000 population). And importantly, the county has consistently experienced negative domestic net migration (Figure 4), meaning that **the area regularly loses more residents than it gains**.

This means that ICSD enrollments are not unusually shaped by migration; rather, the churning of its population plays an overall small role in determining the total count of student populations. This observation is also apparent in grade-progression ratios (GPRs) which show the percentage of ICSD students that move into the following grade. For migration of children into the district to have an outsized impact on enrollments, these progression ratios would be expected to regularly deviate significantly from a value of 1.[3] By contrast, elementary GPRs in ICSD from 2015-2025 have an average value of 0.991 (Table 2).

[3] Grade Progression Ratios reflect the proportion of children that move into the next expected grade relative to the starting number in the cohort. These values capture both progression of existing students into subsequent grades and the transfer in/out of new students. As elementary progression is assumed to be very high in ICSD, deviations from 1 are expected to be entirely driven by in and out-migration.

Figure 4: Net Migration in Tompkins County, 2010-2024



Source: Census Bureau Vintage 2020 and Vintage 2024 Annual Population Estimates.
Note: Migration data from 2020-21 are omitted because of exceptional spikes in migration during the Covid-19 pandemic.

Table 2: Grade Progression Ratios for ICSD Elementary Grades

	K>1st	1st >2nd	2nd >3rd	3rd >4th	4th >5th
2016	0.997	0.986	1.000	0.965	1.025
2017	0.985	0.999	0.991	0.990	0.974
2018	0.985	0.985	1.023	0.993	1.000
2019	0.969	0.970	1.000	0.980	1.012
2020	0.970	0.995	0.932	0.969	0.949
2021	0.923	0.916	0.906	0.972	0.947
2022	1.074	0.949	1.003	0.987	1.040
2023	1.006	0.972	1.021	1.022	1.033
2024	1.034	1.008	1.034	0.984	1.030
2025	1.031	0.970	1.053	0.986	0.995

Source: NYS Department of Education

It is also the case that international migration into the area has bolstered the resident population and offset losses. In 2024, for instance, Tompkins County had a net gain of 1,580 international migrants that offset the loss of 1,414 domestic residents. The children of international migrants enrolled in ICSD schools can be approximated by students who are English Language Learners (ELL). At the district level, ELLs composed 4.5% of all students in 2025, down slightly from 5.0% in 2015 (Table 3). These students are, however, not distributed uniformly across the district. Belle Sherman and Northeast have the highest shares of ELL students (15.6% at both schools in 2025). By contrast, ELL students compose relatively smaller shares at Caroline (1.8%), Fall Creek (4.1%), and Enfield (4.8%).

Table 3: Share of ELL Students, 2015 & 2025

	2015	2025	Δ
Ithaca City School District	5.0%	4.5%	-0.5
Belle Sherman	20.3%	15.6%	-4.7
Beverly J Martin	15.7%	6.3%	-9.4
Caroline	0.4%	1.8%	+1.4
Cayuga Heights	0.3%	5.2%	+4.9
Enfield	0.0%	4.8%	+4.8
Fall Creek	0.0%	4.1%	+4.1
Northeast	16.6%	15.6%	-1.0
South Hill	0.0%	2.8%	+2.8
Boynton	0.0%	1.6%	+1.6
DeWitt	8.0%	3.2%	-4.8
Ithaca Senior High	2.3%	1.9%	-0.4

Source: NYS Department of Education

Socioeconomic and Racial Diversity: ICSD's student body is relatively advantaged compared to peer districts. For example, only about 10.5% of ICSD children under age 18 live in poverty; far below the ~18% rates for upstate districts. Within the district, however, low-income students are unevenly distributed. Roughly 37-40% of ICSD students qualify as economically disadvantaged, but this varies by school. The highest concentrations of poverty are at Beverly J. Martin and Enfield Elementaries, whereas the wealthiest zones (e.g. Cayuga Heights) have far smaller disadvantaged shares.

In terms of race/ethnicity, ICSD's population is relatively diverse. The district's overall diversity index (the chance that two randomly selected people differ by race/ethnicity) is about 51%, substantially higher than the 39% average for comparable upstate districts. Similarly, 68% of ICSD residents are non-Hispanic white, which is about ten points below peer districts. Among ICSD schools, diversity has grown over time: the student diversity index rose from 53% in 2015 to 58% in 2025. However, like socioeconomic status, racial/ethnic diversity is uneven across schools. Three elementary zones (Beverly J. Martin, Northeast, and Belle Sherman) have long been the most diverse. Other schools have become notably more heterogeneous: for instance, Fall Creek Elementary's diversity index jumped from 37% (2015) to 57% (2025), and Caroline, Enfield, and South Hill also saw sizable gains. At the middle-school level, both Boynton and DeWitt increased in diversity over the decade.

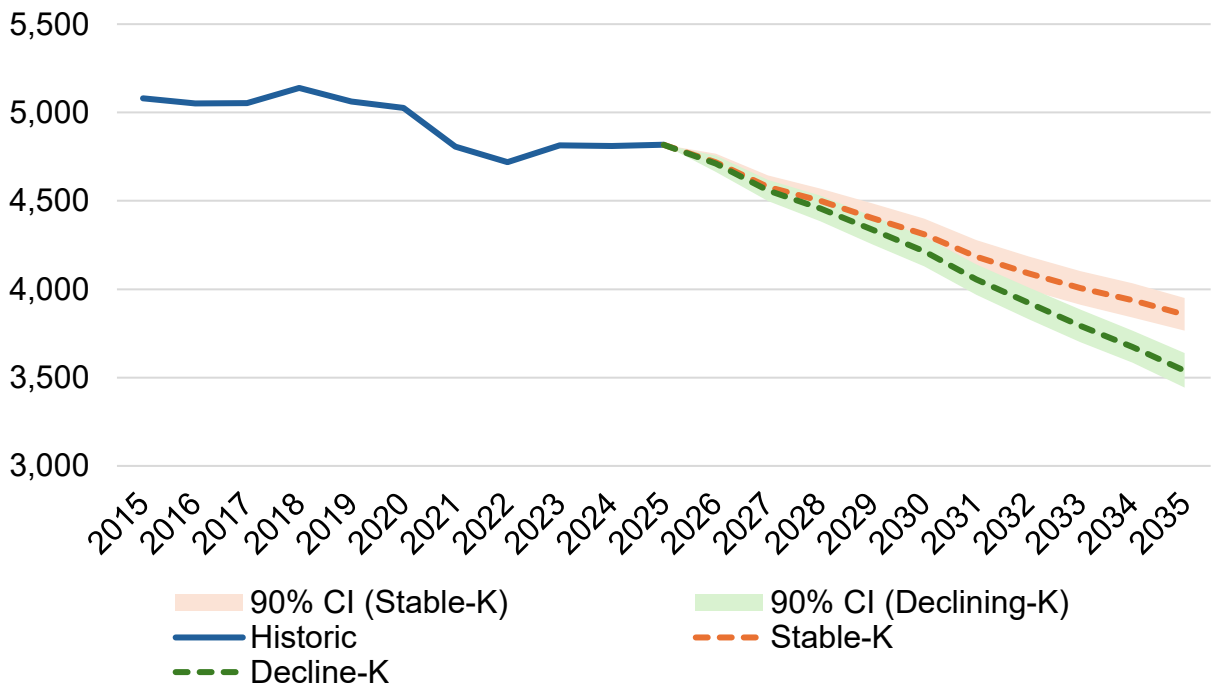
Enrollment Forecasts (2026–2035)

To forecast future enrollments numbers, we employ a cohort progression model augmented with simulation techniques to capture uncertainty. In brief, our projections follow each cohort of children as they move through the school system, accounting for observed patterns in how students advance or leave at each grade. The process begins by estimating incoming kindergarten classes based on recent fertility trends, "rolling forward" the number of births in the district five years prior, adjusted by the typical

proportion who enroll in ICSD. Each cohort's size is then carried forward year to year, with grade progression ratios applied to reflect the gain or loss of students as the cohort advances (e.g., larger 9th grade classes when new students enter high school). This cohort survival approach is a standard technique in educational demography, and it inherently captures the effects of both migration and retention. We determine these forecasts under two scenarios: (1) a "status quo" (*stable-K*) where kindergarten intake remains around current levels; and (2) a "continued decline" scenario (*decline-K*) where kindergarten classes continue to gradually shrink. These scenarios bracket the uncertainty in long-term enrollment. Further details underlying the model are provided in the Appendix.

District-Wide Projections: ICSD's total K-12 enrollment is projected to continue declining over the next decade. Under the baseline stable-K scenario assuming flat kindergarten entry, **the district is expected to enroll roughly 3,800 students in 2035, down from ~4,800 in 2025** (Figure 5). This projected decline of 1,000 students would represent a **20% reduction** in the number of students that ICSD serves. **Under the decline-K scenario, the total is projected to fall further to around 3,500 students by 2035, representing a 27% reduction over the next ten years**. The projected decline is gradual year-to-year; on the order of 1 to 3% per year. The 90% confidence interval from our simulations is approximately ±5% of the projected values; for example, in 2030 the middle 90% of simulations for the stable-K model range from 4,200 to 4,400 students. In all the 1,000 simulations run, none projected an increase.

Figure 5: ICSD Historical and Projected Enrollment, 2015-2035



Source: ICSD enrollment data and PAD projections. Note: the solid line shows actual enrollment through 2025; the dashed lines show projected enrollment under the two scenarios. The shaded band is the 90% confidence interval in the baseline scenario.

School-Specific Projections: We produced **projections for each school** to identify where the largest changes are likely. Except for Fall Creek, all elementary schools show enrollment declines in the next decade, though the magnitude varies (Table 4). **The largest relative elementary-level declines are projected to be at Enfield and Cayuga Heights**. Projections indicate that by 2035, Enfield Elementary will see its enrollment drop to 100 or fewer students (down from ~200 in 2016), a decline of 32% in the stable-K projection. Cayuga Heights is also forecast to decline substantially, with expected enrollments in 2035 of 180 (-30%) in the stable-K projection. Both Northeast and South Hill are also forecasted to decline substantially, by -22% and -19%, respectively, but with larger forecasted enrollments in 2035 of about 270 students. Beverly J. Martin is expected to see modest declines of about 15% in the stable-K projection. By contrast, Belle Sherman, Caroline, and Fall Creek are expected to stay comparatively stable, with forecasted change of -7%, -8%, and +3% in the stable-K projection.

At the secondary levels, both middle schools and the high school are also expected to decline substantially. In the stable-K projection, Boynton is forecast to decline to 367 students and DeWitt to 376 students by 2035, representing -28% and -31%, respectively. Ithaca Senior High is projected to decline by 23%, to just over 1000 students in 2035.

We emphasize that these school-level forecasts have wider uncertainty. Projections for individual schools have wider margins of error than the district-wide totals. This is because small local factors can heavily influence a single school's enrollment. However, the key takeaway is that **no school is projected to experience substantial growth** and every elementary campus will likely have fewer students in 5–10 years than today, barring unforeseen increases in fertility, domestic net migration, or immigration.

Table 4: Historical and Projected Enrollments, 2015-2035

		Stable-K Projections			Decline-K Projections		
	2025	2030	2035	%Δ	2030	2035	%Δ
ICSD	4,817	4,305	3,854	-20.0%	4,209	3,537	-26.6%
Belle Sherman	336	304	312	-7.1%	288	269	-19.9%
Beverly J Martin	223	183	190	-14.8%	174	163	-26.9%
Caroline	249	220	228	-8.4%	207	195	-21.7%
Cayuga Heights	258	207	180	-30.2%	194	155	-39.9%
Enfield	148	113	101	-31.8%	107	87	-41.2%
Fall Creek	200	189	206	+3.0%	179	177	-11.5%
Northeast	347	270	271	-21.9%	254	233	-32.9%
South Hill	335	272	273	-18.5%	257	235	-29.9%
Boynton	512	441	367	-28.3%	443	340	-33.6%
DeWitt	546	479	376	-31.1%	480	347	-36.4%
Ithaca Senior High	1400	1349	1072	-23.4%	1347	1058	-24.4%

Source: NYS enrollment data and PAD projections. Note: Stable projection of about 278 students enrolled at Lehman Alternative is included in the district total.

Facility Utilization and Cost Overview

ICSD currently manages **12 instructional facilities**: eight elementary schools (K-5), two middle schools (6-8), one large comprehensive high school (9-12), and one alternative secondary school (LACS, grades 6-12). In addition, the district has an administration building, and shares responsibility for BOCES facilities and a charter school (New Roots Charter). For this analysis, we focus on the main K-12 school buildings. Key data points for each facility include: building size, age, capacity (proxied by number of classrooms), operating costs, and capital needs. Table 5 summarizes these factors for the eight elementary schools and the secondary schools.

Table 5: ICSD Facilities Operating Expenses

	Vintage	SqFt	Total Improve Cost (mil)	Facilities Condition Index	Annual Facility O&M (mil)
Belle Sherman	1926	58,172	$7.8	17%	$1.4
Beverly J Martin	1935	77,477	$11.6	19%	$1.8
Caroline	1958	50,902	$9.3	23%	$1.2
Cayuga Heights	1921	52,990	$8.7	21%	$1.2
Enfield	1959	41,155	$6.3	19%	$1.0
Fall Creek	1934	37,546	$7.5	25%	$0.9
Northeast	1964	57,356	$8.1	18%	$1.3
South Hill	1954	65,874	$5.7	11%	$1.5
Boynton	1971	130,153	$16.0	14%	$3.0
DeWitt	1971	131,845	$15.3	14%	$3.1
Ithaca Senior High	1960	293,300	$40.2	15%	$6.8

Source: ICSD provided data

Aging Infrastructure and Capital Needs: Most ICSD schools are legacy facilities, being built in the early-to-mid 20th century. Belle Sherman Elementary opened in 1926 (with an addition in 1970), Beverly Martin in 1935, Cayuga Heights in 1921, and Fall Creek in 1934. Even the newer elementary buildings like Northeast (1964) and Caroline (1958) are 60+ years old. The age of these structures means significant maintenance and upgrades are required to keep them in good condition. A recent facilities assessment by TetraTech identified substantial capital improvements for each school, ranging from about $5.7 million (South Hill) to $11.6 million (Beverly Martin). In short, maintaining these aging buildings will be expensive: each year the district must invest capital funds or risk facility deterioration. Spreading limited capital dollars across eight separate elementary campuses (plus secondary schools) makes it difficult to address all needs adequately.

Operating Costs: Each school building carries fixed operating overhead that does not scale down with fewer students. ICSD-provided budget data indicate that elementary schools incur about $1.0-1.5 million per year in facility operating and maintenance (O&M) expenses (this excludes classroom teachers, who are part of instructional costs

that follow students). For example, Belle Sherman's annual building O&M cost is about $1.35 million. A smaller building like Enfield still costs roughly $0.96 million per year to operate, despite serving far fewer students, as every school needs a minimum level of heating, lighting, upkeep, and staffing. The largest elementary school, Beverly Martin, has a sizeable 77,000 sq. ft. footprint and the highest elementary O&M at roughly $1.8 million annually. The key point is that a half-empty school building costs nearly as much to operate as a full one.

Excess Capacity and Enrollment Trends: Capacity in a school is directly measured by the number of standard classrooms, which determines how many student sections can be accommodated. Across the eight elementary schools, ICSD has 206 classrooms in total, which implies a theoretical capacity of approximately 3,700 to 4,100 students assuming 18–20 students per room. Current elementary enrollment is only about 2,100 students and just 50–60% of this potential, suggesting **significant underutilization across most buildings** (Table 6).

Table 6: Classroom Utilization for ICSD Schools, 2025 and 2035

		Current (2025)		Stable-K Forecast (2035)	
	# Class-rooms	Enrollment	Students/ Classroom	Projected Enrollment	Students/ Classroom
Total Elementary	206	2,096	10.2	1,761	8.5
Belle Sherman	30	336	11.2	312	10.4
Beverly J Martin	31	223	7.2	190	6.1
Caroline	26	249	9.6	228	8.8
Cayuga Heights	25	258	10.3	180	7.2
Enfield	21	148	7.0	101	4.8
Fall Creek	17	200	11.8	206	12.1
Northeast	30	347	11.6	271	9.0
South Hill	26	335	12.9	273	10.5
Boynton	30	512	17.1	367	12.2
DeWitt	33	546	16.5	376	11.4
Ithaca Senior High	55	1400	25.5	1072	19.5

Source: ICSD provided data, NYS enrollment data, and PAD projections

At the school level, many classrooms are far below capacity. For example, Belle Sherman has 30 classrooms but only 336 students, averaging about 11 students per room. Enfield, the smallest elementary school, has 148 students across 21 rooms; fewer than 7 students per classroom. These figures will continue to decline: under the stable-k enrollment projections, district-wide students per classroom is expected to fall further to 8.5 by 2035, with Enfield dropping to fewer than 5 students per room and others like Cayuga Heights and Beverly J. Martin approaching or falling below 7.

To quantify these gaps in capacity more explicitly, we compute each school's potential capacity (elementary classrooms × 18; secondary x 22) to both current and projected

enrollment levels (Table 7). As of 2025, the **district carries more than 1,600 unused elementary seats. That number is expected to rise to nearly 2,000 by 2035**. Every school exhibits some excess, with Enfield and Beverly Martin among the most underutilized. For example, Enfield's projected enrollment in 2035 is only 101 students, compared to a capacity of 378, meaning nearly three-quarters of its seats will be vacant. Even Fall Creek, which is projected to grow slightly, will still operate 33% below capacity.

Table 7: Potential & Excess Capacity for ICSD Schools, 2025 and 2035

		Current (2025)		Stable-K Forecast (2035)	
	Potential Capacity	Current Usage	Current Excess	Projected Usage	Projected Excess
Total Elementary	3,708	2,096	+1,612	1,761	+1,947
Belle Sherman	540	336	+204	312	+228
Beverly J Martin	558	223	+335	190	+368
Caroline	468	249	+219	228	+240
Cayuga Heights	450	258	+192	180	+270
Enfield	378	148	+230	101	+277
Fall Creek	306	200	+106	206	+100
Northeast	540	347	+193	271	+269
South Hill	468	335	+133	273	+195
Boynton	660	512	+148	367	+293
DeWitt	726	546	+180	376	+350
Ithaca Senior High	1,210	1,400	-190	1,072	+138

Source: ICSD provided data, NYS enrollment data, and PAD projections

Expense Savings from Facility Disposition

The excess capacity and fixed costs outlined above translate into substantial potential savings if ICSD reduces its facility footprint. In simple terms, disposing a school building allows the district to avoid three main expenses: (a) annual capital investment needed to keep that facility up-to-date, (b) ongoing operations and maintenance (O&M) costs, and (c) certain instructional/staffing expenses. We assume the avoided annual capital expenditure is about 6.7% of the building's identified improvement cost (reflecting an annualized investment to maintain or upgrade the facility). The instructional expense savings are assumed to be modest: roughly 10% of a limited subset of the school's instructional costs, since most instructional positions follow students.

For the eight elementary schools, the potential recurring savings per school ranges from about $1.6 million up to $2.8 million per year (Table 8). Smaller schools with low enrollment but significant overhead yield the lower end of savings (e.g. Fall Creek would save roughly $1.6 million annually). In contrast, a larger and more costly building like Beverly J. Martin could save on orders of $2.8 million per year. These figures underscore that maintaining each additional half-filled school costs the district on the order of a couple million dollars every year.

Table 8: Savings from Facility Disposition

	Annual Capex (thou)	Annual Facility O&M (mil)	Instruc Expense Save (thou)	Annual Disposition Savings (mil)	Annual Disposition Savings per 2035 Student
Belle Sherman	$521	$1.4	$302	$2.2	$6,972
Beverly J Martin	$771	$1.8	$299	$2.8	$15,113
Caroline	$620	$1.2	$261	$2.1	$9,057
Cayuga Heights	$580	$1.2	$262	$2.1	$11,523
Enfield	$418	$1.0	$204	$1.6	$15,633
Fall Creek	$502	$0.9	$212	$1.6	$7,706
Northeast	$542	$1.3	$341	$2.2	$8,177
South Hill	$384	$1.5	$332	$2.2	$8,231
Boynton	$1,067	$3.0	$428	$4.5	$12,322
DeWitt	$1,017	$3.1	$419	$4.5	$11,970
Ithaca Senior High	$2,677	$6.8	$867	$10.4	$9,666

Source: ICSD provided data and PAD projections

An alternative to assessing efficiency loss of underutilized schools is the annual cost per student of keeping a building open. We compute this by dividing the total savings by the number of students each school is projected to serve in 2035 under the stable-K scenario. By this measure, closing an under-enrolled school like Enfield or Beverly J. Martin would save over $15,000 per student relocated, reflecting their high costs relative to the small enrollment. Cayuga Heights (with ~180 students in 2035) would save about $11,500 per student, and Caroline around $9,000 per student. At the other end, a larger school such as Belle Sherman, which is expected to serve 300+ students, would yield roughly $7,000 in savings per student by 2035. In general, elementary schools that are small or operating far below capacity are the most expensive (per pupil) to keep open.

The potential savings from closing a secondary school are even higher in absolute terms, though practical considerations may make doing so less feasible. Each middle school (Boynton or DeWitt) carries about $4.5 million in annual combined costs that would be saved if one were disposed, and the high school alone accounts for over $10 million in yearly facility and associated costs (Table 8).

Consolidation Scenarios

This section translates the enrollment projections and facility cost estimates into a series of illustrative consolidation scenarios. **These are not recommendations**; rather they are intended to help ICSD evaluate the fiscal and operational implications of maintaining the current building footprint, identify feasible building blocks for possible consolidation, and point to areas for additional analysis.

Each of these scenarios is anchored in the enrollment projections and building capacity estimates summarized in this report. They assume that the key conditions shaping enrollment remain broadly in place: continued low fertility and no structural shift in grade

progression or net migration. Because population forecasts are inherently uncertain, these scenarios should be revisited as updated enrollment, fertility, or migration data become available.

The scenarios also do not incorporate important factors that meaningfully impact feasibility and potential savings, including: (i) detailed transportation and associated costs; (ii) special education service constraints; (iii) the availability of specialized spaces (e.g., art, music, science labs) beyond standard classrooms; (iv) transitional costs; (v) state aid implications; and (vi) the market value of facility disposition or reuse. Finally, the scenarios do not model changes to Lehman Alternative Community School (LACS), as enrollment into LACS is not determined by residential catchment populations. Potential changes to LACS are therefore outside the scope of these scenarios and would require separate policy analysis.

Option A: Close one elementary school (estimated annual savings of $1.6-$2.8M)

A one-school closure is the least disruptive pathway and provides the most flexibility in designing boundaries and transportation. Based on annual disposition savings (Table 8), plausible single-school candidates include:

- **Enfield** ($1.6M/year or $15,633 per projected 2035 student): The smallest and most underutilized elementary school, with projected enrollment near 100 students by 2035 and high fixed costs per pupil.
- **Cayuga Heights** ($2.1M/year or $11,523 per projected 2035 student): Projected to decline substantially and remain relatively small by 2035. Closing Cayuga Heights produces moderate savings and could be paired with boundary design to maintain balance across receiving schools.
- **Beverly J. Martin** ($2.8M/year or $15,113 per projected 2035 student): Combines relatively high facility costs with low projected enrollment, producing the largest single-school gross savings. Because BJM serves a high share of economically disadvantaged students and is among the more diverse elementary schools, any reassignment design and access to supports are crucial.

Option B: Close two elementary schools (estimated annual savings of $3.7-$4.9M)

A two-school closure reduces the facility footprint while keeping a diverse network of elementary schools. More viable combinations are those that (i) avert near-term capital investments in chronically underutilized buildings, and (ii) enable reassignment plans that maintain (or improve) socioeconomic balance across receiving schools. Possible combinations (ordered by estimated savings) include:

- **Enfield + Cayuga Heights** ($3.7M/year): Closes one higher-need and one lower-need school, creating an opportunity to improve socioeconomic balance through deliberate reassignment.

- **Enfield + Beverly J. Martin** ($4.4M/year): Higher fiscal impact, but also higher equity and service-delivery sensitivity because both schools serve higher concentrations of economically disadvantaged students.
- **Cayuga Heights + Beverly J. Martin** ($4.9M/year): Largest two-school gross savings; but feasibility depends on whether receiving schools can absorb students without increasing segregation or creating long commutes.

Option C: Close three elementary schools and restructure middle grades (estimated annual savings of about $6.5M)

A three-school closure yields the largest recurring savings among elementary options, but it also carries the implementation complexity and potential disruption. The most straightforward combination closes Enfield, Cayuga Heights, and Beverly J. Martin, with combined savings of roughly $6.5 million per year.

Capacity constraints underscore why this option requires caution. Given the capacity estimates in Table 7, closing these three buildings would reduce total elementary capacity from 3,708 seats to 2,322 seats. Relative to current elementary enrollment (2,096 students), that leaves a districtwide margin of about 226 seats. Under the 2035 stable-K forecast (1,761 students), this margin rises to about 561 seats. The near-term margin is therefore narrow, making this option more sensitive to boundary design, specialized-space needs, and transportation feasibility than Options A or B.

One way to increase operational headroom—without relying on a middle school closure—is to restructure grades across both middle school campuses into a lower/upper model (for example, grades 5–6 in one building and grades 7–8 in the other). This would shift at least one cohort out of the elementary footprint and make the elementary reassignment less sensitive to modest forecasting error and room-by-room constraints. Table 7 indicates that Boynton and DeWitt each have proxy excess capacity today (+148 and +180 seats, respectively), with larger projected excess by 2035 (+293 and +350). At the same time, Table 7 also makes clear that the District cannot consolidate all middle grades into a single campus under current assumptions: combined middle enrollment is 1,058 students today (512+546), exceeding the proxy capacity of either building, and even in 2035 the combined middle enrollment (743) remains slightly above DeWitt's proxy capacity (726).

Importantly, a lower/upper middle school model is not only an operational change; it is a substantive program design choice with significant pedagogical implications. Before ICSD treats this structure as a viable option, it is advisable to undertake a focused review of the educational research on grade configuration and lower/upper middle school models, with attention to the conditions under which such designs improve (or fail to improve) student outcomes, school climate, equitable access to supports, and staffing structures.

Conclusion and Next Steps

ICSD's enrollment decline reflects long-run demographic change, driven by sustained declines in local births. As smaller cohorts move through the system, total enrollment is

projected to fall meaningfully over the next decade. At the same time, ICSD operates a large and aging portfolio of school facilities with sizeable and fixed operating and reinvestment costs. The result is increasing facility costs per pupil and a growing mismatch between the building footprint and the number of students it serves.

This report brings those dynamics into an empirical framework by combining enrollment projections, capacity estimates, and savings estimates from potential facility disposition. The consolidation scenarios described here are intended as illustrative pathways derived from these data, not recommendations.

Before ICSD advances any consolidation plan, additional analysis is necessary to confirm feasibility, quantify net savings, and assess equity impacts. At minimum, that work should include: (1) a room-by-room utilization and specialized space assessment; (2) transportation systems, travel time, and cost modeling; (3) an equity impact of boundary alternatives; (4) net fiscal analysis incorporating transition costs, recurring cost changes, capital timing, and potential facility disposition/reuse; and (5) if grade-span restructuring is considered, a focused review of the educational research and local pedagogical implications of alternative configurations.

Appendix A: ICSD enrollment projection methodology

Introduction

This appendix describes the methodology and motivation of the choices made that underlie the Ithaca City School District (ICSD) projections and projections for each of the individual schools.

The main characteristics of the projection methodology:

- Top-down approach: the ICSD enrollment by grade is projected first, and then the separate schools, making sure that projected enrollment in the schools add up to the school district
- Grade progression based: data on historic grade progression is used to project into the future
- Simulation of uncertainty: there is variation in the historic data, and this historic variation is carried through the projections. This results in confidence intervals around the estimates
- Scenarios are defined in terms of assumptions on the future kindergarten enrollments

Historical data is used differently for different grades depending on analysis of this historic data.

ICSD: simulation of grade progression ratio based projections

A grade progression ratio methodology makes assumptions about the size of a cohort as it moves through the grades.

$$Enr_g = GP_{g-1} * Enr_{g-1}$$

Where GP is the assumed grade progression ratio. If GP is equal to 1, the cohort size doesn't change over time, smaller than 1 means that there is attrition related to net out migration, dropouts, or choosing alternative schools. The ratio can also be larger than 1 and cohorts can grow year over year.

The projections involve simulation to quantify some uncertainty in the assumptions. Instead of taking a point estimate for each assumption, a single run draws assumptions from a probability distribution. The simulation reruns the projection a thousand times, and leads to a distribution of outcomes.

Each simulation run starts with the 2025 enrollment numbers. Then one year at a time, the projection model:

1. Draws the new Kindergarten enrollment
2. Draws grade enrollment ratios for ICSD and by multiplying this with last year's enrollment numbers, determines enrollments for each grade in year t

3. After establishing ICSD enrollment for each grade, different probability distributions are used for each school that enrolls students in that grade and the model creates initial grade enrollments for each school
4. Those initial grade enrollments are then multiplied with a raking factor in a way that the sum of the final school grade enrollments add up to the ICSD enrollment

This process is done 1,000 times for the years 2026 through 2035.

The probability distributions are based on analysis of the 2015 – 2025 enrollments. The remainder of this document goes into more depth on the analysis and the role of these probability distributions in the projection process.

Grade progression ratio assumptions

We analyzed 10 years of grade progression ratios for ICSD

YEAR	KG	gr_1	gr_2	gr_3	gr_4	gr_5	gr_6	gr_7	gr_8	gr_9	gr_10	gr_11	gr_12
2015	395												
2016	403	0.997	0.986	1	0.955	1.025	1.019	1.005	0.995	0.967	0.997	0.969	1.003
2017	403	0.985	0.99	0.991	0.99	0.974	0.997	1.029	1.025	0.972	0.979	1.003	0.995
2018	452	0.985	0.985	1.026	0.993	1	1.03	0.981	1.005	1.048	0.968	0.984	1.005
2019	404	0.969	0.97	1	0.98	1.012	1.032	0.991	0.981	0.982	0.91	0.973	1.003
2020	427	0.97	0.995	0.932	0.969	0.949	0.993	0.962	0.994	1	1.005	0.99	0.992
2021	336	0.923	0.916	0.906	0.972	0.947	0.987	0.977	0.978	0.955	0.983	0.966	0.987
2022	353	1.074	0.949	1.003	0.987	1.04	0.967	1	0.971	0.982	0.975	0.927	0.984
2023	353	1.006	0.972	1.021	1.022	1.033	1.063	1.032	1.027	1.047	1.003	1.019	1.055
2024	323	1.034	1.008	1.034	0.984	1.03	0.995	0.984	1.056	0.997	0.991	0.977	0.966
2025	300	1.031	0.97	1.053	0.986	0.995	1.016	1.037	1.016	1.021	0.971	0.979	0.971

The ratios are color coded where the brightest greens are the highest values (max = 1.074) and the darkest reds the lowest values (min = 0.906).

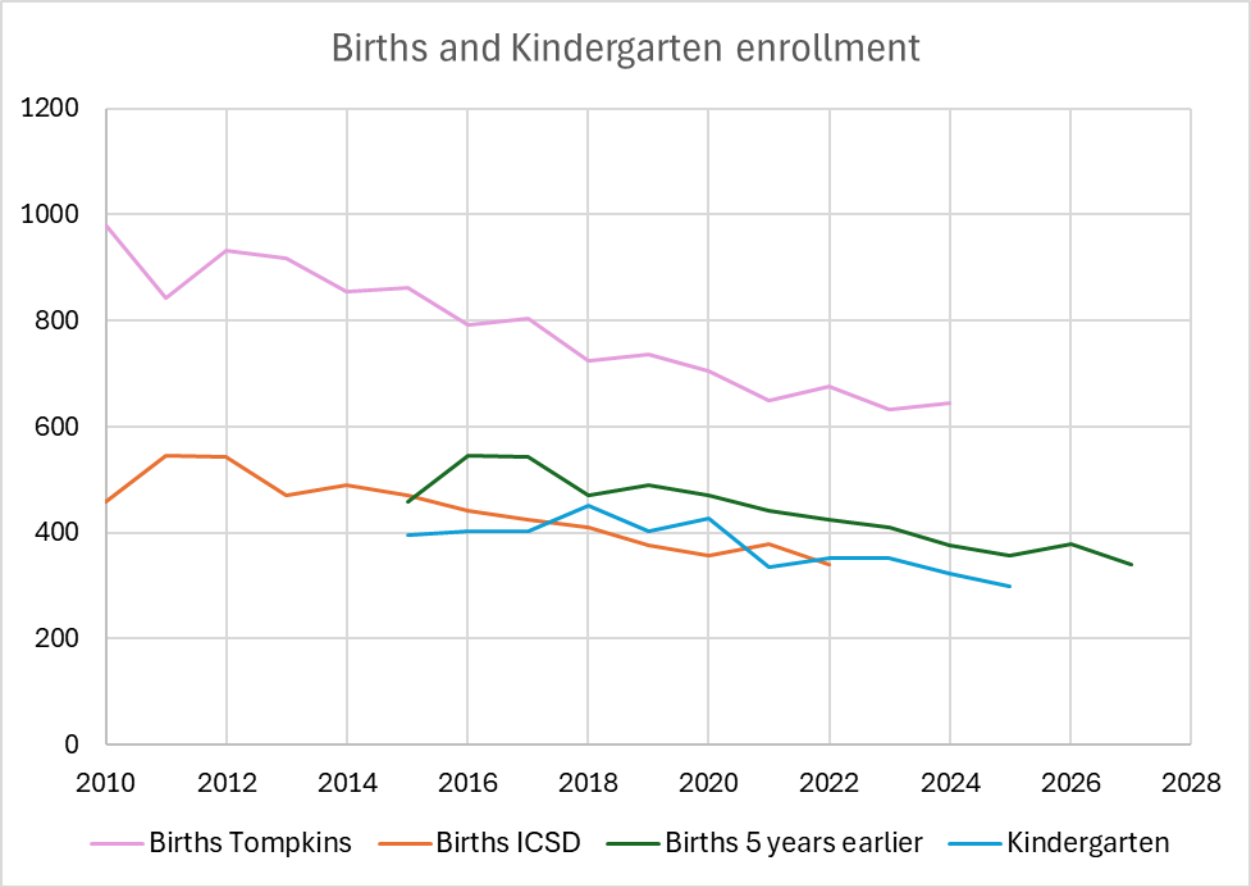
The grade progression ratios for 2021 are in general a little lower as many parents looked for alternatives during Covid and in 2023 there is a slight rebound.

For the simulation, the highest and lowest grade progression ratios per grade were removed from the above table and remaining observations were given equal chance to be used in the simulation run as assumed grade progression ratios.

Enrollment in kindergarten

The projection model begins with an assumed enrollment in Kindergarten.

There is a strong connection between Kindergarten enrollment trends and the number of births in the past.



Births in Tompkins County are from the Census Bureau population estimates, which gets its data from the National Center for Health Statistics. The number of births within ICSD is from the NY State Department of Health.

The number of births has gone down with close to 35% since 2010 but has been relatively flat in recent years. Kindergarten enrollment is around 85% of births in ICSD 5 years prior.

The last year of kindergarten enrollment was 300 students.

TWO SCENARIOS

Scenario 1 (Flat Kindergarten enrollment): The probability distribution used in the projections is a kindergarten enrollment drawn out of a normal distribution centered around 300, with a standard deviation of 5.

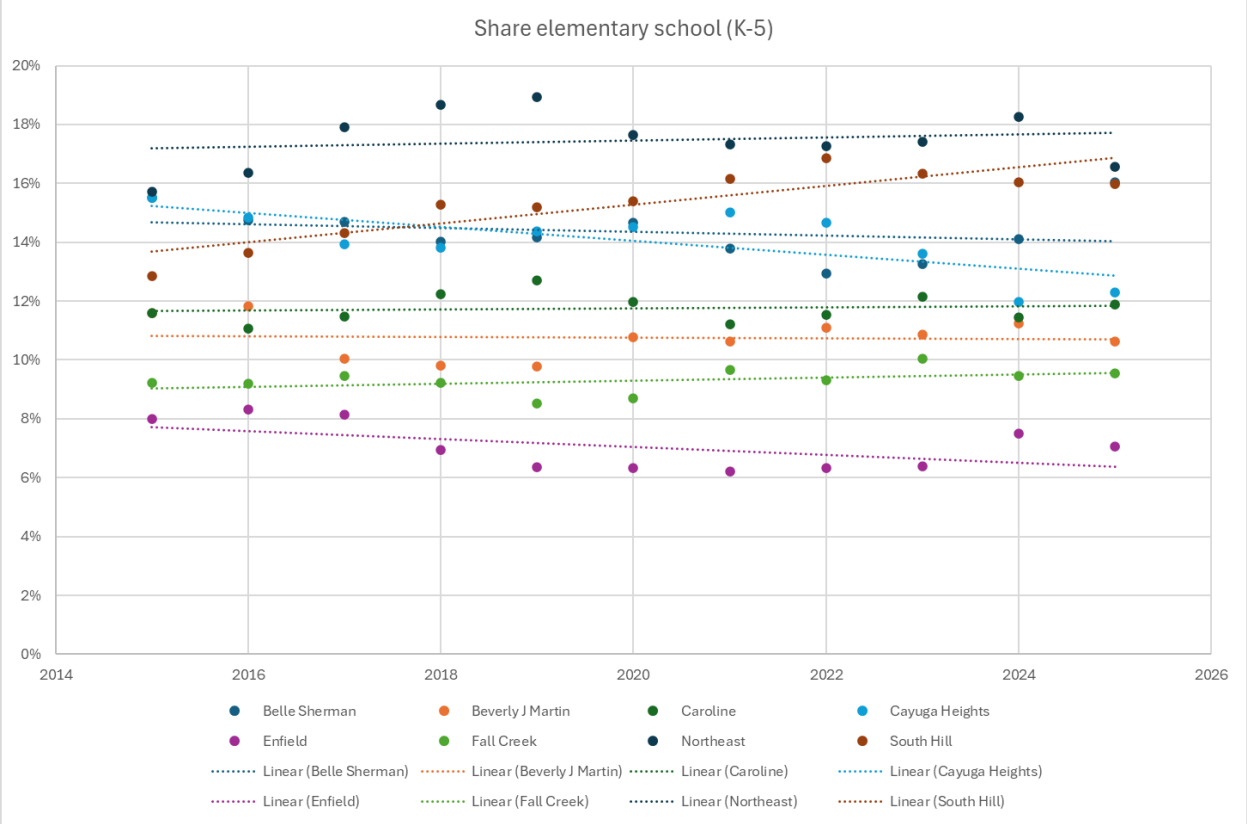
Scenario 2 (Declining Kindergarten enrollment): The probability distribution used in the projections is a kindergarten enrollment drawn out of a normal distribution centered around 300 in 2025 but decreases with 5 every year, with a standard deviation of 5.

With these assumptions for kindergarten enrollment and random choice of grade progression ratios, It is possible to project enrollment for ICSD.

K-6, Kindergarten and Elementary school projections

There is a lot more variation in grade progression ratios at the elementary school level as cohort sizes get smaller and a single student impacts the ratios.

Another option is to analyze shares of the ICSD student population that go to a particular school.



A few things stand out:

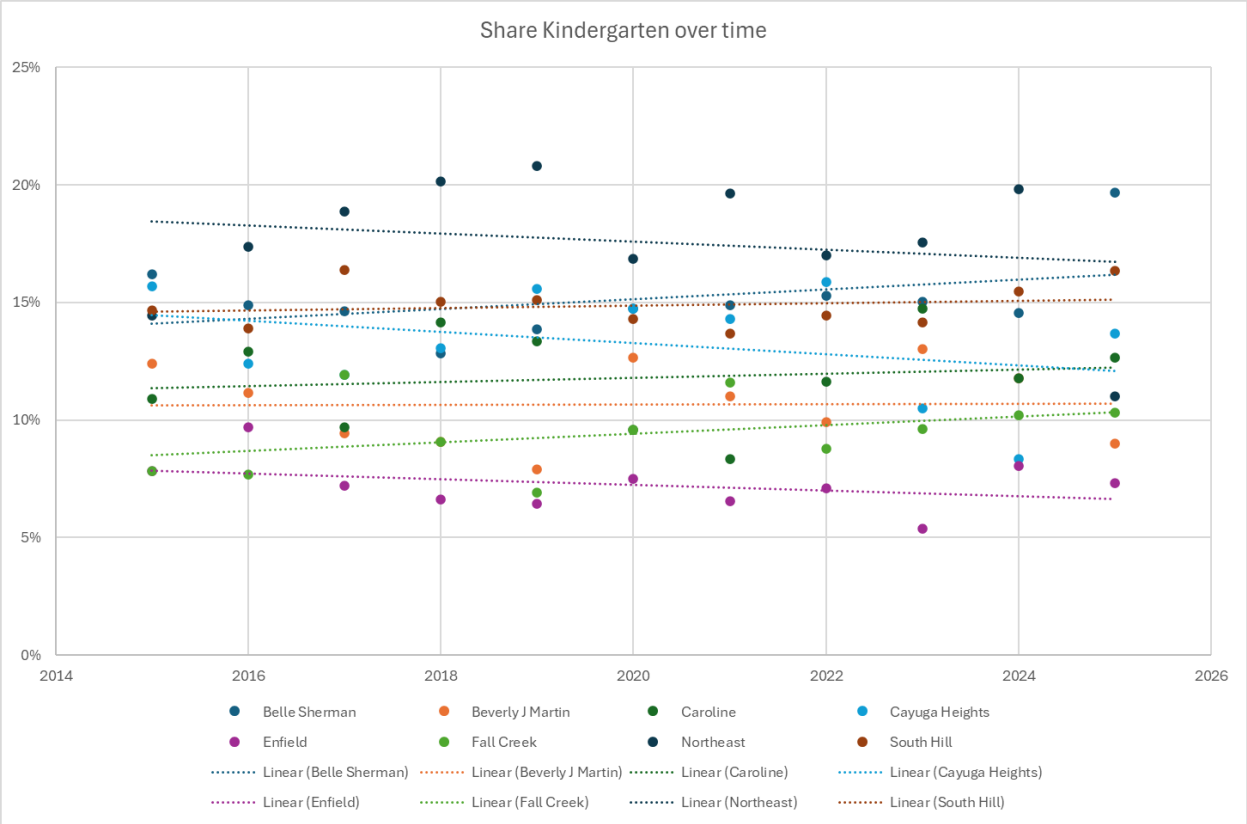
- Most of the elementary school have a pretty constant share of the school district K-5 enrollment
- Enfield and Cayuga Heights shares have slowly been declining, and the share of students enrolled at South Hill has slowly increased

Looking at share by grade and by year, there is a clear cohort pattern visible. If a cohort starts with a relative high or low share, it will keep a relative high or low share as the cohort progresses over time. The color coded shares underneath are an example.

ENTITY_NAME	YEAR	KG	gr_1	gr_2	gr_3	gr_4	gr_5
BEVERLY J MARTIN ELEMENTARY SCHOOL	2015	12.4%	12.7%	8.3%	12.0%	11.7%	12.4%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2016	11.2%	12.7%	14.3%	9.2%	12.3%	11.2%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2017	9.4%	9.3%	10.8%	11.9%	8.1%	10.8%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2018	9.1%	9.3%	9.7%	10.8%	11.2%	8.8%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2019	7.9%	10.0%	9.4%	9.5%	11.0%	10.9%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2020	12.6%	8.9%	11.0%	10.6%	9.5%	11.8%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2021	11.0%	13.5%	8.9%	10.6%	10.0%	9.5%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2022	9.9%	11.4%	13.1%	9.7%	10.5%	11.8%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2023	13.0%	9.0%	12.0%	13.1%	9.0%	9.2%
BEVERLY J MARTIN ELEMENTARY SCHOOL	2024	11.8%	13.4%	10.3%	11.3%	13.3%	7.4%
BEVERLY J MARTIN ELEMENTARY S	2025	9.0%	10.2%	11.9%	8.8%	10.3%	13.4%

Assumption: share of ICSD enrollment is constant for a cohort.

This means that the share of Kindergarten students need to be further examined:



Trends in shares in Kindergarten enrollment are most likely due to the different age compositions within each of the school zones.

Projection Assumption:

An extrapolation of the share of the Kindergarten enrollments is used to set a share for the incoming Kindergarten class. The Standard Deviation of the residuals of the linear fit is used to simulate the uncertainty.

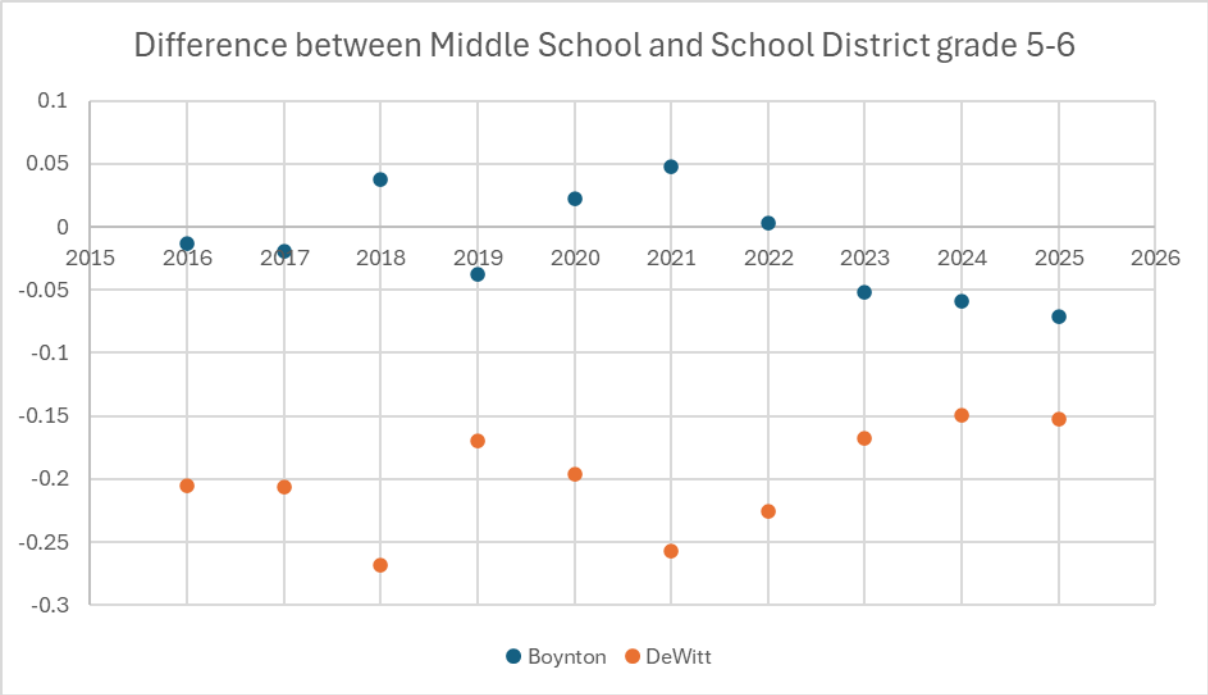
Middle school projections

Grade 6 enrollment for Boynton and DeWitt

Analyses:

1. Calculate Grade 6 enrollment in year t divided by sum of Grade 5 enrollment in year t-1 of the default feeder schools
2. Calculate difference relative to ICSD Grade 5 → 6 progression ratio in the same year

Result:



Projection Assumption:

The differences from ICSD in the 5→6 grade progression ratios for Boynton and DeWitt are random draws from a multivariate normal distribution with:

	Boynton	DeWitt	
Mean	-0.01	-0.20	
Standard Deviation	0.041	0.041	
Correlation			-0.92

The projections add the random draw from this distribution to the appropriate Grade Progression ratio for the School District.

Enrollment in 6th grade at Lehman Alternative

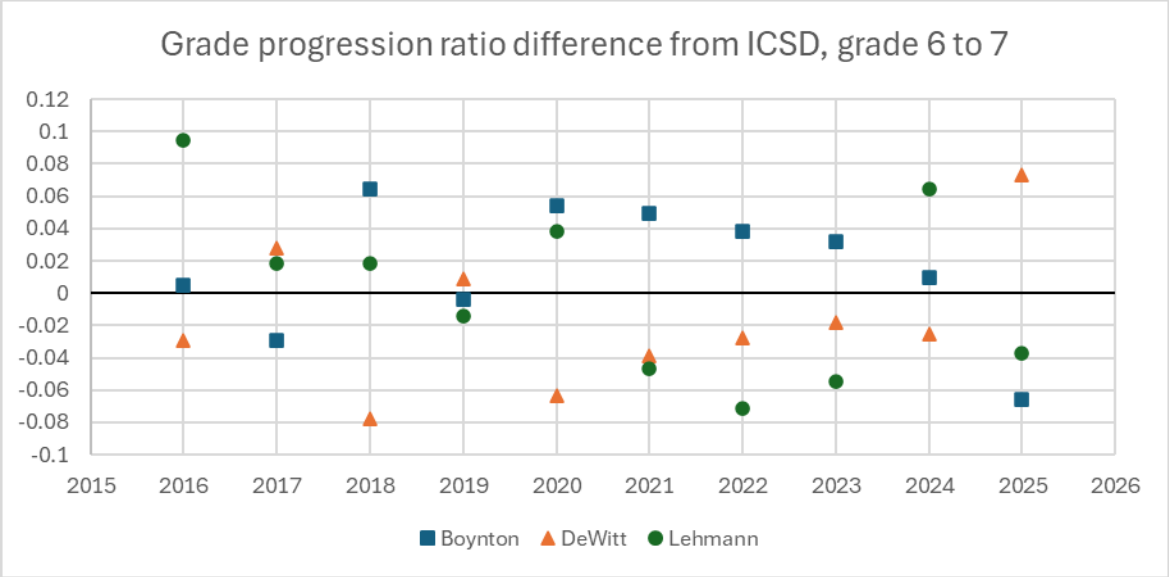
Enrollment in 6th grade at Lehman Alternative is a random draw from past 6th grade enrollment, excluding one of the highest and the lowest enrollments, leaving two past observations of an enrollment of 42, three of 43 and two of 44.

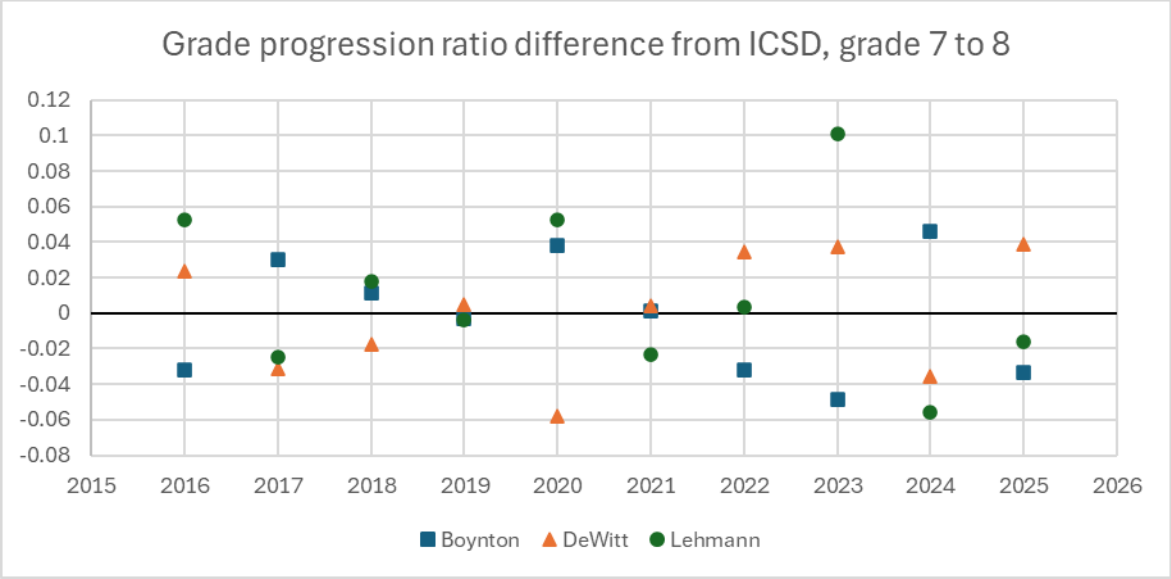
After initial enrollments for the 6'th grades are calculated, Boynton and DeWitt are controlled to the ICSD grade 6 minus Lehmann grade 6.

Grade 7 and 8:

Analyses:

1. Calculate Grade 7 and 8 grade progression ratios
2. Calculate difference with grade progression ratio from comparable ICSD grade progression
3. Calculate means, standard deviations and correlations for the three schools





Projection Assumption:

The differences between the ICSD and the school grade progression ratios for grade 7 and 8 for each of the school are random draws from a multivariate normal distribution with:

For grade progression from grade 6 to 7:

	Boynton	DeWitt	Lehman
Mean	0.015	-0.017	0.001
Standard Deviation	0.041	0.044	0.055

Correlations	Between Boynton and DeWitt	-0.955
	Between Boynton and Lehman	-0.03
	Between DeWitt and Lehman	-0.26

For grade progression from grade 7 to 8:

	Boynton	DeWitt	Lehman
Mean	-0.002	0.0001	0.01
Standard Deviation	0.033	0.034	0.047

Correlations	Between Boynton and DeWitt	-0.964
	Between Boynton and Lehman	-0.51
	Between DeWitt and Lehman	0.27

The projections add the random draw from these distributions to the appropriate Grade Progression ratio for the School District to derive a grade progression for each school. Initial results are then controlled to the School District enrollment.

High school

Projection Assumption:

The differences between the ICSD and the school grade progression ratios for high school grades for each of the schools are random draws from a multivariate normal distribution with:

	Ithaca High School	Lehman	
Grade 8 to 9	**Boynton + DeWitt to High School**		
Mean	-0.0003	0.0032	
Standard Deviation	0.0109	0.0942	
Correlation			-0.9925
Grade 9 to 10			
Mean	0.004	-0.0286	
Standard Deviation	0.0124	0.0933	
Correlation			-0.9828
Grade 10 to 11			
Mean	0	0.0002	
Standard Deviation	0.008	0.0648	
Correlation			-0.996
Grade 11 to 12			
Mean	0.0121	-0.0928	
Standard Deviation	0.0139	0.1099	
Correlation			-0.9965

School District Projection Evaluation

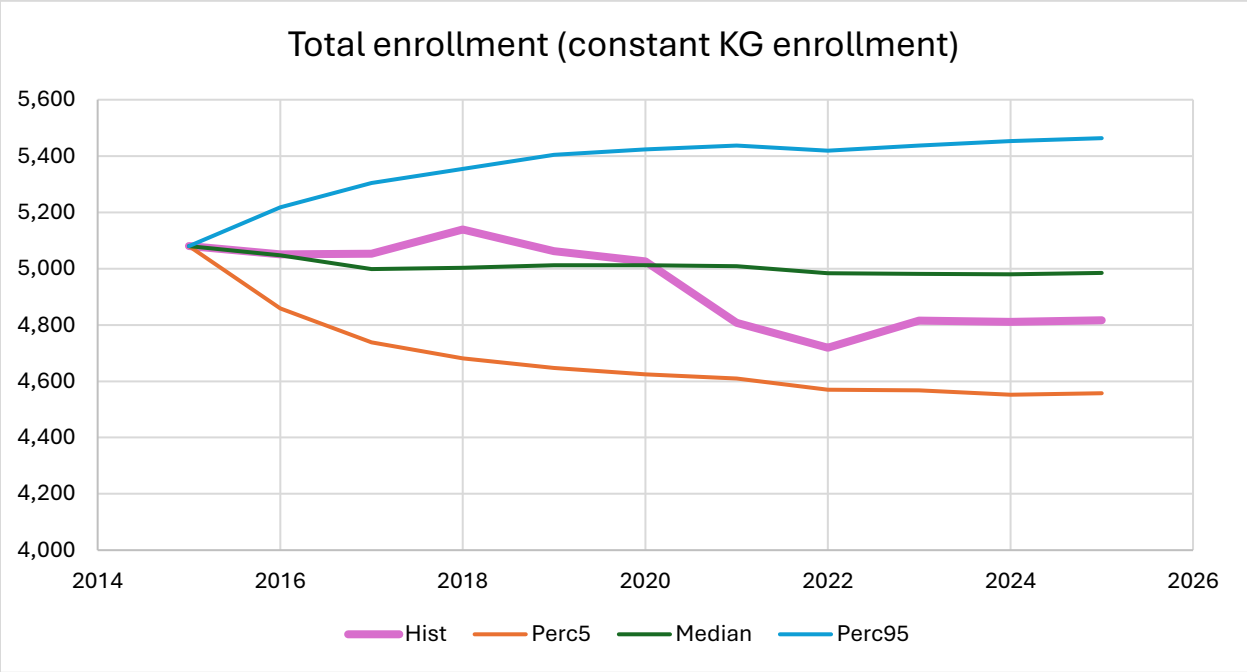
To evaluate the projection methodology, we used historic school district data (2006 through 2015) as input and used to same projection methodology to project 2015 through 2025.

Just like the published 2025-2035 projections, we took 2 scenarios for the Kindergarten enrollment

- A constant Kindergarten enrollment consistent with the 2015 KG enrollment
- A slowly declining KG enrollment (the expected value declining with 5 students per year)

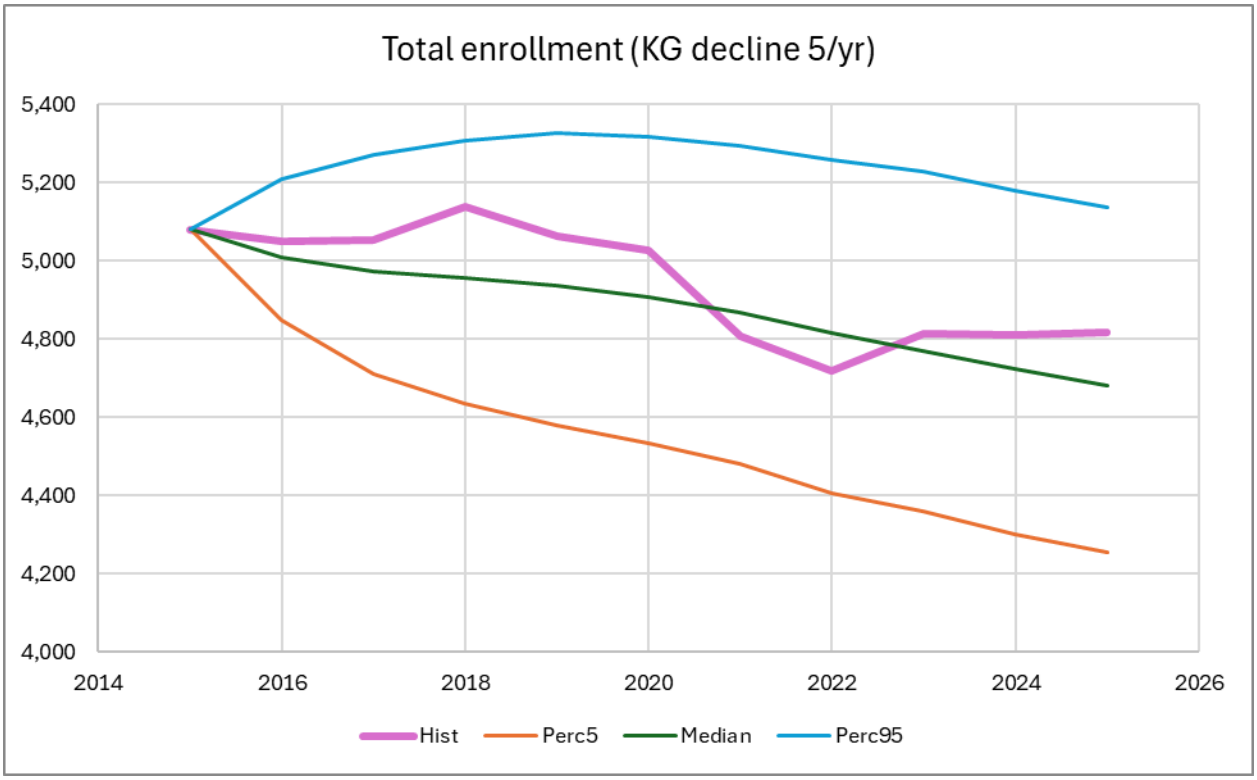
We then compared the results with the actual enrollments from 2015 through 2025.

With a constant KG enrollment and grade progression ratios based on data from 2006-2015 the comparison looks like:



Where the purple line is the observed enrollment and the green the median enrollment resulting from the projections.

In the case of assuming a slowly declining Kindergarten enrollment, the results look like:



These results make us comfortable with using the same methodology for 2025-2035.