

New K-5 School Enrollment Projections Still Appear Optimistic BOE Urgency to Add More K-5 Capacity Makes No Sense Connecticut's Growing Fiscal Crisis Should Restrain All Local Funding Decisions

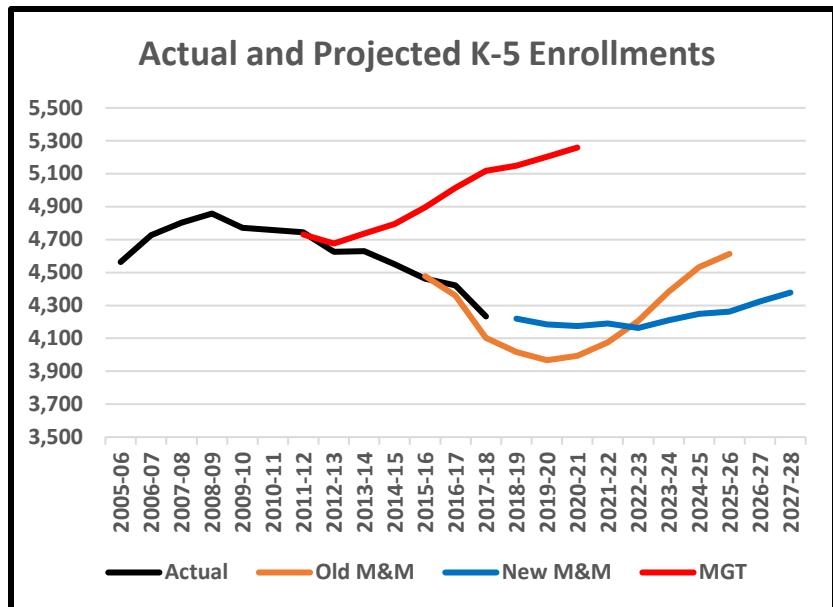
- New K-5 enrollment projections are lower, but probably still too optimistic.
- The BOE continues to understate our K-5 school capacity by calling a “576” school a “504,” and then insisting that we can put only “428-454” kids in it – that’s basically 75% of actual capacity.
- Fairfield has more than enough K-5 capacity for the next several years, and perhaps much longer.
- There is no rush to do anything until we see what actually happens with enrollments.
- Connecticut faces a serious and deepening financial crisis that is likely to have significant adverse effects on our Town, including lower, if any, reimbursements for school construction.

Section One: K-5 ENROLLMENTS

Predicting the future is not easy, and elementary school enrollments are certainly no exception. The outcome depends on many unpredictable influences (like births and the number of families moving in and out), all of which are subject to change without notice.

K-5 enrollments of **4,233** at the beginning of the current year were **down 13%** from **4,858** in 2008-09. The BOE’S consultant, Milone & MacBroom (M&M), now thinks they will decline **another 2%** to **4,163** by **2022-23**, and then rise gradually to **4,378** by **2027-28**, **still 10% below their 2009 level**. These projections are important because we will be making decisions based on them that can cost taxpayers tens of millions of dollars. So, it seems reassuring when M&M says its projections are “supported by demographic, housing and economic data,” and that they are based on a “cohort survival methodology that is accepted by CSDE School Construction Projects (CGS 10-283),” and that they include “persistence ratios [that] account for the various external factors affecting enrollments, including housing characteristics, residential development, economic conditions, student transfers in and out of the system, and student mobility.”

However, these claims seem far less reassuring when one learns that **the same consultant, less than two years ago, using the same methodology, produced projections that were quite different**. As is apparent in the graph on the right, M&M’s latest 2025-26 projection (blue line) is **8% below** (350 fewer students) what they previously thought would happen (orange). Also shown in the graph are the even more optimistic projections (red) of another BOE consultant, MGT, that were based on equally sophisticated methodologies.



In reality, the consultants assemble lots of historical data **and then they guess**. In the case of M&M, they guess: (a) **what births will be** in the future; (b) **what the relationship between births and kindergarten enrollments will be** (the so-called “Birth-to-K ratio”); and finally, (c) **how many additional students will migrate into our schools for grades 1-5** (the so-called “Persistence ratio”). Implicit in M&M’s methodology is a presumption that there are **stable and reliable relationships** between births and kindergarten enrollment, between past and future birth-to-K ratios, and between past and future persistency ratios. In fact, the historical record makes it very clear that **consultants can’t predict births, and that the statistical ratios upon which they rely fluctuate widely for reasons they cannot explain**.

- **Births:** M&M’s latest “best” guess about births is that, **having dropped 17%** from an average of **724** in the 2000-2006 period to **598** on average in the 2007-2009 period, and **having dropped another 14%** to **513** in the 2010-2017 period, Fairfield births will rebound 13% to average **578** in the 2018-2022 period. **M&M offers no rationale for why births have declined or why they should increase.**
- **Birth-to-K Ratio:** M&M’s latest guess is that the “BTK” ratio, after averaging **1.146** (within a wide range of **0.952** to **1.331**)¹ over the past 13 years (FY2006-FY2018), will average **1.245** over the next ten years (FY19-FY28). At 1.245, M&M’s guess is at the 77th percentile of the historical range. **M&M offers no rationale for why the BTK ratio has increased, or why it should remain much higher.**
- **Persistency Ratio:** M&M’s latest guess is that the overall Persistency (In-Migration) Ratio, after averaging **1.043** (within a range of 1.028 to 1.068) over the past 12 years (FY2007-FY2018), will average **1.068** over the next ten years (FY2019-FY2028). At 1.068, M&M’s guess is at the 100th percentile of the historical range. **M&M offers no rationale for why the Persistency ratio has increased, or why it should remain at the high end of its historical range.**²

M&M provides three different scenarios for total school enrollment, which they label as “Maximum, “Best Fit” and “Minimum.” The differences are based primarily in different assumptions about future births, which they claim to have “developed from regression models based on assumed unemployment rate and single-family home sales.”³ They do not provide a breakdown of their three projections into K-5, Middle School and High School, but using their data, we can look at different alternative scenarios. One obvious scenario to consider is: **What happens if births do not increase from their latest 5-year average, and what if the BTK and Persistency ratios revert to their historical means instead of staying at or near their historical peaks? The answer is that K-5 enrollments in 2027-28 would be 16% (713 students) lower (3,665) than M&M is now projecting (4,378), and 25% below 2009’s level (4,858).**

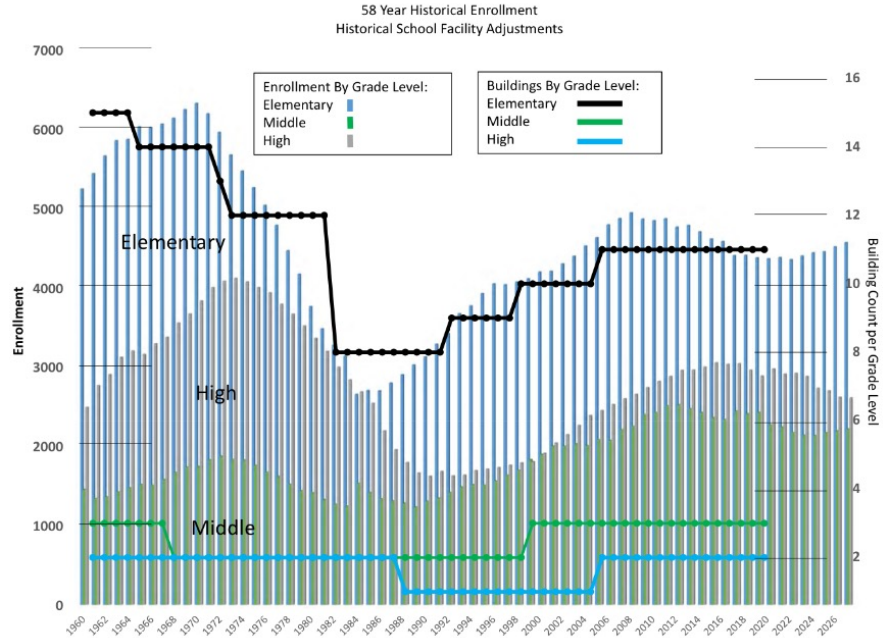
Two things seem very clear: (1) M&M’s projections should be viewed with considerable skepticism; and (2) M&M’s “Best Fit” projections are probably high because they assume substantial and sustained increases in BTK and Persistency ratios. M&M itself concedes that their “methodology works well for stable populations, including communities that are growing or declining at a steady rate,” but they fail to acknowledge that these conditions do not currently apply in Fairfield (or perhaps anywhere else in CT).

¹ Note that this range means that at the low end, K enrollments were 4.8% below births five years earlier, and at the high end, K enrollments were 33.1% higher than births five years earlier. Accordingly, this does not appear to be a useful predictive tool.

² M&M also does not explain why the Persistency Ratio should increase only in the first three grades (K-1, 1-2 and 2-3) and not in the final two grades (3-4 and 4-5).

³ M&M says their assumed increases in births are +23%, +10% and -5% for their maximum, “best-fit” and minimum projections, respectively, although it is not clear how they computed these percentage increases.

Meanwhile, although the M&M projections seem high, they are consistent with and therefore reinforce the fervent beliefs of several past and present BOE members that ***“enrollments have declined in the past, but they always recover.”*** In her “Proposed Budget for 2018-19,” Supt. Jones provides the graph on the right with 58 years of enrollment data, which shows that elementary school enrollments did decline from a 1970 peak over 6,000 to a 1984 trough of less than 3,000, and then partially recovered to almost 5,000 in 2008.



Whether they think the forces that produced this outcome are still relevant, or that there are new forces at work that will produce the same outcome has not been shared by those who assert that “enrollments always recover.”

The Unanswered Questions

What we would really like to know is why births have declined in recent years, and why the number of students who have migrated into our schools seems to have increased relative to the number of births. At this point, we can only suggest some plausible hypotheses.

Births

Assuming the historical data are correct, the number of Fairfield births between 2000 and 2006 averaged **725** (within a range of 638 to 841). Births then **declined 18%** to an average of **598** (in a tight 585-610 range) in the

School Year	TOTAL K-5 ENROLLMENTS					
	Actual	Old M&M	New M&M	M&M Change	Alternate Scenario*	Scenario v. M&M
2005-06	4,564					
2006-07	4,727					
2007-08	4,803					
2008-09	4,858					
2009-10	4,772					
2010-11	4,758					
2011-12	4,744					
2012-13	4,626					
2013-14	4,630					
2014-15	4,550					
2015-16	4,462	4,478				
2016-17	4,421	4,360				
2017-18	4,233	4,103				
2018-19		4,018	4,219	201	4,050	-169
2019-20		3,967	4,185	218	3,971	-214
2020-21		3,993	4,175	182	3,870	-305
2021-22		4,076	4,190	114	3,844	-346
2022-23		4,205	4,163	-42	3,750	-413
2023-24		4,383	4,209	-174	3,713	-496
2024-25		4,532	4,249	-283	3,733	-516
2025-26		4,613	4,263	-350	3,678	-585
2026-27			4,324	na	3,690	-634
2027-28			4,378	na	3,665	-713

* This scenario simply assumes that births for the next five years remain at their last five years, and that the BTK and Persistency ratios revert to their historical instead of increasing substantially as M&M has assumed.

2007-2009 period and **declined another 14%** (a cumulative 29%) to an average of **513** over the next eight years (in another relatively tight 483-567 range). Perhaps the most likely explanation is that the Great Recession, which began in late 2008, played an important role by discouraging childbearing. Perhaps the sustained weakness in the housing market continued the trend to smaller families. In any case, there is no obvious reason (e.g., an expected increase in population) to believe that circumstances have changed and that births will average **578** over the next five years (**13% higher than the last eight years**) as M&M's "best-guess" projections assume they will.

If anything, Connecticut's deepening financial crisis and the new federal tax laws restricting the deductibility of state and local taxes, which will also affect the deductibility of mortgage interest, seem to argue for a continued decline in births. According to one recent article, *"The share of women who have children could drop again if current trends continue. Women are planning to have children at later ages, when they are more likely to have trouble conceiving. And the fertility rate has not rebounded after the recession in the way that many economists expected: The number of babies born per 1,000 women of childbearing age in 2016, the last year for which we have official data, **was a record low.**"*⁴

The BTK Ratio

As is apparent in the table on the right, the number of kids enrolled in kindergarten for the academic years 2006-2009 averaged about 3% (1.032) more than the number of births five years earlier. This Birth-to-Kindergarten ratio then bumped up to about 15% (1.151) for the next six academic years (2010-2015), and then bumped up again to 29% (1.288) in the last three years. A small portion of the recent bump reflects the fact that we began to admit Open Choice students into Kindergarten classes beginning in 2013-14 (5, 7, 2, 6 and 1 students, respectively). Perhaps, once again, the Great Recession is responsible, by forcing many more Fairfield families to choose public schools rather than private schools. Perhaps the latest bump reflects a one-time increase in the number of families with school-age children because many seniors who had been trying to sell their homes were finally able to do so. Perhaps the families moving into what are now heavily discounted (and thus more affordable) higher-end homes are less inclined to send their children to private schools than the prior owners. Perhaps the Millennials are finally moving to suburbs and starting families, albeit smaller families than previous generations. Perhaps the income demographics of Fairfield are changing permanently in the direction of more lower-end families and fewer higher-end families. Perhaps there has been a shift in

Birth-to-Kindergarten Ratios				
Birth Year	Births	School Year	K Enrllmnt	BTK Ratio
2000	841	2005-06	801	0.952
2001	778	2006-07	822	1.057
2002	680	2007-08	736	1.082
2003	757	2008-09	786	1.038
2004	638	2009-10	722	1.132
2005	698	2010-11	770	1.103
2006	681	2011-12	800	1.175
2007	610	2012-13	683	1.120
2008	598	2013-14	722	1.207
2009	585	2014-15	685	1.171
2010	515	2015-16	645	1.252
2011	505	2016-17	646	1.279
2012	474	2017-18	631	1.331

⁴ <https://mobile.nytimes.com/2018/01/18/upshot/the-us-fertility-rate-is-down-yet-more-women-are-mothers.html?referer=https://query.nytimes.com/search/sitesearch/?action=click&contentCollection=TopBar&WT.nav=searchWidget&module=SearchSubmit&pgtype=Homepage>

the girl-boy mix of births in favor of more girls, which would temporarily increase the BTK ratio because boys are often held back a year.

The Persistency Ratio

Meanwhile, the Persistency (or “In-Migration”) Ratio, which measures how many more students are enrolled in our elementary schools than were enrolled in Kindergarten for the previous five years, was quite stable for ten years (2007-2016) at around 4% (1.038). However, in the last two years it too has bumped up to almost 7% (1.066). Once again, a small portion of the recent bump can be explained by changes in Open Choice admissions. For example, in 2016-17, we admitted 15 O.C. students into grade one, for a total of 17, including the two students admitted to Kindergarten the previous year. This alone kicked the K-1 persistency ratio that year from 1.023 to 1.047, but this does not

PERSISTENCY (IN-MIGRATION) RATIO DATA			
School Year	Prev. 5 Yrs. K Enroll.	Grades 1-5 Enroll.	Persistency Ratio
2006-07	3786	3905	1.031
2007-08	3872	4067	1.050
2008-09	3912	4072	1.041
2009-10	3907	4050	1.037
2010-11	3867	3988	1.031
2011-12	3836	3944	1.028
2012-13	3814	3943	1.034
2013-14	3761	3908	1.039
2014-15	3697	3865	1.045
2015-16	3660	3817	1.043
2016-17	3535	3775	1.068
2017-18	3381	3602	1.065

explain why the K-1 ratio stayed at 1.043 the following year when there was a net reduction of one O.C. student (from 6 to 5) in grade 1 versus Kindergarten. As noted above on the subject of births, Connecticut’s deepening financial crisis, weak economic growth and the new federal tax laws restricting the deductibility of state and local taxes and of mortgage interest, would all seem to argue for reduced in-migration, but we are not aware of any valid means of predicting what will actually happen.

Whatever the outcome is for K-5 enrollments, the good news for taxpayers (as we will discuss in Section Two), is that **we have more than enough capacity in our K-5 schools to allow us to wait and see what actually happens to enrollments before we have to make any decisions about whether we should expand or shrink our K-5 school system.**

Section Two: K-5 SCHOOL CAPACITY

You might think that computing capacity utilization is easy:

1. Count the number of classrooms;
2. Multiply the number of classrooms by the number of students each of them will hold to determine how many seats we have; and
3. Divide the number of students we have by the number of seats available.

Unfortunately, it seems nothing is easy when it comes to understanding our \$200 million school system.

Counting Classrooms – Educational Specifications

“Educational Specifications” (“ed-specs”) describe what rooms, room sizes, room uses and design characteristics are deemed to be necessary by the BOE to achieve its educational goals and objectives. Readers will probably not be surprised to learn that the ed-specs have steadily increased the amount of

space that the BOE says is required in our K-5 schools. In addition to “classrooms,” the BOE now specifies a need for **Resource** (Special Education) rooms, **Science** rooms, **Art** rooms, **Music** rooms, **Music Instrumental** rooms, **Gifted** rooms, **Occupational and Physical Therapy** rooms, **Conference** rooms, **Office** rooms, and **Small Groups** rooms, **Media Center** rooms, **Computer Lab** rooms, **Administrative** rooms, and **Nurses** rooms, in various sizes and combinations.

The latest detailed “ed specs” from the BOE were those created for the planned \$18-\$19 million renovation and expansion of Holland Hill School, a summary of which is provided in the slide on the right from a presentation by M&M dated October 24, 2017.⁵

We will not review any of these “ed specs” in detail, but they are important to understanding why, as you

can see in the table below, there are more classrooms in each of our elementary schools than are included in the number of classrooms that are “useable” for instruction.

Instructional Spaces
 4 Kindergarten classrooms
 20 Grade 1 to 5 classrooms

Support Services¹
 1 Instructional Improvement Teacher
 1 School Psychologist
 1 Social Worker
 1 Teacher of Gifted Room
 1 Math/Science Room
 2 Language Art Specialist Rooms
 1 Spanish Office
 Nurses Facility
 Large Conference Room

Educational Spaces
 Art Room with storage
 Music Room with small group classroom
 Media center with integrated comp lab

Special Education¹
 4 Resource Teaching Rooms
 2 Speech & Language Rooms
 1 OT/PT Room

Other¹
 2 Staff workrooms

Rooms highlighted in blue were assumed to occupy full-size classrooms

¹ Ed Spec does not specify the recommended size of special education, support services, or other spaces 5/2017

CAPACITY UTILIZATION IN K-5 SCHOOLS													
	Classrooms			Instructional Rooms		Total Seats (iii)			Current Pupils (2/1/18)	Empty Seats @ 95%	Capacity Utilization		
	Total	CLC	Pre-K	M&M	Actual	M&M	Actual	@ 95%			M&M	Actual	@ 95%
Pupils/Room						21	24						
Burr	28	1	1	22	23	462	552	524	380	144	82%	69%	72%
Dwight	21	1	0	17	17	357	408	388	314	74	88%	77%	81%
Holland (i)	28	0	0	24	24	504	576	547	378	169	75%	66%	69%
Jennings	23	1	0	17	17	357	408	388	290	98	81%	71%	75%
McKinley	30	0	0	24	24	504	576	547	438	109	87%	76%	80%
Mill Hill (ii)	20	0	0	13	18	273	432	410	350	60	128%	81%	85%
N. Stratfield	28	0	0	24	24	504	576	547	382	165	76%	66%	70%
Osborn	30	2	0	22	22	462	528	502	429	73	93%	81%	86%
Riverfield	27	0	0	24	24	504	576	547	413	134	82%	72%	75%
Sherman	24	0	0	22	22	462	528	502	470	32	102%	89%	94%
Stratfield	27	0	2	22	24	462	576	547	408	139	88%	71%	75%
	286	5	3	231	239	4851	5736	5449	4252	1197	88%	74%	78%

Source: M&M at 10/24/17. (i) After current renovations and expansion. (ii) M&M numbers exclude five portables. (iii) The M&M source data include CLC seats at 8/room and exclude Pre-K seats, which makes no sense. We have excluded both CLC and Pre-K (a non-mandated program) from seats available in Instructional classrooms from all columns.

⁵ http://cdn.fairfieldschools.org/boe/meetings/ad-hoc-op-effectiveness/BOE_Elem_Scenario_Planning-Revised.pdf

Counting Classrooms -- Portables

The next step in determining capacity is to decide whether to include portable classrooms in the totals. In its most recent analysis, the BOE arbitrarily chose to **exclude** the five portables that are currently in use at Mill Hill School. We have included them because they exist and are currently in use or available for use, and because the BOE itself has always included them in the past, including last year's budget book (page 163), which shows Mill Hill's seat capacity at 378 (including the five portables). This year's book (page 167) shows capacity at only 273 ($378 - 273 = 105 / 21 = 5$ portables).

Counting Classrooms – Pre-Kindergarten Space

The BOE also **excludes** three classrooms (one at Burr and two at Stratfield), two of which are currently used for a **non-mandated** Pre-Kindergarten (PK) program (for only 72 students) that represents an ineffectual response to the longstanding "racial imbalance" problem at McKinley School. These PK classrooms will not be necessary when the racial imbalance "problem" is solved, as it inevitably will be, by redistricting, and thus we have **included** them in our total.⁶ The second PK classroom at Stratfield is used for an Early Childhood Center program that could be moved elsewhere. We have not included in our instructional classroom count any other rooms that are excluded by the BOE, such as the five classrooms that are dedicated to the districtwide CLC (Complex Learner Cohort) program.

Seats Per Classroom – BOE Guidelines

Perhaps the most important influence on any analysis of capacity utilization is how many pupils we should assume can be accommodated in each classroom. The maximum number of students is determined **by the BOE's own guidelines** on class sizes. These guidelines are found on page 134 the Superintendent's Budget Proposal.⁷ The guidelines are: **23 for grades K-2** and **25 for grades 3-5** in all schools except McKinley, where they are in both cases, two students less. The number of students can exceed these guidelines, but the guidelines go on to specify that a class "*not exceeding 25 shall be desirable*" and that when a K-2 class **exceeds 30** or a 3-6 class **exceeds 35**, "*the class may be divided or a teaching aide and/or intern provided.*" **In the table above, we have assumed that 100% capacity is 23 students in a K-2 class and 25 students in a 3-5 class, representing an average of 24 students per K-5 classroom, though if it were necessary to do so, the guidelines would allow for more.**

Seats Per Classroom – Loading Factor

As the consulting firm, MGT, explains in its December 2010 report: "*Elementary schools typically group students by grade level where each class contains students of one grade. Realistically, students do not come in even groups for each grade. Consequently, it is unrealistic to expect each classroom to be filled with the maximum number of students allowed in the loading factor, e.g. 25 students in every 3rd grade room. Therefore, to arrive at a practical capacity calculation, a 95 percent scheduling/grouping factor is used to arrive at the functional capacity.*"⁸

⁶ Although the State BOE has discussed mandating universal PK in Connecticut schools, doing so is extremely unlikely in the midst of a deepening fiscal crisis for the State and many of its municipalities. If PK were mandated, all towns would be given several years to figure out how to comply.

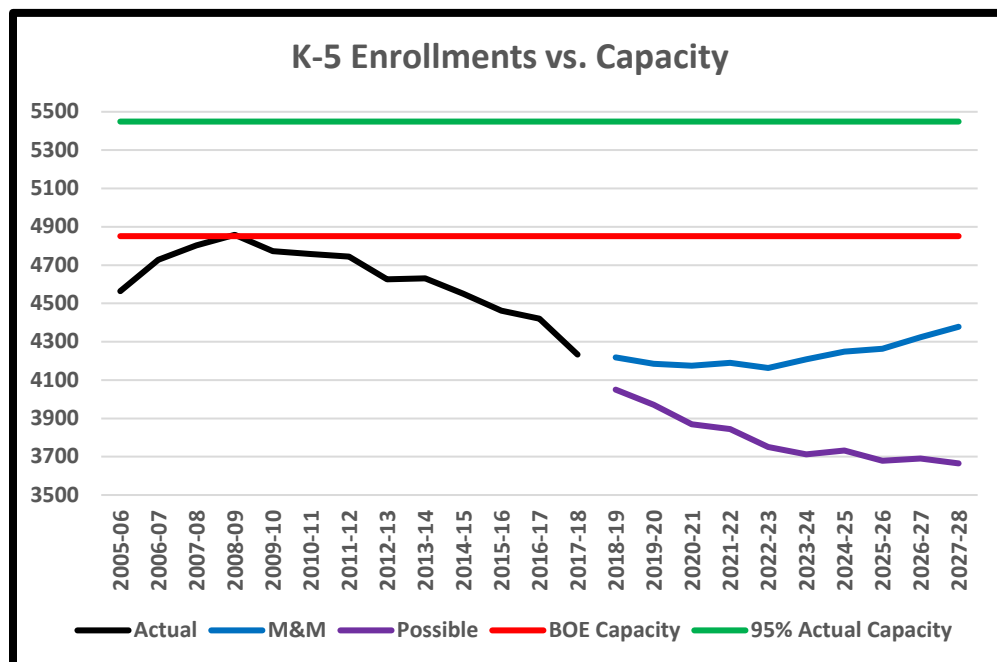
⁷ http://cdn.fairfieldschools.org/boe/budget/2018-19/Superintendents_Budget_2018-2019_01-16-2018.pdf

⁸ <http://archive.fairfieldschools.org/downloads/enrollment/4469%20-%20Fairfield%20Public%20Schools%20-%20Enrollment%20Projections%20-%20Elementary%20Capacity%20Study.pdf>

In short, schools can't operate at 100% of actual capacity, so some "cushion" must be allowed to accommodate differences from year-to-year in the number of students in each grade. **MGT says a 5% cushion is adequate. In contrast, Fairfield's BOE uses a 12.5% cushion, by assuming that each classroom can accommodate only 21 students, so if there are 24 instructional classrooms, they call the school a "504" (21 x 24 = 504), when it is really a "576" (24 x 24 = 576). Then, the BOE majority asserts that we must apply another 12.5% cushion on top of that by operating at only 85%-90% of their understated capacity, which means they want only 18 students on average in classrooms that can actually accommodate 24 students – which is 75% of actual capacity.**

Section Three: Conclusions

1. With its excessive **12.5% cushion**, by ignoring the five portables at Mill Hill and by assuming that we will always need three classrooms for PK, the BOE says we have only **4,851** seats available for K-5 instruction; Fairfield Taxpayer believes that, with a MGT-recommended cushion of 5%, we have at least **12% more seats (5,449)**.
2. With **4,252** K-5 students at present, the BOE says our current capacity utilization is **88%**; Fairfield Taxpayer believes we are actually ten points lower at **78%**.
3. If the M&M projection (**4,163**) for **2022-23** is correct, the BOE says our capacity utilization in five years will decline to **86%**; Fairfield Taxpayer believes the actual number would be **76%**.
4. If the M&M projection (**4,378**) for **2027-28** is correct, the BOE says our capacity utilization will rise to **90%**; Fairfield Taxpayer believes the actual number would be **80%**.
5. If Fairfield Taxpayer's Alternative Scenario for enrollments proves correct, we will have only **3,665** students in 2027-28, and a capacity utilization of only **76%** based on BOE capacity, and only **67%** based on 95% of actual capacity, ***in which case we are likely to close one or more schools.***
6. We have more than enough capacity under any reasonable scenario, and more than enough time, to wait and see what actually happens to K-5 enrollments before we make any decisions about renovating and/or expanding Mill Hill School at a cost that could exceed \$25 million.





Fairfield Taxpayer

BIRTH, BIRTH-TO-K RATIOS, AND KINDERGARTEN ENROLLMENT DATA														PERSISTENCY (IN-MIGRATION) RATIO DATA									
Birth Year	Births				School Year	Birth-to-Kindergarten Ratios				K Enrollments				Prev. 5 Yrs K Enrollment			In-Migration Ratio			1-5 Enrollments			
	SDPH* Actual	Old M&M	New M&M	M&M Change		Actual	Old M&M	New M&M	M&M Change	1-Oct Actual	Old M&M	New M&M	M&M Change	Actual	Old M&M	New M&M	Actual	Old M&M	New M&M	1-Oct Actual	Old M&M	New M&M	M&M Change
2000	841				2005-06	0.952				801													3,763
2001	778				2006-07	1.057				822				3,786			1.031						3,905
2002	680				2007-08	1.082				736				3,872			1.050						4,067
2003	757				2008-09	1.038				786				3,912			1.041						4,072
2004	638				2009-10	1.132				722				3,907			1.037						4,050
2005	698				2010-11	1.103				770	770			3,867			1.031						3,988
2006	681				2011-12	1.175				800	800			3,836			1.028						3,944
2007	610				2012-13	1.120				683	683	683		3,814			1.034						3,943
2008	598				2013-14	1.207				722	722	722		3,761			1.039						3,908
2009	585				2014-15	1.171				685	685	685		3,697			1.045						3,865
2010	515				2015-16	1.252	1.260			645	649	645		3,660	3,660		1.043	1.046					3,817 3,829
2011	505				2016-17	1.279	1.214			646	613	646		3,535	3,539		1.068	1.059					3,775 3,747
2012	474				2017-18	1.331	1.213			631	575	631		3,381	3,352 3,381		1.065	1.053					3,602 3,528
2013	504	503	504	0	2018-19		1.215	1.300	7.0%		611	655	44		3,244	3,329		1.050	1.071				3,407 3,564 157
2014	567	565	567	0	2019-20		1.214	1.219	0.4%		686	691	5		3,133	3,262		1.047	1.071				3,281 3,494 213
2015	511	580	511	-69	2020-21		1.214	1.288	6.1%		704	658	-46		3,134	3,268		1.049	1.076				3,289 3,517 228
2016	542	601	542	-59	2021-22		1.215	1.247	2.7%		730	676	-54		3,189	3,281		1.049	1.071				3,346 3,514 168
2017	483	607	483	-124	2022-23		1.214	1.300	7.1%		737	628	-109		3,306	3,311		1.049	1.068				3,468 3,535 67
2018		614	560	-54	2023-24		1.213	1.220	0.5%		745	683	-62		3,468	3,308		1.049	1.066				3,638 3,526 -112
2019		621	569	-52	2024-25		1.214	1.220	0.5%		754	694	-60		3,602	3,336		1.049	1.066				3,778 3,555 -223
2020		628	578	-50	2025-26		1.213	1.220	0.5%		762	705	-57		3,670	3,339		1.049	1.066				3,851 3,558 -293
2021			587	na	2026-27			1.220				716	na		3,728	3,386			1.066				3,608 na
2022			598	na	2027-28			1.219				729	na			3,426			1.065				3,649 na
Avg.	521.4#	614.2#	578.4#			1.146	1.218	1.245									1.043	1.050	1.068				

* State Dept. of Public Health Old M&M data are as of 2/11/16. New M&M data are as of 11/28/17.

Latest 5-year averages.

ALTERNATE SCENARIO WITH NO CHANGE IN BIRTHS AND WITH BTK AND PERSISTENCY RATIOS AT THEIR HISTORICAL AVERAGES

Birth Year	Births		School Year	BTK Ratios		K Enrollments		Last 5 Yrs. K Enrollment		Persistency Ratio		1-5 Enrollments		K-5 Enrollments	
	SDPH* Actual	Alternate Scenario		Actual	Alternate Scenario	Actual	Alternate Scenario	Actual	Alternate Scenario	Actual	Alternate Scenario	Actual	Alternate Scenario	Actual	Alternate Scenario
2000	841		2005-06	0.952		801						3763		4564	
2001	778		2006-07	1.057		822		3786		1.031		3905		4727	
2002	680		2007-08	1.082		736		3872		1.050		4067		4803	
2003	757		2008-09	1.038		786		3912		1.041		4072		4858	
2004	638		2009-10	1.132		722		3907		1.037		4050		4772	
2005	698		2010-11	1.103		770		3867		1.031		3988		4758	
2006	681		2011-12	1.175		800		3836		1.028		3944		4744	
2007	610		2012-13	1.120		683	683	3814		1.034		3943		4626	
2008	598		2013-14	1.207		722	722	3761		1.039		3908		4630	
2009	585		2014-15	1.171		685	685	3697		1.045		3865		4550	
2010	515		2015-16	1.252		645	645	3660		1.043		3817		4462	
2011	505		2016-17	1.279		646	646	3535		1.068		3775		4421	
2012	474		2017-18	1.331		631	631	3381	3381	1.065		3602		4233	
2013	504	504	2018-19		1.146		578		3329		1.043		3472		4050
2014	567	567	2019-20		1.146		650		3185		1.043		3322		3971
2015	511	511	2020-21		1.146		586		3149		1.043		3285		3870
2016	542	542	2021-22		1.146		621		3090		1.043		3223		3844
2017	483	483	2022-23		1.146		554		3065		1.043		3197		3750
2018		521	2023-24		1.146		597		2988		1.043		3116		3713
2019		521	2024-25		1.146		597		3007		1.043		3136		3733
2020		521	2025-26		1.146		597		2954		1.043		3081		3678
2021		521	2026-27		1.146		597		2966		1.043		3093		3690
2022		521	2027-28		1.146		597		2942		1.043		3068		3665
Avg.	521.4#	521#		1.146	1.146					1.043	1.043				

* State Dept. of Public Health

Latest 5-year averages.



Fairfield Taxpayer

School Year	PERSISTENCY RATIOS BY GRADE (Class Size Change One Year to Next)				
	K-1	1-2	2-3	3-4	4-5
2002-03	1.037	1.013	1.006	1.003	1.000
2003-04	1.039	1.011	0.997	0.983	0.976
2004-05	1.001	1.010	1.001	0.973	1.015
2005-06	1.058	0.990	0.982	0.995	0.990
2006-07	1.006	0.984	1.028	1.021	1.001
2007-08	1.033	1.004	1.037	1.041	1.023
2008-09	1.020	0.993	1.009	0.995	1.007
2009-10	1.017	1.003	1.012	1.012	1.002
2010-11	1.026	1.013	1.009	0.994	1.005
2011-12	1.021	0.992	1.003	1.004	1.004
2012-13	1.051	0.986	1.010	1.012	1.009
2013-14	1.029	1.020	1.005	1.009	1.005
2014-15	1.039	1.011	1.014	1.006	1.009
2015-16	1.010	1.011	1.027	1.003	0.989
2016-17	1.047	1.023	1.020	1.011	1.021
2017-18	1.043	1.031	1.020	0.997	1.008
2018-19E	1.048	1.022	1.024	1.001	1.014
2019-20E	1.034	1.018	1.025	1.001	1.006
2020-21E	1.033	1.018	1.024	1.001	1.006
2021-22E	1.033	1.018	1.025	1.001	1.006
2022-23E	1.034	1.018	1.023	1.001	1.004
2023-24E	1.033	1.019	1.025	1.001	1.006
2024-25E	1.034	1.018	1.024	1.001	1.005
2025-26E	1.035	1.018	1.024	1.001	1.006
2026-27E	1.034	1.018	1.024	1.001	1.005
2027-28E	1.034	1.018	1.025	1.001	1.004
Averages					
2003-'16	1.028	1.003	1.010	1.004	1.003
2017-'18	1.045	1.027	1.020	1.004	1.014
2019-'28E	1.035	1.019	1.024	1.001	1.006
Assumed					
Increase	2.8% to 3.5%	0.3% to 1.9%	1.0% to 2.4%	0.4% to 0.1%	0.3% to 0.6%

Source: M&M as of 11/29/2017, with ratios for AYs 17, 18 and 19 updated for actual enrollments.

February 7, 2018