Enrollment Projection Update

Ad Hoc Subcommittee of the Advisory Committee

November 27, 2018



Overview



- 1. Addressing inconsistencies in 2017-2018 Enrollment Report
- 2. The 2018 Enrollment Report Preliminary Projections
- 3. The ongoing impact of historic enrollment growth on Brookline's Public Schools





PSB Annual Enrollment Projection Report

- What the Enrollment Projection Report is
 - First published in 2016
 - A snapshot of current enrollment and birth data used to project future enrollment
 - Report created once per year after October 1 Enrollment is certified with the state and annual births are shared by Town Clerk's office
 - Purpose is for it to be used as a planning tool.
 - ❖ It is not meant to be a definitive prediction of actual enrollment
 - Methodology continues to be refined
 - "The report and its content will continue to be updated as more student based information and data becomes available."



PSB Annual Enrollment Projection Report BRC

PUBLIC SCHOOLS of BROOKLINE

Methodology - a combination of three factors

- 1. Annual births
 - Future births based on three-year average of actual births
- 2. Progression Rates --
 - Calculated for each grade
 - Birth to K progression rate recalculated each year using the new K class.
 - Birth to Kindergarten Five-Year Average Most recent five year average used to create the future K projections each year
 - Specific grade level progression rates used to calculate enrollment at each grade
- 3. Enrollment from Known Housing Developments that have been filed with Planning Department. Each year PSB uses the list it gets from Planning Department





Concerns Raised by Nobrega and Doggett

Two things are happening in this critique

- 1. Recalculating last year's report based on new information and then calling into question last year's report
 - We will address this by sharing the new enrollment projections
- 2. Three questions raised about the methodology and the calculations in the 2017-18 report
 - a. Adding 40 students in METCO and Materials Fee Program into the methodology throughout the ten-year forecast
 - b. Outdated birth data and the discrepancy between two different tables in the report
 - c. Housing development assumptions that generate projected student increases appear to overstate student population projections





Question #1

Adding 40 students in METCO and Materials Fee Program into the methodology throughout the ten-year forecast

- ❖ In checking the progression rates used, we confirmed that the 40 students were included in the methodology incorrectly.
- ❖ We recalculated the projections without the METCO and Material Fee students and compared them with the published report

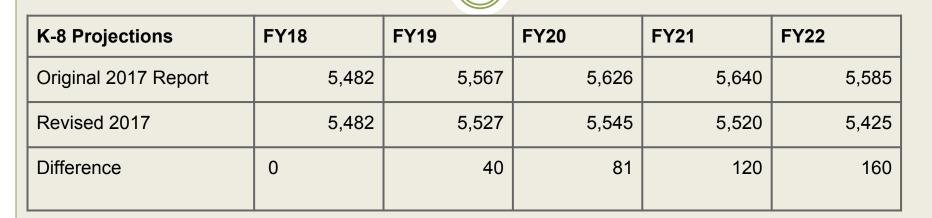
Response:

- **140 Students** -- Revised 2017 Enrollment Projections result in a total of 140 student difference in FY 2022 across all elementary schools
- **18 Students per School** 140 students equals 18 students per elementary schools or 2 students per grade per school



Comparison: 2017 Original and 2017 Revised Projections



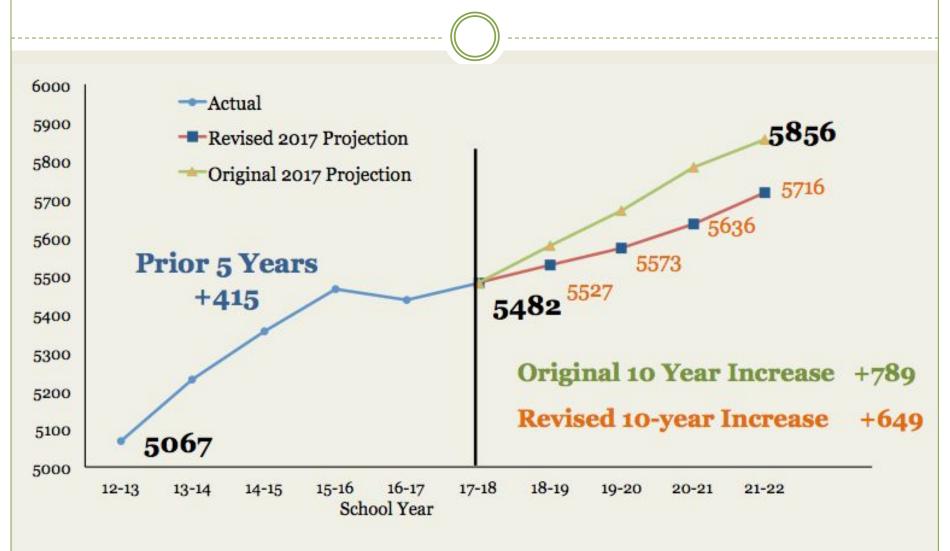


K-8 with New Housing	FY18	FY19	FY20	FY21	FY22
Original 2017 Report	5,482	5,567	5,654	5,737	5,856
Revised 2017	5,482	5,527	5,573	5,636	5,716
Difference		40	81	101	140

NOTE: 2017 Revised Projections use the same progression rate and same average birth rate originally used in the 2017 report. 40 METCO and Materials Fee students originally included have been taken out.

Revised 2017 Elementary Enrollment Projection with New Housing

Actual Enrollment through October 1 2017, Projected: through FY22





Question #2 raised by Nobrega and Doggett

 Outdated birth data and the discrepancy between two different tables in the report

Response

- All calculations in 2017-2018 report were based on accurate birth data;
 the data on page 35 of the 2017-18 report
- The data on page 26 was NOT used to calculate the progression rate or the average birth rate use in the report.



Student Generation based on Known, and Planned Housing Developments



Student Generation Rates

- 1. Have used the same student generation rate in each report
- 2. Based on looking at actual residences, # of bedrooms in each residence and number of PSB students enrolled who live in these residences

			1-Bed			2-Bed			3-Bed			4-Bed			5-Bed	
	Total #		# of			# of	LEGISTON		# of			# of			# of	
Location	Units	Total	Students	SGR	Total	Students	SGR	Total	Students	SGR	Total	Students	SGR	Total	Students	SGR
BHA Properties	460	82	0		212	85		126	141		33	53		7	6	
Dexter Park	408	111	7		226	22		71	7		586			000		
Dummer	32	6	0		22	9		4	5							
Hancock Village	530	243	30		266	242		21	36							
	1430	442	37	8.37%	726	358	49.31%	222	189	85.14%	33	53	160.61%	7	6	85.71%



Student Generation from Known Housing Developments



- 1. Claim: New and updated information on housing developments from the Planning Department makes the 2017-18 projections out of date
 - It is inappropriate for new housing information to be applied retroactively to last year's data
 - ❖ We have included the new housing data in the 2018-19 enrollment projections
- 2. Nobrega and Doggett use a different student generation rate on high rise units with elevators that they got from the Planning Department and recalculate student generation
 - The school department does not have this student generation rate.
 - We asked the Planning Department about this rate and they are not aware of it.
- 3. The methodology used anticipated additional births based on new housing developments beyond FY24. We are eliminating this in 2018-19 report

2018-2019 Enrollment Projections



Initial Projections 2018-19 Enrollment Report



Initial 2018-19 Enrollment Report includes:

- New birth data from Town Clerk (September 1, 2017 August 31, 2018)
- Updated Known Housing Developments from Planning Department
- Updated calculations on 3 year average birth rate (occurs annually)
- Updated calculations on 5 year average progression rate (occurs annually)
- The same student generation rate used in prior years



The Magnitude of Brookline's Enrollment Growth



K-8 Enrollment: FY2006 - FY2029

FY2006 through FY2019: Actual enrollment

• FY2020 - FY2024: Projections based on known births

 FY2025 - FY2029: Births not known. Projections based on average projected births of 581

FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
3,904	4,062	4,098	4,299	4,473	4,643	4,825	5,067	5,227	5,353	5,465	5,437

FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
5,482	5,503	5,499	5,474	5,356	5,452	5,310	5,214	5,171	5,097	5,032	4,984

Actual Enrollment

Projections based on known births

Births not known. Projections based on projection of average births



2018 Projections - Total Growth since FY2005



FY 2006: Actual K-8 Enrollment was 3,904 students

2018 K-8 Enrollment Projections (including new housing developments)

FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
5,503	5,499	5,474	5,356	5,452	5,310	5,214	5,171	5,097	5,032	4,984

According to 2018-19 K-8 Enrollment Projections:

- In FY24, enrollment will still be 1,400 students more than it was in FY2006
- In FY29, enrollment will still be 1,080 students more than it was in FY2006





2018-2019 Projections

	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
K-8	5,503	5,494	5,457	5,326	5,230	5,045	4,942	4,891	4,807	4,737
K-8 with new housing	5,503	5,499	5,474	5,356	5,452	5,310	5,214	5,171	5,097	5,032
9-12	2,084	2,132	2,199	2,301	2,314	2,404	2,431	2,323	2,317	2,235
9-12 with new housing	2,084	2,134	2,205	2,312	2,391	2,513	2,560	2,445	2,423	2,343
Total	7,587	7,626	7,656	7,627	7,544	7,449	7,373	7,214	7,124	6,972
Total with new housing	7,587	7,633	7,679	7,668	7,843	7,823	7,774	7,616	7,520	7,375



Comparison: 2017 Revised Projections and 2018 Initial Projections



210



51

63

99

129

24

K-8 with New Housing	FY19	FY20 *	FY21	FY22	FY23	FY24
Revised 2017	5,527	5,573	5,636	5,716	5,657	5,563
Initial 2018 Projections	5,503	5,499	5,474	5,356	5,452	5,310
Difference	24	74	162	360	205	253

NOTE: The 2017 Revised Projections show added enrollment begins to make a noticeable impact in FY21 and FY22. In 2018 Initial Projection, revised estimates from Planning Department show that the added enrollment from known developments begins to make a noticeable impact in FY23 and FY24



What is Different in 2018 Enrollment Projections: Impact of Birth Data



Births and	Corresponding	Kindergarten	Enrollment
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Yea	1	Actual Births (1)			K Year	Enrollment
99-0	0	614	(C) - 11		05-06	485
00-0	1	599	3 5		06-07	550
01-0	2	649	a 4		07-08	495
02-0	3	691			08-09	552
03-0	4	696			09-10	596
04-0	5	605	0 1		10-11	545
05-0	6	674			11-12	602
06-0	7	663		1	12-13	666
07-0	8	647	a s		13-14	631
08-0	9	666	3 5		14-15	685
09-1	0	678			15-16	633
10-1	1	692			16-17	582
11-1	2	667			17-18	609
12-1	3	706			18-19	603
13-1	4	649	Proj	ected	19-20	
14-1	5	632		rage	20-21	
15-1	6	615	es s		21-22	1
16-1	7	579	3 5	581	22-23	
17-1	8	548	(2)		23-24	

Births have declined over the past 5 years

3-Year Average of Births

2013-14 to 2015-16 = 632 (2016-17 report)

2014-15 to 2016-17 = 609 (2017-18 report)

2015-16 to 2017-18 = 581 (2018-19 report)

The 3-year average is used to calculate the Kindergarten enrollment in years beyond known births (FY25-29 in 2018 report).

Source: Town of Brookline Town Clerk

⁽¹⁾ Birth counts are based on kindergarten eligibility dates - September 1 to August 31

^{(2) 548 =} actual births from September 1, 2017 to August 31, 2018 as recorded by the Town Clerk as of November 15, 2018.



What is Different in 2018 Enrollment Projections: Impact of K Progression Rate



HISTORICAL PROGRESS		
Year	Rate	
05-06	0.79	
06-07	0.92	
07-08	0.76	
08-09	0.80	
09-10	0.86	
10-11	0.90	
11-12	0.89	
12-13	1.00	
13-14	0.98	Average
14-15	1.03	S. Briston and S. State Control of the Control of t
15-16	0.93	
16-17	0.84	0.91
17-18	0.91	
18-19	0.85	

Birth to K Progression Rate has declined as a result of declining births

2012-13 to 2016-17 Average = 0.96 (16 report)

2013-14 to 2017-18 Average = 0.94 (17 report)

2014-15 to 2018-19 Average = 0.91 (18 report)



Planning Department -Known Developments, Fall 2018

Project	Total # Units	Studio	1-Bed	2-Bed	3-Bed	4-Bed	Projected Students	District	Estimated Completion Date	School Year Impacted
	Student Genera	nt Generation Ratio:		49.31%	85.14%	160.61%	K through 12			
40 Centre St	40	16	14	5	5				06-2021	2021-2022
Projected S	Students			1 2	4		7	Coolidge Corner		
420 Harvard/49 Coolidge	25	3	6	11	5				01-2020	2020-2021
Projected S	Students			1 5	4		10	Coolidge Corner		
Waldo/Durgin	143		85	58					02-2022	2022-2023
Projected S	Students			7 29			36	Coolidge Corner		
455 Harvard	17		10	5	2				11-2019	2020-2021
Projected S	Students			1 2	2		5	Coolidge Corner		31.1.2
134 Babcock	45	20	13	7	5				10-2020	2021-2022
Projected	Students			1 3	4		8	Coolidge Corner		
21 Crowninshield	8				8				07-2019	2019-2020
Projected S	Students				7		7	Coolidge Corner	11.00	,
Residences of South Brookline (Hancock	Village) 161		57	59	22	23			10-2021	2022-2023
Projected S	Students			5 29	19	37	90	Baker		
Puddingstone (Hancock Village)	230		54	140	24	12		(0 Kt 221 W - 22	10-2021	2022-2023
Projected S	Students			5 69	20	19	113	Baker		
1223 Beacon Street (Hampton Court)	123	8	38	52	25	100		0.000.00	08-2023	2023-2024
Projected S	Students			3 26	21		50	Lawrence		
445 Harvard	25		12	10	3				07-2022	2022-2023
Projected S	Students			1 5	3		9	Coolidge Corner		
500 Harvard	30	3	17	7	3				09-2022	2022-2023
Projected S	Students			1 3	3		7	Coolidge Corner		
TOTALS	847	50	306	354	102	35				
Projected S	Students		2	6 173	87	56	342			



Questions to Consider when Assessing Enrollment Projection Report



- 1. What weight should the outlying years (years 6-10) have in the projections?
- 2. How predictive are actual births in Brookline predictive of K enrollment?
- 3. What impact should be considered of larger demographic trends such as those predicted by MAPC?
- 4. Should student generation rate be recalculated using newer data and condo conversions/T-districts?
- 5. Should we use different student generation rates for specific properties based on actual enrollment (e.g. Hancock Village, BHA residences, etc)?
- 6. Should new growth be calculated in the out years?

Ongoing Impact of Brookline's Historic Enrollment Growth





Impact of Enrollment Growth

Between 2005 and 2018 the Town of Brookline has added 1,599 K-8 students into our existing eight elementary schools.

The result:

- Degradation of existing facilities
- Carving learning spaces out of locker rooms, hallways, and windowless storage spaces
- Overburdened teaching and learning spaces, as well as cafeterias, gyms, and administrative offices
- Our schools lack proper spaces for special education, English language instruction, guidance, nursing, and math and literacy support
- School facilities falling behind peer communities



A Townwide Challenge



- **Historic and Ongoing Enrollment Growth -** Since 2005, we have absorbed the equivalent of three K-8 schools into our existing schools through expand in place. Every school is overcrowded and needs relief in some way.
- Overdue Renovation and Updating of Facilities Driscoll and Pierce School need renovation to update facilities and address overcrowding. Driscoll has never completed a full renovation.
- **Core Facilities are Inadequate** Core facilities in 7 of 8 K-8 schools (gyms, libraries, cafeterias, hallways) no longer have the capacity to handle the current student population.
- **Substandard Spaces** at each school, we have substandard classrooms because they have been created out of offices, hallways, locker rooms, etc.
- **Temporary Rentals used for K-8 Classrooms** Pierce and Baker Schools have a total of 6 classrooms that are in rented space
- **Early Education Programs** currently 11 BEEP classrooms in rental space. With a new BEEP building 5 BEEP classrooms will remain in rental space. 5 more remain at Lynch Center.



Runkle

Enrollment Growth from 2005 to 2018



36%

41%

	2005-2006	2018-2019	# Growth since 2005	% Growth since 2005
Baker	647	762	115	18%
Coolidge Corner	670	873	203	30%
Driscoll	366	614	248	68%
Heath	360	522	162	45%
Lawrence	478	705	227	47%
Lincoln	410	581	171	42%
Pierce	546	865	319	58%

2005 - 2018 growth is equivalent to combined 2005 enrollment of Driscoll, Heath, Lincoln, and Runkle

427

3,904

581

5,503

154

1,599



Substandard Spaces at Driscoll









Public Schools of Brookline, 2005-2018 Enrollment v. Capacity

	2005 Enrollment	2008 Enrollment	2012 Enrollment	2018 Enrollment	Capacity*	Number of Students Over + or (Under) Capacity
Driscoll	366	403	530	614	574	+40

*Capacity information based on March 29, 2012 MGT Enrollment Capacity and Utilization Report



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Substandard Spaces at Heath





Public Schools of Brookline, 2005-2018 Enrollment v. Capacity

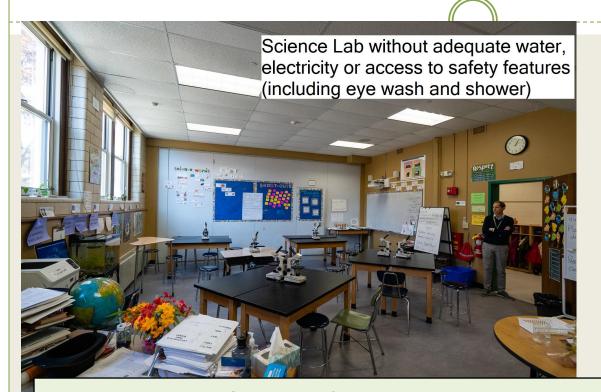
	2005 Enrollment	2008 Enrollment	2012 Enrollment	2018 Enrollment	Capacity*	Number of Students Over + or (Under) Capacity
Heath	360	402	494	522	553	(31)







Substandard Spaces at Baker





ETS Office (Closet in Library)

Public Schools of Brookline, 2005-2018 Enrollment v. Capacity

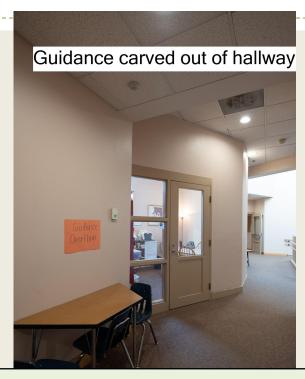
	2005 Enrollment	2008 Enrollment	2012 Enrollment	2018 Enrollment	Capacity*	Number of Students Over + or (Under) Capacity
Baker	647	672	678	762	679	+83



Substandard Spaces at Lawrence and Lincoln







Public Schools of Brookline, 2005-2018 Enrollment v. Capacity

	2005 Enrollment	2008 Enrollment	2012 Enrollment	2018 Enrollment	Capacity*	# of Students Over + or (Under) Capacity
Lawrence	478	557	623	705	572**	+133
Lincoln	410	469	545	581	437	+144





Substandard Spaces at Pierce





Public Schools of Brookline, 2005-2018 Enrollment v. Capacity

	2005 Enrollment	2008 Enrollment	2012 Enrollment	2018 Enrollment	Capacity*	Number of Students Over + or (Under) Capacity
Pierce	546	630	699	865	634	+231