

Wayland Public Schools

Enrollment and Class Size Report: 2020-2021



On Display at Wayland Middle School, September 2020

Introduction

On October 1 of each year, Wayland Public Schools is required to record and report the total number of students enrolled by grade to the Massachusetts Department of Elementary and Secondary Education (DESE). DESE and the Commonwealth of Massachusetts uses October 1 enrollment to calculate the Town of Wayland’s Foundation Enrollment and Chapter 70 funding. October 1 enrollment is also used by the district’s administration to project class sizes and to identify trends in enrollment for subsequent years, which form the baseline upon which the district’s operating and capital budgets are developed. Essentially, student enrollment projections drive staffing levels and enrollment trends identified in out-years inform the district’s multi-year budget forecast models.

The Enrollment and Class Size Report provides a summary of 2020-21 October 1 enrollment by grade, school and elementary classroom, projected enrollment for the 2021-22 school year and forecasted trends through 2030.

Special Note about the FY 2020-21 School Schedule

On August 5, the School Committee voted to implement a “Phased Hybrid” approach. Students began their school year on September 14, later than originally planned in order to allow staff extra time to prepare for this new model of schooling. The Children’s Way students and special education students began in-person instruction on September 14. The remainder of K-12 students received instruction remotely between September 14 and October 16.

On October 19, Wayland moved to a Hybrid model. This model schedules half of the students to attend in-person school on a given day while the other students learn remotely. Kindergarten through grade 12 students attend school in-person either in an A group or a B group along the following configuration:

GROUP	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
GROUP A	In- Person	In-Person	X	Remote	Remote
GROUP B	Remote	Remote	X	In- Person	In-Person

The purpose of the “X” day is two-fold. It is an opportunity for teachers to create and implement the dual aspects of their teaching responsibilities in a hybrid model, the in-person and the remote, and develop on-line presentations and interactive activities. Also, it provides an opportunity for teachers to give feedback to students regarding their on-line work and conduct small group and one-on-one sessions with struggling students. Teachers also collaborate with colleagues to develop both in-person and remote activities. Finally, on the “X” day, teachers devote some time to connecting with students synchronously. More information about the Wayland Public Schools Return to School Comprehensive Plan can be found here: [Fall 2020 Wayland Return to School Comprehensive Plan](#)

Table of Contents

Introduction.....	2
2020-2021 Actual Enrollment.....	4
<i>Actual Enrollment</i>	4
<i>WRAP Enrollment -Wayland Remote Alternative Program</i>	4
<i>Actual vs Projected Enrollment</i>	5
<i>METCO Enrollment</i>	6
<i>Non-resident Staff Student Enrollment</i>	7
<i>English Learners</i>	7
<i>Special Education Students</i>	7
<i>Elementary Learning Spaces</i>	8
<i>Elementary Class Size</i>	9
2021-2022 Projected Enrollment	9
<i>Strategies for Maintaining Target Class Sizes at the Elementary Level</i>	10
<i>Use of Buffer Zones</i>	11
<i>Budget for Projected Enrollment</i>	11
<i>FY 2022 Projected Elementary Class Size</i>	12
POPULATION AND ENROLLMENT FORECASTS FOR THE WAYLAND PUBLIC SCHOOLS	14

2020-2021 Actual Enrollment

Actual Enrollment

Total enrollment in the Wayland Public Schools on October 1, 2020 was 2,705 students, which is four fewer students than enrolled on October 1, 2019 and 28 fewer students than the number projected for FY21. October 1, 2020 enrollment by grade and school is illustrated in the table below:

FY 21 October 1 Enrollment vs. FY 20 October 1 Enrollment	TK*	FDK*	01	02	03	04	05	06	07	08	09	10	11	12	TOTAL FY 21	TOTAL FY 20	# +/-
Claypit Hill Elementary School	27	48	66	75	98	102	89								505	508	-3
Happy Hollow Elementary School	33	37	56	52	60	65	58								361	383	-22
Loker Elementary School	12	45	80	56	76	45	45								359	324	35
Total Elementary Schools	72	130	202	183	234	212	192								1,225	1,215	10
Wayland Middle School								199	201	242					642	658	-16
Total Middle School								199	201	242					642	658	-16
Wayland High School											213	196	196	233	838	836	2
Total High School											213	196	196	233	838	836	2
Total FY 21	72	130	202	183	234	212	192	199	201	242	213	196	196	233	2,705	2,709	-4
Total FY 20	19	183	178	239	211	195	190	206	241	211	202	198	230	206	2,709		
# +/-	53	-53	24	-56	23	17	2	-7	-40	31	11	-2	-34	27		-4	

Note*

TK - Traditional K

FDK -Full Day Kindergarten

The elementary schools increased by ten students over last year. The middle school decreased by 16 students and the high school increased by 2 students. This year, the grades with the highest enrollment are noted below:

- Grade 8 – 242 students
- Grade 3 – 234 students
- Grade 12 – 233 students. Note that 233 students are enrolled in grade 12 whereas 202 students are enrolled in Kindergarten.

The grades with the lowest enrollment are outlined below:

- Grade 2 - 183 students
- Grade 5 – 192 students
- Grades 10 and 11 – both with 196 students

WRAP Enrollment -Wayland Remote Alternative Program

Reflected in the total October 1 enrollment are 181 students enrolled in **WRAP**, Wayland Remote Alternative Program, which is a separate program from the Wayland Public Schools Phased Hybrid Model. Those who choose it remain independent of the rest of the Wayland Public Schools in-person for at least a semester:

FY 21 October 1 Enrollment	WRAP Students														Total
	TK	FDK	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	
Wayland High School											10	12	8	7	37
Wayland Middle School								16	17	18					51
Claypit Hill School				17		12	12								41
Happy Hollow School	14	7													21
Loker School			17		14										31
Total WRAP	14	7	17	17	14	12	12	16	17	18	10	12	8	7	181

Of the total 181 students enrolled in the WRAP program, more than 70% consist of elementary grade students: 129 elementary, 21 middle and 31 high school students. The WRAP program required the increase of 2.0 FTE in instructional staff.

Please note that the chart above reflects the schools WRAP students were assigned to, not their neighborhood schools. Fifty-seven students in grades K-5 choosing to participate in WRAP were grouped together to create and staff appropriate class sizes. Please find below WRAP enrollment by neighborhood school:

Neighborhood School	Assigned School	Grade	Number of Students
Claypit Hill	Happy Hollow	Traditional Kindergarten	5
Claypit Hill	Happy Hollow	Full Day Kindergarten	3
Claypit Hill	Loker	1	7
Claypit Hill	Loker	3	4
Happy Hollow	Claypit Hill	2	5
Happy Hollow	Claypit Hill	4	2
Happy Hollow	Claypit Hill	5	5
Happy Hollow	Loker	1	5
Happy Hollow	Loker	3	5
Loker	Claypit Hill	2	7
Loker	Claypit Hill	4	1
Loker	Claypit Hill	5	3
Loker	Happy Hollow	Traditional Kindergarten	5
TOTAL			57

Actual vs Projected Enrollment

The table below illustrates by grade level this year's **actual** enrollment versus **projected** enrollment by grade:

FY 21 Actual Enrollment vs. FY 21 Projected Enrollment															TOTAL ACTUAL	TOTAL PROJECTED	# +/-	
	TK*	FDK*	01	02	03	04	05	06	07	08	09	10	11	12				
Claypit Hill Elementary School	27	48	66	75	98	102	89									505	519	-14
Happy Hollow Elementary School	33	37	56	52	60	65	58									361	377	-16
Loker Elementary School	12	45	80	56	76	45	45									359	362	-3
Total Elementary Schools	72	130	202	183	234	212	192									1,225	1,258	-33
Wayland Middle School								199	201	242						642	643	-1
Total Middle School								199	201	242						642	643	-1
Wayland High School											213	196	196	233		838	832	6
Total High School											213	196	196	233		838	832	6
Total FY 21 Actual	72	130	202	183	234	212	192	199	201	242	213	196	196	233		2,705	2,733	-28
Total FY 21 Projected	19	189	200	187	246	216	201	195	205	243	207	201	196	228		2,733		
# +/-	53	-59	2	-4	-12	-4	-9	4	-4	-1	6	-5	0	5		-28		

Note*
TK - Traditional K
FDK - Full Day Kindergarten

The most significant changes in enrollment by grade between this year’s actual and projected enrollment was reflected in Traditional Kindergarten versus Full Day Kindergarten. Traditional Kindergarten increased by 53 students and Full Day Kindergarten decreased by 59 students. In total, actual kindergarten enrollment, the most difficult grade level to forecast, was relatively close to the projected enrollment, 202 versus 208 students. A survey of parents revealed that families were reluctant to pay a tuition fee for remote full day instruction and instead preferred to opt for traditional kindergarten programming when given the choice. Grade 3, the district’s projected largest grade level, enrolled 12 fewer students than projected followed by Grade 5 with nine fewer students than projected, whereas the transitional grades of Grade 6 and Grade 9 reflected a higher enrollment than projected.

Boston Resident Student Enrollment

Of the 2,705 students enrolled in the Wayland Public Schools on October 1, 2020, 136 students are Boston residents enrolled in the METCO program, of which Wayland has been a participating community for more than 50 years. Communities that participate in the METCO program are awarded a grant each year to support the educational opportunities for students enrolled. In addition, the Commonwealth of Massachusetts includes into the Foundation Formula used to calculate the Town’s annual Chapter 70 aid.

Boston resident students enrolled in the Wayland Public Schools by grade and school are noted by grade and school below:

FY 21 October 1 Enrollment vs. FY 20 October 1 Enrollment	METCO Students														FY 21	FY 20	# +/-
	TK	FDK	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12			
Wayland High School											7	10	9	13	39	45	-6
Wayland Middle School									13	19	14				46	40	6
Claypit Hill School	1	2	1	4	5	4	8								25	25	0
Happy Hollow School		1	1	2	2	5	2								13	16	-3
Loker School		1	2	1	6	2									12	10	2
Total October 1, 2020	1	4	4	7	13	11	10	13	19	14	7	10	9	13	135	136	-1
Total October 1, 2019		3	5	10	9	10	14	20	13	7	10	9	13	13	136		
# +/-	1	1	-1	-3	4	1	-4	-7	6	7	-3	1	-4	0	-1		

Of the Boston residents enrolled, 50 students are enrolled at the elementary school level, 46 at the middle school and 39 at the high school. The total number of Boston resident students enrolled in Wayland Public Schools remains relatively consistent from year to year. The difference in actual enrollment between this year and last year was one student.

Non-resident Staff Student Enrollment

In addition to 135 Boston residents enrolled in the district, 74 students of non-resident staff members attend the Wayland Public Schools this school year, which is 6 fewer students than the last school year: 23 students attend elementary schools, 20 attend the middle school and 31 attend the high school. The total number of non-resident staff students enrolled varies from year to year and enrollment is dependent upon space availability. Enrollment by grade and school for non-resident staff is provided on the following page:

FY 21 October 1 Enrollment vs. FY 20 October 1 Enrollment	Non-Resident Students													FY 21	FY 20	# +/-	
	TK	FDK	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11				Grade 12
Wayland High School											14	6	5	6	31	23	8
Wayland Middle School								6	7	7					20	28	-8
Claypit Hill School		1	2		3	3	4								13	18	-5
Happy Hollow School				1	2	1									4	6	-2
Loker School			2	2			2								6	6	0
Total October 1, 2020		1	4	3	5	4	6	6	7	7	14	6	5	6	74	81	-7
Total October 1, 2019		4	4	5	5	6	6	7	7	14	6	5	5	7	81		
# +/-		-3	0	-2	0	-2	0	-1	0	-7	8	1	0	-1	-7		

It is important to note that the Commonwealth of Massachusetts includes staff member's non-resident students into the Foundation Formula used to calculate the Town's annual Chapter 70 aid.

English Learner Student Enrollment

The Commonwealth mandates specific services that must be delivered to English Learners based on students' proficiency levels within specific learning environments. English Learner enrollment increased by ten students this year to a total of 93 students in this school year:

FY 21 October 1 Enrollment vs. FY 20 October 1 Enrollment	English Learner Students													FY 21	FY 20	# +/-	
	TK	FDK	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11				Grade 12
Wayland High School											7		4	2	13	8	5
Wayland Middle School								6	3	3					12	12	0
Claypit Hill School		3	3	5	8	2	1								22	20	2
Happy Hollow School		2	4	9	3	2	1								21	16	5
Loker School		3	5	5	9	2	1								25	27	-2
Total October 1, 2020		8	12	19	20	6	3	6	3	3	7	0	4	2	93	83	10
Total October 1, 2019		7	20	20	8	4	4	5	3	4	1	3	2	2	83		
# +/-		1	-8	-1	12	2	-1	1	0	-1	6	-3	2	0	10		

Special Education Student Enrollment

Also mandated by the Commonwealth are the services required for students on individual education plans. The number of students on IEPs can vary significantly from year to year. October 1, 2020 Special Education enrollment decreased by fourteen students this year to a total of 511 including 25 students in out of district placements which is the same number as last year, however assessments are still undergoing and it may be likely that new or expanded services may be required to meet new needs.

FY 21 October 1 Enrollment vs. FY 20 October 1 Enrollment	Special Education Students					
	PK	ELEM	MS	HS	OOD	FY 21 Total
PK	26				1	27
K		17				17
Grade 1		18			1	19
Grade 2		17			1	18
Grade 3		29				29
Grade 4		40			1	41
Grade 5		39				39
Grade 6			36		1	37
Grade 7			41		1	42
Grade 8			46		1	47
Grade 9				43	5	48
Grade 10				37		37
Grade 11				41	2	43
Grade 12				56	11	67
FY 21 Total	26	160	123	170	25	511
FY 20 Total	32	163	132	173	25	525
# +/-	-6	-3	-9	-3	0	-14

Efforts have been made to follow the recommendation by Special Education Consultants in FY 2016 to and deliver improved services to students more cost effectively by building capacity within the district. Since that time, Wayland has created the capacity to effectively serve more students with broad and varying needs in district rather than in out of district tuition-based programs. In fact, program shifts have taken place this year at The Children’s Way to improve service delivery to students. Lastly, to address the needs of struggling students not on individual education plans, our RTI (Response To Intervention) programs require small group instruction within and outside of our general education classrooms. Serving students through general education program is effective in improving outcomes for students without individual educational plans.

Elementary Learning Spaces

The number of students by school, grade and classroom varies from year to year and drives staffing levels, as does the demographic make-up of learners enrolled in each classroom. In addition to driving staffing levels, the demographic make-up of our learners drives the need for appropriate learning spaces.

Each space for special subjects, such as technology, music, physical school building provides dedicated /wellness education and art. However, it is becoming increasingly challenging to create learning spaces required to deliver instruction to particular students who may require small group instruction.

The availability of appropriate space is scarce, especially at Claypit Hill where learning spaces have been created from renovating offices, conference rooms and custodial storage areas as well as transforming book and copier/work rooms into learning spaces. Prior to space reconfiguration required to respond to the COVID-19 pandemic, parent and professional meetings had moved into public spaces such as the cafeteria and materials, books and copiers are stored and used in corridors, which presents obstacles for safe passage

through the hallways. Creating appropriate learning spaces has been an enormous challenge and there is no indication that the needs for space will decrease anytime soon.

A number of solutions are being considered to address the shortage of appropriate learning spaces in our district. To support these efforts, an appropriation of \$200,000 was appropriated in FY 21 to student our school building capacity for 21st Century Learning.

Elementary Class Size

Illustrated in the table below are average class sizes per elementary school by grade. These enrollments are inclusive of the WRAP program:

FY 21 Actual Elementary School Class Size

	TOTAL	NUMBER CLASSROOMS	AVERAGE CLASS SIZE	TARGET UPPER LIMIT
<u>ClayPit Hill</u>				
Kindergarten	75	4	19	20
Grade 1	66	3	22	20
Grade 2 (1 WRAP)	75	4	19	23
Grade 3	98	4	25	23
Grade 4 (1 WRAP combined 4/5)	102	5	20	25
<u>Grade 5</u>	<u>89</u>	<u>4</u>	<u>22</u>	<u>25</u>
Total	505	24	21	
<u>Happy Hollow</u>				
Kindergarten (1 WRAP)	70	4	18	20
Grade 1	56	3	19	20
Grade 2	52	2	26	23
Grade 3	60	3	20	23
Grade 4	65	3	22	25
<u>Grade 5</u>	<u>58</u>	<u>3</u>	<u>19</u>	<u>25</u>
Total	361	18	20	
<u>Loker</u>				
Kindergarten*	57	3	19	20
Grade 1* (1 WRAP)	80	4	20	20
Grade 2*	56	3	19	23
Grade 3 (1 WRAP)	76	4	19	23
Grade 4	45	2	23	25
<u>Grade 5</u>	<u>45</u>	<u>2</u>	<u>23</u>	<u>25</u>
Total	359	18	20	
Total Elementary	1,225	60	20	

NOTE: Reflects WRAP enrollment

* Spanish Immersion, 1 classroom per grade

2021-2022 Projected Enrollment

In October and November of 2019, Dr. Jerome McKibben, principal of McKibben Demographic Research, LLC from Rock Hill, SC, conducted a population study of the Town of Wayland and a ten-year enrollment forecast, 2020-21 through 2029-30 for the Wayland Public Schools. On December 2, Dr. McKibben presented his findings to the School Committee. On the pages to follow are the enrollment projections

compared with FY 21 actual enrollment followed by a copy of Dr. McKibben’s demographic report. *POPULATION AND ENROLLMENT FORECASTS FOR THE WAYLAND PUBLIC SCHOOLS 2020-21 THROUGH 2029-30:*

Wayland Public Schools: Total District Enrollment

	Projected	Actual		FY 22 Projected Enrollment			Projected Enrollment FY 23 to FY 30								
	October 1 2020-21	October 1 2020-2021	# +/-	% +/-	2021-22	# +/-	% +/-	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Traditional K	19	72	53	279%	19	-53	-74%	19	19	19	19	19	19	19	19
Full Day K	189	130	-59	-31%	187	57	44%	186	185	182	182	179	178	175	178
1	200	202	2	1%	203	1	0%	201	200	199	196	196	193	192	189
2	187	183	-4	-2%	210	27	15%	214	212	211	210	207	207	204	203
3	246	234	-12	-5%	193	-41	-18%	216	212	219	218	217	214	214	211
4	216	212	-4	-2%	252	40	19%	197	212	226	224	223	222	219	219
5	201	192	-9	-4%	223	31	16%	260	212	230	233	231	230	229	226
Total: K-5	1258	1225	-33	-3%	1287	62	5%	1293	1263	1286	1282	1272	1263	1252	1245
6	195	199	4	2%	206	7	4%	229	267	209	236	239	237	236	235
7	205	201	-4	-2%	194	-7	-3%	205	228	266	208	235	238	236	235
8	243	242	-1	0%	207	-35	-14%	196	207	230	269	210	237	240	238
Total: 6-8	643	642	-1	0%	607	-35	-5%	630	702	705	713	684	712	712	708
9	207	213	6	3%	238	25	12%	203	192	203	225	264	206	232	235
10	201	196	-5	-2%	206	10	5%	237	202	191	202	224	263	205	231
11	196	196	0	0%	199	3	2%	204	235	200	189	200	222	260	203
12	228	231	3	1%	194	-37	-16%	197	202	233	198	187	198	220	257
Total: 9-12	832	836	4	0%	837	1	0%	841	831	827	814	875	889	917	926
Total: K-12	2733	2703	-30	-1%	2731	28	1%	2764	2796	2818	2809	2831	2864	2881	2879
Total: K-12	2733	2703	-30	-1%	2731	28	1%	2764	2796	2818	2809	2831	2864	2881	2879
Change	24	-6			28			33	32	22	-9	22	33	17	-2
%-Change	0.9%	-0.2%			1.0%			1.2%	1.2%	0.8%	-0.3%	0.8%	1.2%	0.6%	-0.1%
Total: K-5	1258	1225	-33	-3%	1287	62	5%	1293	1263	1286	1282	1272	1263	1252	1245
Change	43	10			62			6	-30	23	-4	-10	-9	-11	-7
%-Change	3.5%	0.8%			5.1%			0.5%	-2.3%	1.8%	-0.3%	-0.8%	-0.7%	-0.9%	-0.6%
Total: 6-8	643	642	-1	0%	607	-35	-5%	630	702	705	713	684	712	712	708
Change	-15	-16			-35			23	72	3	8	-29	28	0	-4
%-Change	-2.3%	-2.4%			-5.5%			3.8%	11.4%	0.4%	1.1%	-4.1%	4.1%	0.0%	-0.6%
Total: 9-12	832	836	4	0%	837	1	0%	841	831	827	814	875	889	917	926
Change	-4	0			1			4	-10	-4	-13	61	14	28	9
%-Change	-0.5%	0.0%			0.1%			0.5%	-1.2%	-0.5%	-1.6%	7.5%	1.6%	3.1%	1.0%

Recently, Dr. McKibben recommended that Wayland use the FY 2022 enrollment projections and when the 2020 census data is available after this fall, he will review the data and refine the study.

Strategies for Maintaining Target Class Sizes at the Elementary Level

Wayland Public schools employs a number of strategies to maintain class sizes in each elementary school within the School Committee’s target class size range, two of which are employing buffer zones and budgeting for projected enrollment. This year, as described in the prior section, students were grouped outside of neighborhood schools for the WRAP program.

Use of Buffer Zones

In order to maintain equitable class sizes across the district, “buffer zones” have been designated for each elementary school. Buffer zones are used to assign students based on the capacity of each elementary school building. The zones are defined as areas in town from which individual addresses may be assigned to one of two elementary schools. Once assigned to a school, a student remains in that school throughout elementary school. Any street highlighted on the attached listings is in a buffer zone, and houses on both sides of the street are considered within the buffer zone. To view Wayland Public Schools buffer zones, click here: [Wayland Public Schools Buffer Zones](#).

The buffer zones may be refined from year to year to strategically manage and accommodate growing elementary school enrollment with approval by the School Committee. Originally the geographic enrollment lines were drawn to support two sections for each grade level at Loker, three sections per grade level at Happy Hollow and four sections per grade level at Claypit Hill.

Budget for Projected Enrollment

Enrollment projections are used to develop the next year’s budgets for staffing, spaces and non-personnel supplies and services. Staffing levels at all grade levels are predicated upon the number and demographics of students reasonably expected to be enrolled at the start of the school year. Elementary enrollment numbers by school and by grade are used in conjunction with the School Committee’s Class Size Policy guidelines to determine the number of classroom sections needed at each grade level, which in turn drives the number of classroom teachers and specialists (e.g. art, general music and physical education teachers) required at each school and grade level.

Although the McKibben forecasts will be used to project FY 22 enrollment, it is unclear how much in-migration enrollment the Wayland Public Schools will experience given the impact of COVID-19 Pandemic. Highlighted below are the in-migration numbers of students by grade level. In total enrollment is forecasted to increase by a net of 28 students or 1%. As noted, enrollment forecasts guide budgeted staffing levels and if the forecasts are accurate, the enrollment projections of an increase of 62 students at the elementary level and decrease of 35 students at the middle school will be reflected in staffing budgets for next year.

	Projected October 1 2020-21	Actual October 1 2020-2021		FY 22 Projected Enrollment 2021-22		FY 22 Cohort In-Migration	
			# +/-		# +/-		# +/-
Traditional K	19	72	53	19	-53		
Full Day K	189	130	-59	187	57		4
1	200	202	2	203	1		1
2	187	183	-4	210	27		8
3	246	234	-12	193	-41		10
4	216	212	-4	252	40		18
5	201	192	-9	223	31		11
6	195	199	4	206	7		14
7	205	201	-4	194	-7		-5
8	243	242	-1	207	-35		6
9	207	213	6	238	25		-4
10	201	196	-5	206	10		-7
11	196	196	0	199	3		3
12	228	231	3	194	-37		-2

FY 2022 Projected Elementary Class Size

Each year, the projected enrollment is broken down to projected class sizes. Illustrated in the table below are average class sizes per elementary school by grade as calculated for next year, however these class sizes will be review and evaluated by each school principal and may change based on new information. Please also note that some of the changes between this year and next year are related to WRAP classrooms:

FY 22 Projected Elementary School Class Size

	FY 21		NUMBER	AVERAGE	TARGET		CHANGE
<u>ClayPit Hill</u>	CLASSROOMS	TOTAL	CLASSROOMS	CLASS SIZE	UPPER LIMIT	Manual Adjustment	OVER FY21
Kindergarten	4	77	4	19	20		0
Grade 1	3	77	4	19	20	18	1
Grade 2	4	85	4	21	23		0
Grade 3	4	65	3	22	23		-1
Grade 4	5	109	5	22	25		0
Grade 5	4	104	5	21	25		1
Total	24	517	25	21			1
<u>Happy Hollow</u>							
Kindergarten	4	55	3	18	20		-1
Grade 1	3	54	3	18	20		0
Grade 2	2	62	3	21	23		1
Grade 3	3	61	3	20	23		0
Grade 4	3	74	3	25	25		0
Grade 5	3	70	3	23	25		0
Total	18	376	18	21			0
<u>Loker</u>							
Kindergarten*	3	74	4	19	20		1
Grade 1*	4	72	3	24	20	-18	-1
Grade 2*	3	63	3	21	23		0
Grade 3	4	67	3	22	23		-1
Grade 4	2	69	3	23	25		1
Grade 5	2	49	2	25	25		0
Total	18	394	18	22			0
Total Elementary	60	1,287	61	63			1

* Spanish Immersion, 1 classroom per grade

In FY 21, McKibben enrollment projected reflected K classroom increase at Loker. That classroom subsequently moved to CH.

Reflected above is the manual adjustment in FY 2022 projected to reflect this classroom move in FY 21

POPULATION AND ENROLLMENT FORECASTS FOR THE WAYLAND PUBLIC SCHOOLS

2020-21 THROUGH 2029-30

OCTOBER 2019

McKibben Demographic Research, LLC Jerome McKibben, Ph.D. Rock Hill, SC

j.mckibben@mckibbendemographics.com

978-501-7069

EXECUTIVE SUMMARY

1. The resident total fertility for the Wayland Public Schools over the life of the forecasts is below replacement level. (1.71 vs. the replacement level of 2.1)
2. Most in-migration to the district continues to occur in the 0-to-9 and 25-to-44 year old age groups.
3. The local 18-to-24 year old population continues to leave the district, going to college or moving to other urbanized areas. This population group accounts for the largest segment of the district's out migration flow and will increase steadily over the next 10 years. The second largest migration outflow is in the 70+ age groups.
4. The primary factors causing the district's enrollment to increase over the next 10 years is the slowing in the increase of empty nest households, the relatively high number of elderly housing units turning over coupled with a sustained rate of in migration of young families.
5. Changes in year-to-year enrollment over the next ten years will primarily be due to large cohorts entering and moving through the school system in conjunction with smaller cohorts leaving the system.
6. The elementary enrollment will slowly decrease after the 2022-23 school year.
7. The median age of the district's population will decrease from 45.3 in 2010 to 41.4 in 2030.
8. Even if the district continues to have some amount of annual new housing unit construction over the next 10 years, the rate, magnitude and price of existing home sales will become the increasingly dominant factor affecting the amount of population and enrollment change.
9. Total district enrollment is forecasted to increase by 109 students, or 4.0%, between 2019-20 and 2024-25. Total enrollment will increase by 61 students, or 2.2%, from 2024-25 to 2029-30.

INTRODUCTION

By demographic principle, distinctions are made between projections and forecasts. A projection extrapolates the past (and present) into the future with little or no attempt to take into account any factors that may impact the extrapolation (e.g., changes in fertility rates, housing patterns or migration patterns) while a forecast results when a projection is modified by reasoning to take into account the aforementioned factors.

To maximize the use of this study as a planning tool, the ultimate goal is not simply to project the past into the future, but rather to assess various factors' impact on the future. The future population and enrollment change of each school district is influenced by a variety of factors. Not all factors will influence the entire school district at the same level. Some may affect different areas at dissimilar magnitudes and rates causing changes at varying points of time within the same district.

The forecaster's judgment, based on a thorough and intimate study of the district, has been used to modify the demographic trends and factors to more accurately predict likely changes. Therefore, strictly speaking, this study is a forecast, not a projection; and the amount of modification of the demographic trends varies between different areas of the district as well as within the timeframe of the forecast.

To calculate population forecasts of any type, particularly for smaller populations such as a school district, realistic suppositions must be made as to what the future will bring in terms of age specific fertility rates and residents' demographic behavior at certain points of the life course. The demographic history of the school district and its interplay with the social and economic history of the area is the starting point and basis of most of these suppositions particularly on key factors such as the age structure of the area.

The unique nature of each district's and attendance area's demographic composition and rate of change over time must be assessed and understood to be factors throughout the life of the forecast series. Moreover, no two populations, particularly at the school district and attendance area level, have exactly the same characteristics.

The manifest purpose of these forecasts is to ascertain the demographic factors that will ultimately influence the enrollment levels in the district's schools. There are of course, other non-demographic factors that affect enrollment levels over time. These factors include, but are not limited to transfer policies within the district; student transfers to and from neighboring districts; placement of "special programs" within school facilities that may serve students from outside the attendance area; state or federal mandates that dictate the movement of students from one facility to another (No Child Left Behind was an excellent example of this factor); the development of charter schools in the district; the prevalence of home schooling in the area; and the dynamics of local private schools.

Unless the district specifically requests the calculation of forecasts that reflect the effects of changes in these non-demographic factors, their influences are held constant for the life of the forecasts. Again, the main function of these forecasts is to determine what impact demographic changes will have on future enrollment. It is quite possible to calculate special "scenario" forecasts to measure the impact of school policy modifications as well as planned economic and financial changes. However in this case the results of these population and enrollment forecast are meant to represent the most likely scenario for changes over the next 10 years in the district and its attendance areas.

The first part of the report will examine the assumptions made in calculating the population forecasts for the Wayland Public Schools. Since the results of the population forecasts drive the subsequent enrollment forecasts, the assumptions listed in this section are paramount to understanding the area's demographic dynamics. The remainder of the report is an explanation and analysis of the district's population forecasts and how they will shape the district's grade level enrollment forecasts.

DATA The data used for the forecasts come from a variety of sources. The Wayland Public Schools provided enrollments by grade and attendance center for the school years 2010-2011 to 2019-20. Birth and death data for the years 2000 through 2017 were obtained from the Massachusetts Department of

Health. The net migration values were calculated using Internal Revenue Service migration reports for the years 2000 through 2016. The data used for the calculation of migration models came from the United States Bureau of the Census, 2005 to 2010, and the models were designed using demographic and economic factors. The base age-sex population counts used are from the results of the 2010 Census. Recently the Census Bureau began releasing annual estimates of demographic variables at the block group and tract level from the American Community Survey (ACS). There has been wide scale reporting of these results in the national, state and local media. However, due to the methodological problems the Census Bureau is experiencing with their estimates derived from ACS data, particularly in areas with a population of less than 60,000, the results of the ACS are not used in these forecasts.

For example, given the sampling framework used by the Census Bureau, each year only 150 of the over 5,000 current households in the district would have been included. For comparison 800 households in the

district were included in the sample for the long form questionnaire in the 2000 Census. As a result of this small sample size, the ACS survey result from the last 5 years must be aggregated to produce the tract and block group estimates.

To develop the population forecast models, past migration patterns, current age specific fertility patterns, the magnitude and dynamics of the gross migration, the age specific mortality trends, the distribution of the population by age and sex, the rate and type of existing housing unit sales, and future housing unit construction are considered to be primary variables. In addition, the change in household size relative to the age structure of the forecast area was addressed. While there was a slight drop in the average household size in the Wayland Public Schools as well as most other areas of the state during the previous 20 years, the rate of this decline in the district has been forecasted to increase slightly over the next ten years.

ASSUMPTIONS

For these forecasts, the mortality probabilities are held constant at the levels calculated for the year 2010. While the number of deaths in an area are impacted by and will change given the proportion of the local population over age 65, in the absence of an extraordinary event such as a natural disaster or a breakthrough in the treatment of heart disease, death rates rarely move rapidly in any direction, particularly at the school district or attendance area level. Thus, significant changes are not foreseen in district's mortality rates between now and the year 2029. Any increases forecasted in the number of deaths will be due primarily to the general aging of the district's population and specifically to the increase in the number of residents aged 65 and older.

Similarly, fertility rates are assumed to stay fairly constant for the life of the forecasts. Like mortality rates, age specific fertility rates rarely change quickly or dramatically, particularly in small areas. Even with the recently reported rise in the fertility rates of the United States, overall fertility rates have stayed within a 10% range for most of the last 40 years. In fact, the vast majority of year to year change in an area's number of births is due to changes in the number of women in child bearing ages (particularly ages 20-29) rather than any fluctuation in an area's fertility rate.

The resident total fertility rate (TFR), the average number of births a woman will have while living in the school district during her lifetime, is estimated to be 1.71 for the total district for the ten years of the population forecasts. A TFR of 2.1 births per woman is considered to be the theoretical "replacement level" of fertility necessary for a population to remain constant in the absence of in-migration. Therefore, in the absence of migration, fertility alone would be insufficient to maintain the current level of population and enrollment within the Wayland Public Schools over the course of the forecast period.

A close examination of data for the Wayland Public Schools has shown the age specific pattern of net migration will be nearly constant throughout the life of the forecasts. While the number of in and out migrants has changed in past years for the Wayland Public Schools (and will change again over the next 10 years), the basic age pattern of the migrants has stayed nearly the same over the last 30 years. Based on the analysis of data it is safe to assume this age specific migration trend will remain unchanged into the future. This pattern of migration shows most of the local out-migration occurring in the 18-to-24 year old age group as young adults leave the area to go to college or move to other urbanized areas. The second group of out-migrants is those householders aged 70 and older who are downsizing their residences. Most of the local in-migration occurs in the 0-to-9 and 25-44 age groups (the bulk of the which come from areas within 75 miles of the Wayland Public Schools) primarily consisting of younger adults and their children.

As the Middlesex County area is not currently contemplating any major expansions or contractions, the forecasts also assume that the current economic, political, social, and environmental factors, as well as the

transportation and public works infrastructure (with a few notable exceptions) of the Wayland Public Schools and its attendance areas will remain the same through the year 2029. Below is a list of assumptions and issues that are specific to the Wayland Public Schools. These issues have been used to modify the population forecast models to more accurately predict the impact of these factors on each area's population change.

Specifically, the forecasts for the Wayland Public Schools assume that throughout the study period:

a. The national, state or regional economy does not go into deep recession at any time during the 10 years of the forecasts; (Deep recession is defined as four consecutive quarters where the GDP contracts greater than 1% per quarter)

b. Interest rates have reached a historic low and will not fluctuate more than one percentage point in the short term; the interest rate for a 30 year fixed home mortgage stays below 5.0%;

c. The rate of mortgage approval stays at 1999-2003 levels and lenders do not return to "subprime" mortgage practices;

d. There are no additional restrictions placed on home mortgage lenders or additional bankruptcies of major credit providers;

e. The rate of housing foreclosures does not exceed 125% of the 2015-2018 average of Middlesex County for any year in the forecasts;

f. All currently planned, platted, approved and permitted housing developments are built out and completed by 2028. All housing units constructed are occupied by 2029;

g. Specifically, the River's Edge complex will build 188 units between 2020 and 2021 with 25% of the units be affordable and 25% being age restricted;

h. The Cascade complex will build 30 one bedroom and 30 two-bedroom units between 2020 and 2021;

i. The School Street complex will add 12 units by the end of 2020 and be occupied by 2021;

j. The district has at least 140 existing single-family home sales annually between 2019 and 2029;

k. The unemployment rates for the Middlesex County and the Boston Metropolitan Area will remain below 6.0% for the 10 years of the forecasts;

l. The intra district student transfer policy remains unchanged over the next 10 years;

m. Specifically, the Spanish Immersion Lottery will continue for the 10 years of the forecasts and be housed at Loker Elementary;

n. The rate of students transferring into and out of the Wayland Public Schools will remain at the 2015-16 to 2019-20 average;

o. The inflation rate for gasoline will stay below 5% per year for the 10 years of the forecasts;

p. There will be no building moratorium within the district; q. The State of Massachusetts does not change any of its current laws regarding inter-district transfers, school vouchers or charter schools;

r. No new charter schools open in the district or surrounding area in the next 10 years;

-
- s. Businesses within the district and the Wayland Public Schools area will remain viable;
 - t. The number of existing home sales in the district that are a result of “distress sales” (homes worth less than the current mortgage value) will not exceed 20% of total homes sales in the district for any given year;
 - u. Housing turnover rates (sale of existing homes in the district) will remain at their current levels. The majority of existing home sales are made by home owners over the age of 60;
 - v. Private school and home school attendance rates will remain constant;
 - w. The rate of foreclosures for commercial property remains at the 2014-2018 average for Middlesex County.

If a major employer in the district or in the Greater Boston Metropolitan Area (and particularly in the western suburbs) closes, reduces or expands its operations, the population forecasts would need to be adjusted to reflect the changes brought about by the change in economic and employment conditions. The same holds true for any type of natural disaster, major change in the local infrastructure (e.g., highway construction, water and sewer expansion, changes in zoning regulations etc.), a further economic downturn, any additional weakness in the housing market or any instance or situation that causes rapid and dramatic population changes that could not be foreseen at the time the forecasts were calculated. The high proportion of high school graduates from the Wayland Public Schools that attend college or move to urban areas outside of the district for employment is a significant demographic factor. Their departure is a major reason for the extremely high out-migration in the 18 to 24 age group, and was taken into account when calculating these forecasts. The out-migration of graduating high school seniors is expected to continue over the period of the forecasts and the rate of out-migration has been forecasted to remain the same over the life of the forecast series. Finally, all demographic trends (i.e., births, deaths, and migration) are assumed to be linear in nature and annualized over the forecast period. For example, if 1,000 births are forecasted for a 5-year period, an equal number, or proportion of the births are assumed to occur every year, 200 per year. Actual year-to-year variations do and will occur, but overall year to year trends are expected to be constant.

METHODOLOGY

The population forecasts presented in this report are the result of using the Cohort-Component Method of population forecasting (Siegel, and Swanson, 2004: 561-601) (Smith et. al. 2004). As stated in the INTRODUCTION, the difference between a projection and a forecast is in the use of explicit judgment based upon the unique features of the area under study. Strictly speaking, a cohort projection refers to the future population that would result if a mathematical extrapolation of historical trends. Conversely, a cohort-component forecast refers to the future population that is expected because of a studied and purposeful selection of the components of change (i.e., births, deaths, and migration) and forecast models are developed to measure the impact of these changes in each specific geographic area.

Five sets of data are required to generate population and enrollment forecasts. These five data sets are:

- a. a base-year population (here, the 2010 Census population for the Wayland Public Schools and its attendance areas);
- b. a set of age-specific fertility rates for the district to be used over the forecast period and its attendance areas;
- c. a set of age-specific survival (mortality) rates for the district and its attendance areas;

-
- d. a set of age-specific migration rates for the district and its attendance areas; and;
 - e. the historical enrollment figures by grade.

The most significant and difficult aspect of producing enrollment forecasts is the generation of the population forecasts in which the school age population (and enrollment) is embedded. In turn, the most challenging aspect of generating the population forecasts is found in deriving the rates of change in fertility, mortality, and migration. From the standpoint of demographic analysis, the Wayland Public Schools is classified as a “small area” population (as compared to the population of the state of Massachusetts or to that of the United States). Small area population forecasts are more complicated to calculate because local variations in fertility, mortality, and migration may be more irregular than those at the regional, state or national scale. Especially challenging is the forecast of the migration rates for local areas, because changes in the area's socioeconomic characteristics can quickly change from past and current patterns (Peters and Larkin, 2002.)

The population forecasts for Wayland Public Schools were calculated using a cohort-component method with the populations divided into male and female groups by five-year age cohorts that range from 0-to-4 years of age to 85 years of age and older (85+). Age- and sex-specific fertility, mortality, and migration models were constructed to specifically reflect the unique demographic characteristics of each of the attendance areas in the Wayland Public Schools.

The enrollment forecasts were calculated using a modified average survivorship method. Average survivor rates (i.e., the proportion of students who progress from one grade level to the next given the average amount of net migration for that grade level) over the previous five years of year-to-year enrollment data were calculated for grades two through twelve. This procedure is used to identify specific grades where there are large numbers of students changing facilities for non-demographic factors, such as private school transfers or enrollment in special programs.

The survivorship rates were modified or adjusted to reflect the average rate of forecasted in and out migration of 5-to-9, 10-to-14 and 15-to-17-year-old cohorts to each of the attendance centers in Wayland Public Schools for the period 2010 to 2015. These survivorship rates then were adjusted to reflect the forecasted changes in age-specific migration the district should experience over the next five years. These modified survivorship rates were used to project the enrollment of grades 2 through 12 for the period 2015 to 2020. The survivorship rates were adjusted again for the period 2020 to 2025 to reflect the predicted changes in the amount of age-specific migration in the district for the period.

The forecasted enrollments for kindergarten and first grade are derived from the 5-to-9 year old population of the age-sex population forecast at the elementary attendance center district level. This procedure allows the changes in the incoming grade sizes to be factors of forecasted population change and not an extrapolation of previous class sizes. Given the potentially large amount of variation in Kindergarten enrollment due to parental choice, changes in the state's minimum age requirement, and differing district policies on allowing children to start Kindergarten early, first grade enrollment is deemed to be a more accurate and reliable starting point for the forecasts. (McKibben, 1996) The level of the accuracy for both the population and enrollment forecasts at the school district level is estimated to be +2.0% for the life of the forecasts.

REFERENCES

McKibben, J. The Impact of Policy Changes on Forecasting for School Districts. *Population Research and Policy Review*, Vol. 15, No. 5-6, December 1996

Peters, G. and R. Larkin Population Geography. 7th Edition. Dubuque, IA: Kendall Hunt Publishing. 2002.

Siegel, J. and D. Swanson The Methods and Materials of Demography: Second Edition, Academic Press: New York, New York. 2004.

Smith, S., J. Tayman and D. Swanson State and Local Population Projections, Academic Press, New York, New York. 2001.