

2018-19 SCHOOL ENROLLMENT PROJECTIONS FOR SCARBOROUGH

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I. INTRODUCTION

Change in school enrollment derives from two sources, changes in the number of births to residents, and the net migration of preschool and school-aged children into and out of a community. These projections are based on an in-house cohort survival model which reflects both sources of change.

The cohort survival model has two steps:

- First, historical trends and relationships between entering class sizes (first grade enrollment) and resident births in the year that is six years before the enrollment year is analyzed. Correlation coefficients (using Pearson's r-squared) are calculated for the last three, four, five, six, seven, eight, nine and ten-year periods regarding the relationship between first grade enrollment and births. The correlation coefficients are examined to determine which period represents the statistical "best fit" for projecting future first grade enrollment based on resident birth data.
- Second, historical trends at each grade level are analyzed, specifically looking at the grade-to-grade survival ratios. These ratios represent the number of students in a grade in one year (i.e., 1st grade in 2017-18) in relation to the number of students in the next grade the following year (i.e., 2nd grade in 2018-19). Then correlation coefficients (using Pearson's r-squared) are calculated for the last three, four, five, six, seven, eight, nine and ten-year periods regarding the relationship between enrollment in a grade in one year and the next grade the following year to determine which period represents the statistical "best fit" at each of the grade levels. The grade-to-grade ratios that represent the "best fit" are then applied to the current enrollment in each grade and projected first grade classes to project enrollment for the next ten years.

Six models were created to project future enrollment in Scarborough. The first model, called the "best fit" model, is a standard statistical model which projects enrollment based on historical trends, and is considered to be the most likely scenario to occur in Scarborough **IF** future enrollment follows historical patterns of enrollment. After the "best fit" model was created, the impact of new housing units on enrollment in Scarborough was assessed and additional models were created based on the findings. An additional two models were based on the "best fit" model but then took into account the impact of two multi-family housing projects (Avesta and the Beacon) that were under construction at the time of the 10/1/2018 enrollment count. The fourth model, called the "135 housing units added annually" model took into account additional preschool and elementary in-migration impact from a sustained addition of 135 new housing units added annually. As with the "best fit" model, two additional models were added to the "135 housing units added annually" model to account for impact of the Avesta and Beacon projects on enrollment.

To provide reasonable cushions for use in the planning of school facilities, school enrollment projections are summarized by grade group and presented the projections within ranges of plus and minus 10% for grades K-8 and plus and minus 5% for grades 9-12, and plus and minus 3% for grades K-12. These ranges and details on the enrollment data and methodologies used for making the projections can be found in the report **Appendix**.

Sections II and V of this report provides historical enrollment trends and enrollment projections which projects enrollment through 2028-29 for each grade and by grade group in Scarborough. **Section III** discusses the historical grade-to-grade migration trends used to complete the projections.

Section IV of this report presents residential development factors that may influence enrollment projections.

Grade by grade historical and projected enrollment, and ranges for use in school facilities planning are presented in the report **Appendix** along with a detailed explanation of the data used and methodologies.

Notes:

- The term “best fit” refers to the strongest statistical correlation of trends. The reader should keep in mind the “best fit” model is not always the best fit for predicting future enrollment. This is often the case in situations where the “best fit” model does not adequately account for the impact of resident development, when residential development, economic or population changes are occurring in the area, or when significant changes in migration trends or resident birth trends occur in a community.
- When looking at the enrollment figures it is important for the reader to pay close attention to the type of enrollment being discussed, i.e., whether the data is referring to resident enrollment, resident attending enrollment, non-resident students attending district schools, resident students attending non-district schools, or total attending enrollment. Additionally, due to limitations on availability of certain types of enrollment data, these figures do not include 100% home schooled students, or students attending privately paid for schools, but do include students attending Charter Schools.

II. FIRST GRADE ENROLLMENT

A. Historical First Grade Enrollment

First grade enrollment over the last ten years (2009-10 to 2018-19) fluctuated year-to-year while declining, on average. During this ten-year period, first grade enrollment ranged between 173 and 246 students, with an average enrollment of 206 students. The average first grade enrollment over the last five years (2014-15 to 2018-19), was 196 students, a significantly lower level of average enrollment compared with the average of the previous five-year period (2009-10 to 2013-14), or 217 students. Enrollment over the last three years (2015-16 to 2017-18) continued to decline from the five-year average, with first grade enrollment averaging 186 students. *(See Table II-1 and Figure II-2).*

B. Resident Births Influencing Historical Enrollment

Resident births during the ten-year period influencing first grade enrollment over the last ten years (or 2002-03 to 2011-12), declined, on average. The average number of births over the last five years of the period, (2007-08 to 2011-12), was 135 births, was significantly lower than the previous five-year period (2002-03 to 2006-07), with 159 births. What this means is, on average, Scarborough had 24 fewer children born to residents, translating into a significant loss of potential future students. **The decline in average resident births over the last five years of the period placed downward pressure on average entering first grade class sizes, while fluctuations in the level of resident births year-to-year caused fluctuations in first grade class sizes.** *(See Table II-1 and Figure II-1).*

C. Resident Births Influencing Future Enrollment

Over the last ten-year period of available resident birth data, 2008-09 to 2017-18, births to residents of Scarborough averaged 144 births annually, with births fluctuating year-to-year, to range between 129 and 167 births. When looking at the most recent five-year period (2013-14 to 2017-18) increased to average 152 births, and over the last three years (2015-16 to 2017-18) the average of births to residents was slightly lower, to average 146 births. When looking at the most recent average of 146 births compared to births between 2002-03 and 2011-12 (average of 147 births per year), it appears births have been fairly stable, however when looking at the 5-year periods births have declined, then rebounded somewhat. *(See Table II-1 and Figure II-1).*

The “best fit” projections used the three-year average (2015-16 to 2017-18) of births to estimate future births, or the 2018-19 “best fit” model assumes resident births should average about 146 births annually. The “135 housing unit added annually” model is first based on the three-year average then progressively adds 2 births per year to account for an increase in new families from new housing units built. **Since Scarborough has experienced fluctuations in the number of resident births in the past, it is reasonable to assume these fluctuations will continue to occur in the future. However, it is impossible to predict which years will see higher birth levels verse lower birth levels. Due to the influence resident births have on future first grade enrollment, Scarborough will need to keep an eye on future resident births.**

D. Net Preschool Migration Trends

In the first five years of the last decade, (2009-10 to 2013-14), Scarborough experienced an in-migration of preschool-aged children, with an average migration ratio of 1.367, or an increase from resident births of about 37%. In the past five years, (2014-15 to 2018-19), Scarborough experienced a higher level of preschool in-migration, with an average migration ratio of 1.454, or an increase from resident births of about 45%. Additionally, over the last three years, (2016-17 to 2018-19), the higher level of preschool in-migration continued, with an average ratio of 1.422, or an increase from resident births of about 42%. **Over the last ten years, average preschool in-migration has increased, placing additional upward pressure on first grade class sizes over the last five years. (See Table II-1).**

NOTE: Taken together, a decline in the average level of resident births despite being combined with an increase in average preschool in-migration resulted in entering first grade class sizes that, on average, have declined over the last three to five years. In addition, fluctuations in the level of resident births and preschool migration levels caused year-to-year fluctuations in first grade class sizes.

E. Projections of Entering First Grade Class Sizes

The 2018-19 “best fit” model is based on average births occurring between 2015-16 and 2017-18, and on a continuation of preschool in-migration similar to the level occurring over the last five years. (See Tables II-1 and Figure II-2).

- ▶ Under the 2018-19 “best fit” model, first grade enrollment is projected to experience yearly swings corresponding with swings in resident births, with enrollment ranging between 201 and 243 students, and averaging 218 students annually through 2028-29.

The 2018-19 “135 housing units added annually model” is based on the “best fit” model then takes into account the additional impact of new housing unit development on school enrollment.

- ▶ Under the 2018-19 “135 housing units added annually” model first grade enrollment is projected to range between 206 and 249 students with an average enrollment of 226 students per year.

Table II-1 - Relationship of Entering First Grade Class Size to Resident Births
Scarborough - Attending Resident Enrollment

Birth Year (Oct. 15 - Oct. 14)	# of Resident Births		First Grade Year	Best Fit Model			135 Housing Units Model		
				1st Grade Enrollment	Ratio 1 st /Births	+/- %	1st Grade Enrollment	Ratio 1 st /Births	+/- %
2002-03	182		2009-10	246	1.352	35.2%			
2003-04	158		2010-11	224	1.418	41.8%			
2004-05	168		2011-12	208	1.238	23.8%			
2005-06	152		2012-13	206	1.355	35.5%			
2006-07	135		2013-14	199	1.474	47.4%			
2007-08	142		2014-15	212	1.493	49.3%			
2008-09	138		2015-16	209	1.514	51.4%			
2009-10	129		2016-17	173	1.341	34.1%			
2010-11	135		2017-18	199	1.474	47.4%			
2011-12	129		2018-19*	187	1.450	45.0%			
2012-13	150		2019-20	218	1.453	45.3%	224	1.493	49.3%
2013-14	167		2020-21	243	1.455	45.5%	249	1.491	49.1%
2014-15	158		2021-22	230	1.456	45.6%	236	1.494	49.4%
2015-16	157		2022-23	228	1.452	45.2%	234	1.490	49.0%
2016-17	138		2023-24	201	1.457	45.7%	206	1.493	49.3%
2017-18 pre	142		2024-25	207	1.458	45.8%	212	1.493	49.3%
2018-19*	146	148	2025-26	212	1.452	45.2%	221	1.493	49.3%
2019-20*	146	150	2026-27	212	1.452	45.2%	223	1.487	48.7%
2020-21*	146	152	2027-28	212	1.452	45.2%	226	1.487	48.7%
2021-22*	146	154	2028-29	212	1.452	45.2%	229	1.487	48.7%
10-Yr Avg. (2002-03 to 2011-12)	147		10-Yr Avg. (2009-10 to 2018-19)	206	1.411	41.1%			
1st 5-Yr Avg. (2002-03 to 2006-07)	159		1st 5-Yr Avg. (2009-10 to 2013-14)	217	1.367	36.7%			
5-Yr Avg. (2007-08 to 2011-12)	135		5-Yr Avg. (2014-15 to 2018-19)	196	1.454	45.4%			
3-Yr Avg. (2009-10 to 2011-12)	131		3-Yr Avg. (2016-17 to 2018-19)	186	1.422	42.2%			
Most Recent 10-Yr Avg. (2008-09 to 2017-18)	144		Projected 10-Yr Avg. (2019-20 to 2028-29)	218	1.454	45.4%	226	1.491	49.1%
Most Recent 5-Yr Avg. (2013-14 to 2017-18)	152								
Most Recent 3-Yr Avg. (2015-16 to 2017-18)	146								

Births - Maine Center for Disease Control and Prevention, Data, Research and Vital Statistics. 2017 births are preliminary; *2018-19 to 2021-22 births estimated based on average births between 2015-16 and 2017-18. **Note:** Enrollment includes all resident students attending Scarborough schools. **Source:** 2009-10 to 2017-18 -October 1st, resident enrollment from MDOE, 2018-19 data from Scarborough. All else calculated by Wandell Consulting.

When considering the impact of the Avesta and Beacon multi-family projects that have been permitted but not yet completed, there were two different potential scenarios added to both the 2018-19 “best fit” model and the 2018-19 “135 housing unit added annually” model. (See Table II-2). Additional discussion of how these projections were completed can be found in **Section IV** of this report.

+Multi-Family Impact, Scenario 1:

- Based on all multi-family housing units assessed
- +3.85 students will enter the 1st grade in 2019-20
- +7.7 students each year between 2020-21 and 2028-29

+Multi-Family Impact High - Scenario 2:

- Based on projects most similar to the Avesta and Beacon projects
- +5.15 students will enter the 1st grade in 2019-20
- +10.3 students each year between 2020-21 and 2028-29

Table II-2 - First Grade Enrollment by Model - Scarborough - Attending Resident Enrollment								
Birth Year (Oct. 15 - Oct. 14)	# of Resident Births		First Grade Year	1 st Grade Enrollment				
				Best Fit Model	+MFI	+ MFI High	135 Housing Units Model	+MFI High
2012-13	150		2019-20	218	222	223	224	228
2013-14	167		2020-21	243	251	253	249	256
2014-15	158		2021-22	230	237	240	236	243
2015-16	157		2022-23	228	236	239	234	242
2016-17	138		2023-24	201	208	211	206	214
2017-18 pre	142		2024-25	207	214	217	212	220
2018-19*	146	148	2025-26	212	220	222	221	228
2019-20*	146	150	2026-27	212	220	222	223	231
2020-21*	146	152	2027-28	212	220	222	226	234
2021-22*	146	154	2028-29	212	220	222	229	237
(2013-14 to 2017-18)	152		Projected 10-Yr Avg. (2019-20 to 2028-29)	218	225	227	226	233
(2015-16 to 2017-18)	146							

Births - Maine Center for Disease Control and Prevention, Data, Research and Vital Statistics. 2017 births are preliminary; *2018-19 to 2021-22 births estimated based on average births between 2015-16 and 2017-18. **Note:** Enrollment includes all resident students attending Scarborough schools. **Source:** 2009-10 to 2017-18 -October 1st, resident enrollment from MDOE, 2018-19 data from Scarborough. All else calculated by Wandell Consulting.

Figure II-1

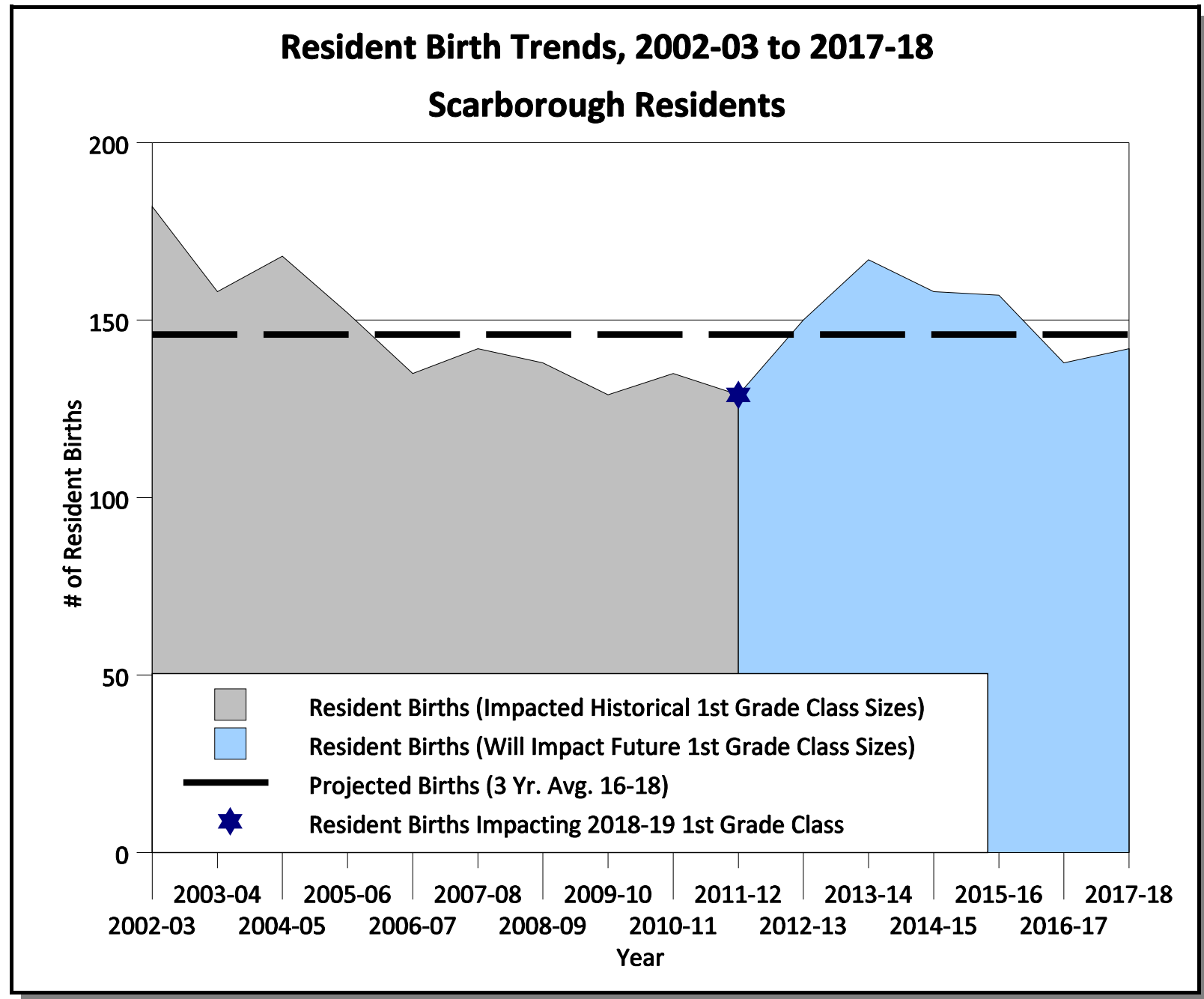
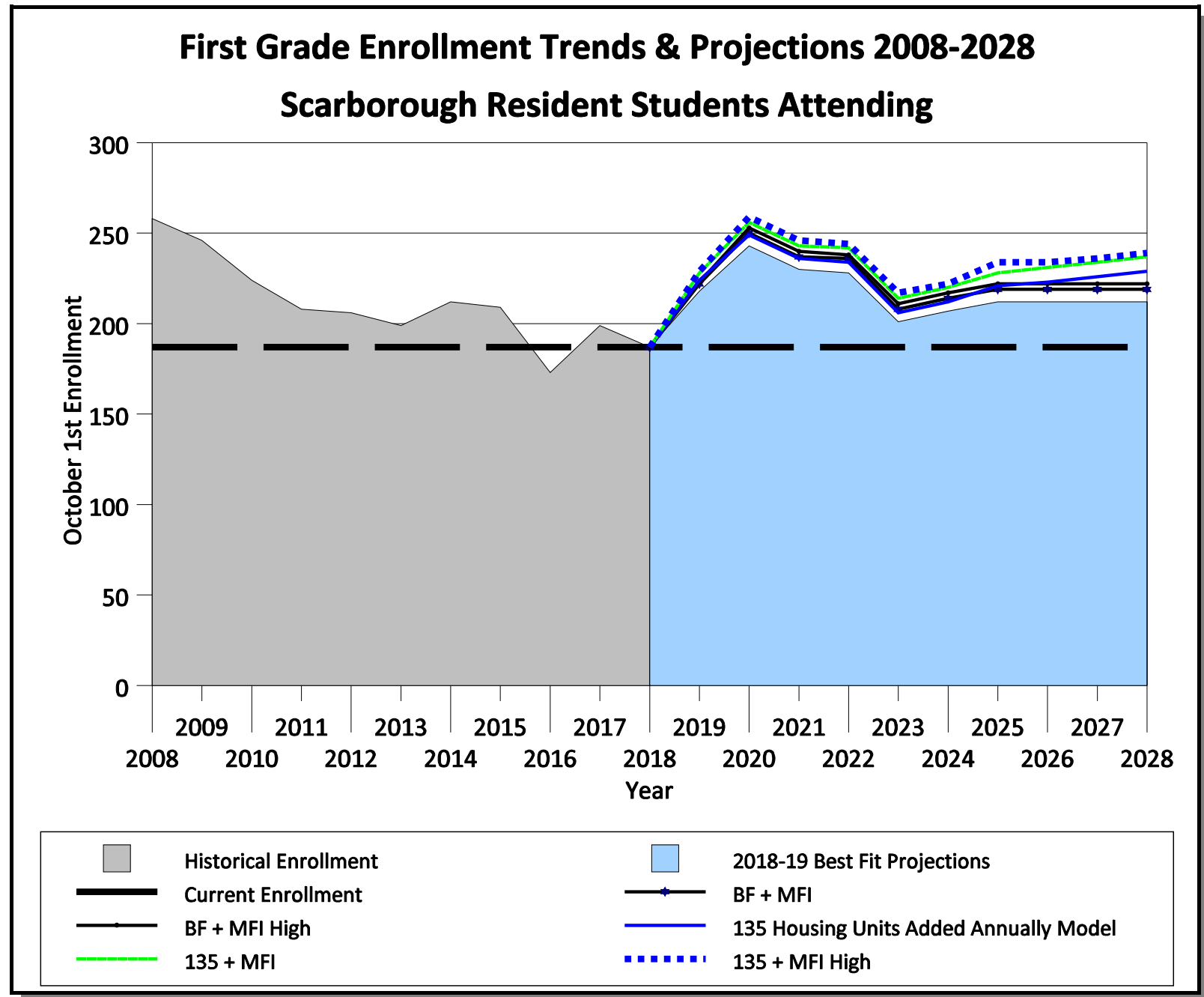


Figure II-2



III. GRADE-TO-GRADE MIGRATION TRENDS

After assessing preschool-migration trends and establishing first grade enrollment, the migration trends between grades are examined and grade-to-grade survival ratios are established. These ratios represent the number of students in a grade in one year (i.e., 1st grade in 2017-18) in relation to the number of students in the next grade the following year (i.e., 2nd grade in 2018-19). The historical average grade-to-grade survival ratios for the last three, four, five, six, seven, eight, nine and ten-year periods are analyzed to determine which period represents the statistical “best fit” at each of the grade levels. The grade-to-grade ratios that represent the “best fit” are then applied to the current enrollment in each grade and projected first grade classes to project enrollment for the next ten years. This section will show how the grade-to-grade migration trends have changed, on average, in Scarborough.

Appendix Table-3 shows average grade-to-grade survival ratios in Scarborough for grades K-12 along with how the ratios translate into a loss or addition of new students. For example, the 10-year K-1 average ratio was 1.029, this translates to an average annual student in-migration of 2.9% between Kindergarten and first grade over the last decade. When looking at these grade-to-grade ratios, student migration trends in Scarborough have changed at some grade levels.

When looking at the average trends over the last three years of the past decade, the most significant change occurred between grades K-1, 1-2, 2-3, and 4-5 over the last 3-year period (2016-17 to 2018-19.) At grades K-1, 1-2, 2-3 a higher in-migration occurred over the last three years compared to the in-migration occurring in the first 5-year period (2009-10 to 2012-13), while at grades 4-5 a lower in-migration occurred over the last three years compared to the in-migration occurring in the first 5-year period. One trend change to watch the slightly higher level of in-migration occurring between 6-7 over the last three years, while the change was not significant, it is notable.

NOTE: The “best fit” model is based on historical migration trends and takes into account changes in trends occurring over the last three years. However, if something unexpected occurs to impact overall average migration trends in Scarborough beyond what is estimated using the historical trends, the enrollment projections would need to be reassessed.

Appendix Table 3 - Scarborough Attending Resident Enrollment - Average Grade-To-Grade Survival Ratios
2018-19 Enrollment Projections

School Year	Grade											
	K-1		1-2		2-3		3-4		4-5		5-6	
	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-
10 Year Avg. (09-18)	1.029	2.9%	1.030	3.0%	1.025	2.5%	1.023	2.3%	1.009	0.9%	1.011	1.1%
1st 5-Year Avg. (09-13)	1.018	1.8%	1.025	2.5%	1.013	1.3%	1.024	2.4%	1.022	2.2%	1.013	1.3%
Last 5-Year Avg. (14-18)	1.039	3.9%	1.035	3.5%	1.038	3.8%	1.023	2.3%	0.995	-0.5%	1.008	0.8%
Last 4-Year Avg. (15-18)	1.039	3.9%	1.045	4.5%	1.050	5.0%	1.014	1.4%	0.996	-0.4%	1.003	0.3%
Last 3-Year Avg. (16-18)	1.048	4.8%	1.053	5.3%	1.065	6.5%	1.020	2.0%	1.002	0.2%	1.017	1.7%

School Year	Grade											
	6-7		7-8		8-9		9-10		10-11		11-12	
	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-
10 Year Avg. (09-18)	1.012	1.2%	1.004	0.4%	0.956	-4.4%	1.003	0.3%	0.996	-0.4%	1.031	3.1%
1st 5-Year Avg. (09-13)	1.011	1.1%	1.002	0.2%	0.961	-3.9%	0.996	-0.4%	0.986	-1.4%	1.027	2.7%
Last 5-Year Avg. (14-18)	1.013	1.3%	1.006	0.6%	0.951	-4.9%	1.010	1.0%	1.006	0.6%	1.034	3.4%
Last 4-Year Avg. (15-18)	1.020	2.0%	1.001	0.1%	0.947	-5.3%	1.010	1.0%	0.996	-0.4%	1.030	3.0%
Last 3-Year Avg. (16-18)	1.031	3.1%	1.003	0.3%	0.959	-4.1%	1.010	1.0%	0.993	-0.7%	1.025	2.5%

2018-19 Enrollment Projections for Scarborough, Completed January 2019
 Data produced by Wandell Consulting

IV. RESIDENTIAL DEVELOPMENT'S IMPACT ON ENROLLMENT

Future school enrollment is impacted by past, current, and future trends in population, housing development, and economic conditions. With the growth of a population and development of new homes comes the potential for new students in the school system. Because school enrollment in Scarborough is impacted by residential development, development trends in the district are analyzed. This information is then used to test whether the “best fit” cohort survival enrollment projections adequately reflect the impact of potential residential development trends.

A. New Housing Unit Development

Table IV-1 presents trends in annual new housing units built in Scarborough between 2003 and 2018. New housing unit data is examined to estimate housing units in the future and to determine if residential development in Scarborough is impacting school enrollment trends. Data on annual new housing units added since 2003 is used to analyze residential development trends, and was obtained from the Scarborough Planning Department. The data on multi-family units excludes 1-bedroom units and any housing that was designated specifically as “senior” or age-restricted housing.

Since 2003, development of all new non-senior housing units has fluctuated between 38 and 180 units per year with new housing unit builds peaking prior to the recession, and falling at the onset of the recession, then picking back up once recovery from the recession began. On average, 97 new non-senior housing units have been added annually in Scarborough since 2003. Over the last five years (2014 to 2018), 123 new non-senior housing units were added annually while the previous five-year period (2009 to 2013) experienced a lower average growth of 58 new units per year. Looking at the last three years, (2016 to 2018), 141 housing units were added annually on average. The increase in new housing over the last three to five years has been driven largely by the addition of new multi-family projects in town, with 180 new housing permits issued in 2018 it appears new housing unit growth has reached a historically high level.

When looking at the multi-family housing projects issued permits over the last couple of years, the new permits included a significant number of 1-bedroom units which would have no statistical impact on future school enrollment. Projects that fit the category for having no impact on school enrollment would be the Eastern Village’s development of 53 units (permits pulled in 2018) consisting of all 1-bedroom units, and the Dunstan Crossing 34 1-bedroom units. It is important to keep in mind the housing figures used for this study excluded any permit issued for a one-bedroom unit. If the permits for those units were included in this analysis, the number of permits issued in 2017 would be 184 permits and in 2018 would fall around 295 permits issued and would have significantly skewed the overall impact of new housing on enrollment.

Even with the removal of the 1-bedroom units, there has also been a significant number of new multi-family units added with two and three-bedroom units. For example the Carrier Woods project off of Mussey Road added a total of 84 multi-family housing units in Scarborough, and while 42 of the units are 1-bedroom apartments, the other 42 units are 2-bedroom apartments. Additional multi-family housing development is also occurring throughout the town. The Beacon (formerly known as the Gateway) is currently under construction and when completed will add 288 new 1, 2, and 3 bedroom units in

town. Another project by Avesta housing currently under construction will add another 38 units of 1, 2 and 3-bedroom housing. When considering the impact of these new housing unit projects, it is important to understand the impact of past housing development on school enrollment.

The Town of Scarborough currently has a Growth Permit cap which allows for 135 growth permits to be issued annually. However, based on the new housing unit data, over the last two years permits have been issued exceeding the 135 growth permit cap. The number of permits issued has exceeded this cap because a number of growth permits were issued from a “reserve pool” of permits set aside by the Scarborough Town Council. This pool of permits was made available to developers of multi-family housing projects set in designated density zones. While the pool of growth permits initially started with 500 available permits for the density zones, there are currently approximately 283.5 permits available in the pool.

At this time the Beacon/Gateway project is the only development that can still pull from the reserve pool with approximately 48 units eligible for the reserve pool permits, leaving a significant number of permits in the pool for future development, or approximately 235.5 permits if none of the 48 units from the Beacon project account for only 0.5 permits.

Another soon to be built large scale Scarborough Downs project would fall under the maximum cap of 135 growth permits issued for new housing units and should not increase the number of permits issued in the town beyond the 135 allowable per year. It is important to keep in mind that the Town Council may elect to change the Growth Ordinance at any time in the future. What this means is, the permits left in the pool may be issued to multi-family housing that contains only studio or one-bedroom units, or it could be issued to housing that contains a variety of bedroom options. While it appears the remaining “reserve pool” permits are of no immediate concern for school enrollment, however that may change at any time. And, any changes to the Growth Ordinance or to this reserve pool of permits may mean the enrollment projections should be revisited.

NOTE: Growth Permits for 1-bedroom units with less than 750 sq. ft of living space only accounts for one-half of a Growth Permit, but would be counted as 1 new housing unit. What this means is a development could have 53 units, but only pull 26.5 Growth Permits if all of the units are 1-bedroom and less than 750 square feet of living space.

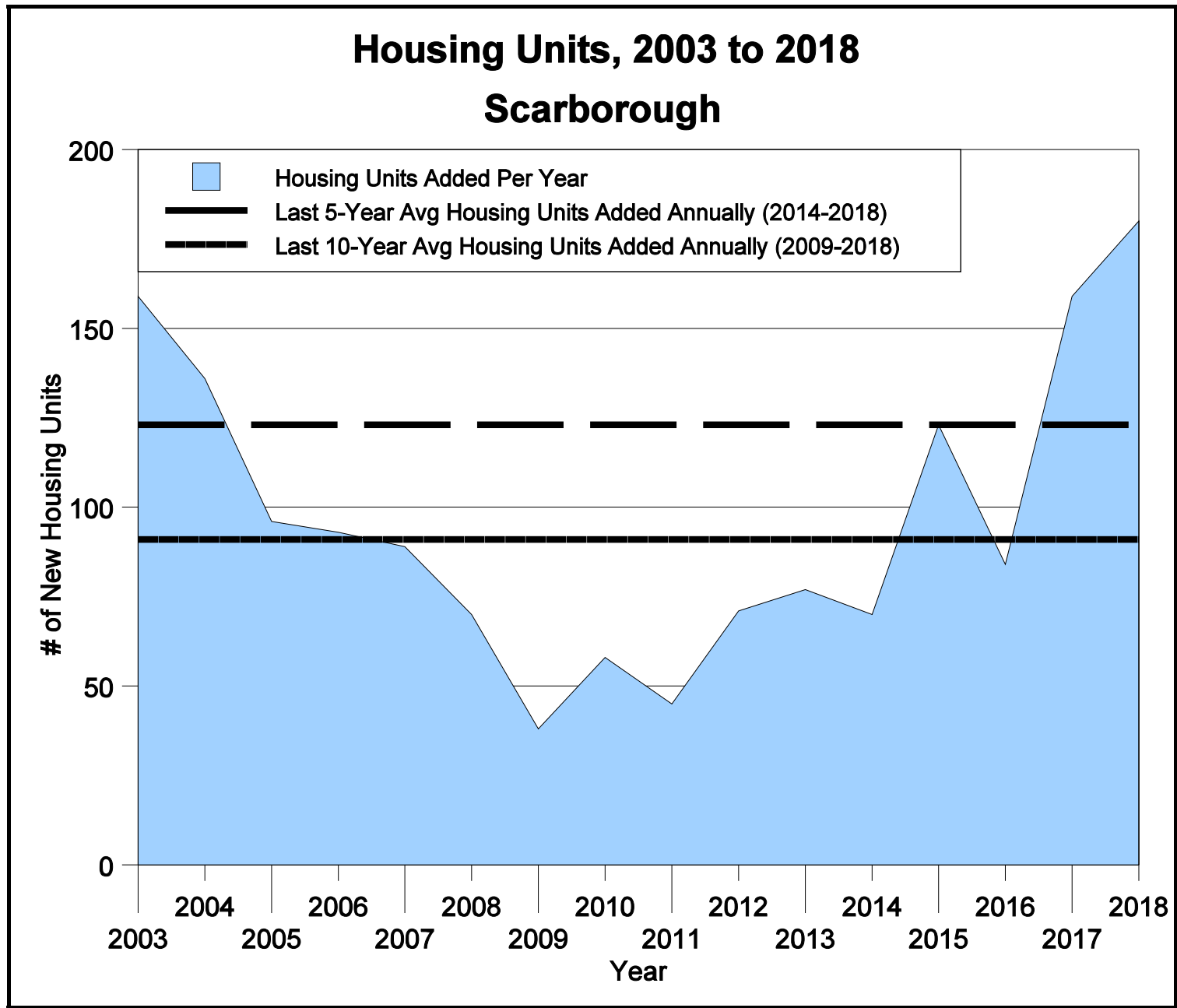
Table IV-1 - New Non-Senior Housing Units, 2003 to 2018
Scarborough

Year	Single-family Homes	Non-Senior Multi-Family (Excludes 1-Bedroom Units)	Total
2003	159	0	159
2004	110	26	136
2005	96	0	96
2006	66	27	93
2007	71	18	89
2008	54	16	70
2009	38	0	38
2010	52	6	58
2011	45	0	45
2012	62	9	71
2013	77	0	77
2014	70	0	70
2015	91	32	123
2016	82	2	84
2017	77	82	159
2018	52	128	180
Average 2003-2018	75	22	97
Most Recent 10-Yr Avg. (2009-2018)	65	26	91
5 Year Average (2009 - 2013)	55	3	58
Last 5 Year Average (2014 - 2018)	74	49	123
Last 3 Year Average (2016 - 2018)	70	71	141

Note: Data includes single-family homes, duplexes and multi-family homes, excludes senior housing and 1-bedroom multi-family units.

Sources: 2003-2018 from Scarborough Planning Department

Figure IV-1



*Chart excludes senior housing and 1-bedroom units

B. Impact of Residential Development on Net In-Migration

Scarborough has historically experienced significant in-migration of both preschool-aged children and school-aged children in the elementary grades. Over the past decade, the size of the first-grade class has exceeded the number of births to Scarborough residents six years earlier by 40 to 71 students per year. Interestingly, the rate of in-migration of preschool-aged children has increased significantly in recent years. The first grade class in the fall of 2009 was approximately 35% larger than the number of births six years earlier. The average rate over the past decade has been approximately 41% while in recent years it has averaged about 42% to 45%. (*See Table II-1*)

Scarborough Public Schools has also historically experienced the net in-migration of students in the elementary grades (primary and intermediate schools). During the late 1990s, the number of students in Grades 1 through 5 often grew by 50 students as they aged into Grades 2 through 6 the following year. The level of net in-migration has decreased and over the past decade has averaged just under a gain of 21 students per year. During these 10 years, net migration varied widely with a loss of 11 students in 2013-14 to 2014-15 to a high in-migration of 49 students in the following year 2014-15 to 2015-16.

Since net in-migration has played a significant role in the enrollment trends in the Scarborough school system, understanding what is driving those trends and how migration may occur in the future is important in projecting possible future enrollment in the system. This section looks at the relationship between residential development and net in-migration of these two age groups to see if there is a consistent relationship between residential development and migration that should be accounted for in the enrollment projections and the long-range building plans for the district.

1. Preschool Migration

Table IV-2 compares the increase in the preschool-aged population with the amount of non-senior residential construction during that same time period. The residential construction figures are based on building permit data supplied by the Town and are offset by a year to account for the period of construction. The table looks at both single-family homes separately and at all non-senior housing including single-family homes, condominiums, and rental apartments combined but excludes any studio/1-bedroom units.

Table IV-2 Relationship of Preschool Migration to Residential Development - Scarborough									
Birth Year	# of Births	First Grade Year	First Grade Class size	Net In-Migration	5-Years	New SFHs	Migration Ratio Students/100 Units	New Non-Senior Units	Migration Ratio Students/100 Units
2002-03	182	2009-10	246	64	2004-08	397	16.1	484	13.2
2003-04	158	2010-11	224	66	2005-09	325	20.3	386	17.1
2004-05	168	2011-12	208	40	2006-10	281	14.2	347	11.5
2005-06	152	2012-13	209	57	2007-11	260	21.9	300	19.0
2006-07	135	2013-14	199	64	2008-12	251	25.5	282	22.7
2007-08	142	2014-15	212	70	2009-13	274	25.5	289	24.2
2008-09	138	2015-16	209	71	2010-14	306	23.2	321	22.1
2009-10	129	2016-17	173	44	2011-15	345	12.8	386	11.4
2010-11	135	2017-18	199	64	2012-16	382	16.8	425	15.1
2011-12	129	2018-19	187	58	2013-17	397	14.6	513	11.3

Sources: Births - Bureau of Health Statistics and Data Management, Maine Department of Health and Human Services, Bureau of Vital Records Administration. 1st Grade Enrollments - October 1st, resident attending enrollment from MDOE for 2002-03 through 2017-18, 2018 from Scarborough School Department. Residential New Housing Units from Town of Scarborough Planning Department. SFHs is short for Single-family Homes

At first glance, the data suggests the level of net in-migration of preschool-aged children since the recession does not directly correlate with the amount of new residential construction in the community. One possible explanation for this is the reduction in the vacancy rate in the Scarborough housing stock that has been occurring over this period of time. In 2008-09 vacancy rates increased as homes were foreclosed and people moved but have dropped since then. According to the American Community Survey, the vacancy rate for owner-occupied housing units in Scarborough decreased from 1.2% in 2009 to 0.2% in 2013 while the vacancy rate for rental units decreased from 11.3% to 3.0% over this period. This decrease in the vacancy rate resulted in approximately 140-150 more housing units being occupied by 2013. If that increase is factored into the migration ratios shown above, the ratios drop somewhat. The 2014 ratio for single-family homes would drop to around 20 while the overall

non-senior ratio would drop to around 16.5 additional preschool-aged children per 100 additional units. In addition, when looking at the ratios after 2010-2014, the migration ratio declined but are more similar to the ratios in 2010-2014 when adjusted for the vacancy rate changes. In 2011-15, there was an in-migration of 12.8 preschool-aged children per 100 single-family homes and 11.4 per 100 of all units. In 2016, there is a ratio of 16.8 preschool-aged per 100 single-family homes and 15.1 for all units, in 2017 14.6 preschool-aged students for 100 single-family or 11.3 additional students per 100 units of all unit types.

2. Elementary Migration

Table IV-3 looks at how the combined enrollment in Grades 1 through 5 changes as those classes age into Grades 2 through 6 the following year compared to the amount of residential development authorized during the preceding year. In most years, those five grades have grown in total by 20 to 30 students as they moved up one grade while the fifteen-year average is approximately +20 students. In the transition from October of 2007 to October of 2008, these grades experienced a net out-migration. This was the period of the housing market collapse. However, between October 2014 and October 2015 another net out-migration occurred. Excluding these two years from the mean, results in an average in-migration of 27 students per year.

When the year-by-year elementary migration is compared to the number of building permits issued by the Town in the preceding year for non-senior housing units (single-family homes, condominiums, and rental apartments) the elementary migration fluctuated independently of the number of new housing units added, therefore no clear relationship between the level of residential construction and the level of elementary migration was noted. However, except for over the last three years there seems to be a bit more correlation between new housing and elementary in-migration.

Table IV-3 Relationship of Elementary Migration to Residential Development - Scarborough							
Building Calendar Year	Single-Family Homes	Non-Senior Multi-Family Units (Excl 1-br Units)	Total Non-Senior Units (Excl 1-br Units)	School Year	Net Migration (Grades 1-5 to 2-6)	In-Migration per 100 Units	
						Per Single-family Homes	Per Total Non-Senior Unit
2003	159	0	159	2003-04 to 2004-05	16	10.1	10.1
2004	110	26	136	2004-05 to 2005-06	23	20.9	16.9
2005	96	0	96	2005-06 to 2006-07	26	27.1	27.1
2006	66	27	93	2006-07 to 2007-08	30	45.5	32.3
2007	71	18	89	2007-08 to 2008-09	-9	-12.7	-10.1
2008	54	16	70	2008-09 to 2009-10	22	40.7	31.4
2009	38	0	38	2009-10 to 2010-11	24	63.2	63.2
2010	52	6	58	2010-11 to 2011-12	2	3.8	3.4
2011	45	0	45	2011-12 to 2012-13	35	77.8	77.8
2012	62	9	71	2012-13 to 2013-14	31	50.0	43.7
2013	77	0	77	2013-14 to 2014-15	14	18.2	18.2
2014	70	0	70	2014-15 to 2015-16	-11	-15.7	-15.7
2015	91	32	123	2015-16 to 2016-17	49	53.8	39.8
2016	82	2	84	2016-17 to 2017-18	22	26.8	26.2
2017	77	82	159	2017-18 to 2018-19	26	33.8	16.4
15-Year Avg.	77	15	91	15-Year Avg.	20	26.1	21.9
Sources: Net Migration - Calculated based on October 1 st attending resident enrollment. Residential New Housing Units - 2003-2018 from Town Planning Department							

C. **Enrollment Impacts of Various Types of Residential Development**

Scarborough has gone through various patterns of residential development. In the 1970s and 1980s, the Town experienced a mix of single-family development and townhouse-style condominium development much of which was located on the east side of the community. The 1990s saw primarily single-family development with much of it occurring in large-lot subdivisions some of which were in the west side of the community. Over the past fifteen years, residential development in Scarborough has returned to a more mixed pattern of development including low-density single-family development, higher density planned developments such as Dunstan Crossing and Eastern Village, and multi-family housing such as Carrier Woods and the Beacon, along with housing specifically geared toward seniors.

In 2015 a private public policy consulting firm, Planning Decisions Inc. was hired by Scarborough Public Schools to look at the impact of new housing unit development on enrollment. To help understand how various types of residential development impacted school enrollments, Planning Decisions looked at actual enrollments from a sample of various types of projects.

Five types of residential developments were identified to analyze:

- Traditional single-family subdivisions developed between 1995 and 2000
- Traditional single-family subdivisions developed between 2005 and 2010
- Traditional single-family subdivisions developed after 2010
- Non-senior multi-family rental housing
- Nontraditional/planned developments

The three single-family subdivision groups were selected to see if and how school enrollments change as a subdivision ages.

For each group, Planning Decisions worked with the Scarborough Planning Department to identify typical projects in each category. Projects were selected in which the housing units are located on new streets to make it easier to accurately identify the number of school children originating from that development. Scarborough Public Schools then reviewed its enrollment records and provided Planning Decisions with grade-by-grade enrollment counts for each development.

Table IV-4 summarizes the enrollments per housing unit by the five categories. The table provides the enrollment per unit for the primary, intermediate, middle and high school grade groupings as well as for the total enrollment in all grades.

Table IV-4
Enrollment per Unit by Type of Development

Type of Development	Enrollment per Unit				
	Primary	Intermediate	Middle	High	Total
Single-family Subdivisions 1995-2000	0.12	0.17	0.19	0.39	0.86
Single-family Subdivisions 2005-2010	0.21	0.18	0.24	0.25	0.85
Single-family Subdivisions after 2010	0.12	0.12	0.15	0.19	0.58
Non-Senior Multi-family Rentals	0.10	0.08	0.09	0.08	0.36
Nontraditional/Planned Development	0.12	0.05	0.08	0.01	0.27

Source: Calculated by Planning Decisions, Inc. in 2015 enrollment study.

Fast forwarding to 2018, new multi-family housing units development has increased significantly. The question of how this new development is impacting enrollment is at the forefront of facilities planning discussions. To determine the impact of future new multi-family housing on school enrollment we must first determine the impact of past multi-family housing unit development. In conjunction with the Planning Department, six multi-family housing units projects were identified to use for comparison purposes. These projects included Burnham Woods, Carrier Woods, Foxcroft, Coach Lantern, Meadow Woods, with The Oaks and the West Oaks being combined as one for the purpose of analysis. These six developments account for 505 total units, with the vast majority of units (337) offering 2-bedrooms, another 75 units have 3-bedrooms, and 93 offer only 1-bedroom. *(See Table IV-5).*

Table IV-5
Multi-Family Project Details

Development	Roads	# of Units	Type of Units	# of 1-bedroom	# of 2-bedroom	# of 3-bedroom
Burnham Woods	North St/Diner Dr	55	1, 2 bd	40	15	0
Carrier Woods	Carrier Woods Rd	84	1, 2 bd	42	42	0
Foxcroft	Foxcroft Rd/Foxcroft Cir	104	2 bd	0	104	0
Coach Lantern	Coach Lantern E/W	90	2, 3 bd	0	35	55
Meadow Woods	62 Gorham Rd	37	1, 2, 3 bd	4	30	3
The Oaks/West Oaks	Pinoak Dr	135	1, 2, 3 bd	7	111	17
Total Units		505		93	337	75

Data from Scarborough Planning Department

Table IV-6 details the enrollment by grade and by grade group for each of the six projects used for comparison and then calculates a ratio of students per unit; 1-bedroom units were excluded from the ratios since studios or one-bedroom units would have no impact on enrollment. For all grades, K-12, there were 158 students in Scarborough living in these six multi-family housing projects. While students were distributed through all grade levels, slightly more students were found in grades K-2 (44 students total) compared to the other 3 grade groups (38 in grades 3-5, 35 in grades 6-8, and 41 students in grades 9-12).

Interestingly, a different enrollment per unit is noted between projects with 1 and 2 bedrooms compared with projects that offer 1, 2 and 3-bedroom units.

Burnham Woods:

- Offers **15** 2-bedroom units
- 12 enrollment was 0.20 students/unit

Carrier Woods:

- Offers **42** 2-bedroom units
- K-12 enrollment was 0.12 students/unit

Foxcroft:

- Offers **104** 2-bedroom units
- K-12 enrollment was 0.17 students/unit

When looking at the projects with 1, 2 and 3 bedroom units (Coach Lantern, Meadow Woods, and The Oaks/West Oaks), the overall ratio of students per all unit types more than doubles, with Coach Lantern having an enrollment of 0.43 students/unit, and Meadow Woods had 0.48 students/unit, and triples for The Oaks and West Oaks combined, with an enrollment of 0.60 students/unit.

The Oaks and West Oaks offers a larger scale development in close proximity to the schools with the vast majority being market rate units. Whether the size of the project or location of the project makes it more desirable is a bit of an uncertainty, but one would venture to guess both factors are at least considered by the families renting the units. When looking at the impact by specific project type and for bedroom type the data also reveals some interesting trends.

Table IV-7 breaks down the enrollment by 2 and 3-bedroom units for each of the multi-family housing projects analyzed.

Coach Lantern:

- Offers **35** 2-bedroom units and **55** 3-bedroom units
- 2-bedroom units contribute 0.14 students/unit, a ratio very similar to Burnham Woods, Carrier Woods, and Foxcroft
- 3-bedroom units contribute 0.62 students/unit. A ratio higher than the impact of single-family homes built after 2010, or 0.58 students/units, but lower than the impact of those single-family homes built between 2005 and 2010, or 0.85 students/unit

Meadow Woods:

- Offers **30** 2-bedroom units and **3** 3-bedroom units.
- 2-bedroom units contribute 0.37 students/unit, in line with multi-family rentals, or 0.36 students/unit
- 3-bedroom units contribute 1.67 students/units. A ratio is significantly higher than the student/unit impact of any single-family homes, but was also subject to significant skewing of the data due to the extremely small sample size of 3 units with 3-bedrooms

The Oaks/West Oaks:

- Offers **111** 2-bedroom units and **17** 3-bedroom units
- 2-bedroom impact is 0.59 students/unit, the same rate as single-family homes built after 2010
- 3-bedroom units the impact is 0.71 students/unit, a rate that also falls inline with the single-family home impact

Table IV-6 - Enrollment for Each Housing Project Studied - Scarborough Enrollment in Multifamily Housing Projects 2018-19

		Housing Information					Enrollment by Grade																Enrollment by School/Group					Ratio of Students/Unit (Excl 1-br)				
		X of Units	Type of Units	1 bd	2bd	3bd	K	1	2	3	4	5	6	7	8	9	10	11	12	K-2	3-5	6-8	9-12	K-12	Ratio K-2	Ratio 3-5	Ratio 6-8	Ratio 9-12	Ratio K-12			
Development	Roads	55	1, 2 bd	40	15	0	1							2						1	0	2	0	3	0.07	0.00	0.13	0.00	0.20			
Carrier Woods	Carrier Woods Rd	84	1, 2 bd	42	42	0	1	1		1			1						1	2	1	1	1	5	0.05	0.02	0.02	0.02	0.12			
Foxcroft	Foxcroft Rd/Foxcroft Cir	104	2 bd	0	104	0	3		1	2	1	2		3			1	3	1	4	5	3	6	18	0.04	0.05	0.03	0.06	0.17			
Coach Lantern	Coach Lantern E/W	90	2, 3 bd	0	35	55	2	3	3	4	5	1	2	1	6	3	3	5	1	8	10	9	12	39	0.09	0.11	0.10	0.13	0.43			
Meadow Woods	62 Gorham Rd	37	1, 2, 3 bd	4	30	3	2	1	2	1				2		3	1	2	2	5	1	2	8	16	0.15	0.03	0.06	0.24	0.48			
Oaks E/W	Pinoak Dr	135	1, 2, 3 bd	7	111	17	10	9	5	6	7	8	3	8	7	4	6	2	2	24	21	18	14	77	0.19	0.16	0.14	0.11	0.60			
Totals		505		93	337	75	18	15	11	14	13	11	6	16	13	11	13	10	7	44	38	35	41	158	0.11	0.09	0.08	0.10	0.38			

Notes:

*Housing Data from Scarborough Planning Office, and Development Managers

*Enrollment Data from Scarborough Schools - based on 10/18/18 count of students

*1-Bedroom Units were removed from the ratios. Only 2 and 3-Bedroom units were considered

Table IV-7 - Impact by Specific Project Type and by Bedroom/Unit Type - Scarborough Enrollment in Multifamily Housing Projects 2018-19

Projects with only 1 and 2 bedroom units																																				
Development		Roads		Housing Information						Enrollment by Grade																Enrollment by School/Group						Ratio of Students/Unit (Excl 1-br)				
				X of Units	Type of Units	1 bd	2bd	3bd	K	1	2	3	4	5	6	7	8	9	10	11	12	K-2	3-5	6-8	9-12	K-12	Ratio K-2	Ratio 3-5	Ratio 6-8	Ratio 9-12	Ratio K-12					
Burnham Woods	North St/Diner Dr	55	1, 2 bd	40	15	0		1						2						1	0	2	0	3	0.07	0.00	0.13	0.00	0.20							
Carrier Woods	Carrier Woods Rd	84	1, 2 bd	42	42	0	1	1		1				1						1	2	1	1	1	5	0.05	0.02	0.02	0.02	0.12						
Foxcroft	Foxcroft Rd/Foxcroft Cir	104	2 bd	0	104	0	3		1	2	1	2		3			1	3	1	1	4	5	3	6	18	0.04	0.05	0.03	0.06	0.17						
Impact from Projects with 1/2 bedrooms		243		82	161	0	4	2	1	3	1	2	1	5	0	1	3	1	2	7	6	6	7	26	0.04	0.04	0.04	0.04	0.16							
Projects with 1, 2, 3 bedroom units																																				
Development		Roads		Housing Information						Enrollment by Grade																Enrollment by School/Group						Ratio of Students/Unit (Excl 1-br)				
				X of Units	Type of Units	1 bd	2bd	3bd	K	1	2	3	4	5	6	7	8	9	10	11	12	K-2	3-5	6-8	9-12	K-12	Ratio K-2	Ratio 3-5	Ratio 6-8	Ratio 9-12	Ratio K-12					
Coach Lantern	Coach Lantern E/W	90	2, 3 bd	0	35	55	2	3	3	4	5	1	2	1	6	3	3	5	1	8	10	9	12	39	0.09	0.11	0.10	0.13	0.43							
		35			35											1	2	1	1	0	0	1	4	5	0.00	0.00	0.03	0.11	0.14							
		55				55	2	3	3	4	5	1	2	1	5	1	2	4	1	8	10	8	8	34	0.15	0.18	0.15	0.15	0.62							
Meadow Woods	62 Gorham Rd	37	1, 2, 3 bd	4	30	3	2	1	2	1				2		3	1	2	2	5	1	2	8	16	0.15	0.03	0.06	0.24	0.48							
		30			30		2	1	2					1		3	1	1		5	0	1	5	11	0.17	0.00	0.03	0.17	0.37							
		3				3				1				1				1	2	0	1	1	3	5	0.00	0.33	0.33	1.00	1.67							
Oaks E/W	Pinoak Dr	135	1, 2, 3 bd	7	111	17	10	9	5	6	7	8	3	8	7	4	6	2	2	24	21	18	14	77	0.19	0.16	0.14	0.11	0.60							
		111	2 bd		111		8	8	5	4	6	7	3	7	6	4	4	2	1	21	17	16	11	65	0.19	0.15	0.14	0.10	0.59							
		17	3 bd			17	2	1		2	1	1		1	1		2		1	3	4	2	3	12	0.18	0.24	0.12	0.18	0.71							
Impact from Projects with 1/2/3 Bedroom Units		262		11	176	75	14	13	10	11	12	9	5	11	13	10	10	9	5	37	32	29	34	132	0.15	0.13	0.12	0.14	0.53							
Impact from 2 Bedroom Units		176			176		10	9	7	4	6	7	3	8	7	9	6	4	1	26	17	18	20	81	0.15	0.10	0.10	0.11	0.46							
Impact from 3 Bedroom Units		75				75	4	4	3	7	6	2	2	3	6	1	4	5	4	11	15	11	14	51	0.15	0.20	0.15	0.19	0.68							
Impact from 2-Bd Units, Both Project Types		337			337		14	11	8	7	7	9	4	13	7	10	9	5	3	33	23	24	27	107	0.10	0.07	0.07	0.08	0.32							

Lastly, in **Table IV-8** the 2015 study findings for the enrollment per unit of impact for non-senior multi-family rentals to the overall ratios of impact from the 2018 study, the ratios have not significantly changed. The total enrollment per unit in 2015 was 0.36 while in 2018 the total impact was 0.38 per unit. However, in 2018 when we looked at things more closely, or specifically by number of bedrooms offered in each unit and the enrollment coming from each unit type, the impact was significantly different, with the impact of 3-bedroom units being significantly higher than the combined impact of all unit types.

It is important to keep in mind, the pool of multi-family housing units was relatively small with only 176 2-bedroom units and 75 3-bedroom units analyzed in the study. However, once the Avesta and the Beacon projects are completed and occupied, the pool of 3-bedroom units would increase by 67%. Therefore, if additional large scale multi-family projects are developed in the next few years it would be prudent for the district to re-visit the multi-family impact analysis once the Avesta and Beacon projects are complete to determine if there have been significant changes in the impact per unit type.

Table IV-8 Enrollment per Unit Comparison 2015 Study to the 2018 Study - Scarborough Enrollment 2018-19					
Type of Development	Enrollment per Unit				
	Primary K-2	Intermediate 3-5	Middle 6-8	High 9-12	Total
2015 Study					
Non-Senior Multi-family Rentals	0.10	0.08	0.09	0.08	0.36
2018 Study					
All Non-Senior Multi-family Units 6 Projects Combined (excludes 1-bd units)	0.11	0.09	0.08	0.10	0.38
1 & 2 bedroom Unit Projects Burnham Woods/Carrier Woods/Foxcroft	0.04	0.04	0.04	0.04	0.16
1, 2, & 3 bedroom Unit Projects Coach Lantern/Meadow Woods/Oaks E/W	0.15	0.13	0.12	0.14	0.53
<i>Impact from 2-bedroom Units</i>	<i>0.15</i>	<i>0.10</i>	<i>0.10</i>	<i>0.11</i>	<i>0.46</i>
<i>Impact 3-bedroom Units</i>	<i>0.15</i>	<i>0.20</i>	<i>0.15</i>	<i>0.19</i>	<i>0.68</i>
<i>Combined 2-bedroom Unit Impact</i>	<i>0.10</i>	<i>0.07</i>	<i>0.07</i>	<i>0.08</i>	<i>0.32</i>
Source: Calculated by Planning Decisions, Inc. in 2015 enrollment study, 2018 calculated by Wandell Consulting					

D. Future Rate of Residential Development

The amount of residential development in Scarborough has varied widely over the past decade as the recession and housing market collapse of 2007-2008 took its toll on new housing starts in the community. The number of permits for new single-family homes dropped from 159 in 2003 to a low of 38 in 2009. (*See Table IV-1*). Since 2010, single-family starts have rebounded averaging 70 units between 2016 and 2018. Prior to 2015, multi-family housing that is not targeted to seniors has occurred intermittently over the past decade primarily at the Oaks development in Oak Hill. However, as discussed previously more recently new multi-family unit development has increased significantly and based on the assessment is the last second, multi-family housing has a strong influence on in-migration in the schools.

In looking toward the future, Jay Chace, Scarborough's Town Planner was asked about the likely level of future residential development in the community over the next five to ten years. Based on the current level of activity, he projects there is a 50/50 chance that to town will continue to meet the 135 permits issued per year under the Growth Permit Cap. The remaining estimated 235.5 permits in the “reserve pool” set aside by the Town Council also could enter the picture at any time, but without a proposed project to use as a guide, the potential impact on enrollment is largely unknown.

Next, the “best fit” model will be tested to determine what level of new housing unit development is accounted for in the preschool and elementary migration trends. In addition, since the town has two large scale multi-family projects in play which have not yet been accounted for in the trends since the units were not built/occupied as of 10/1/2018, the impact of those multi-family units on enrollment must also be determined.

E. Relationship of Residential Development to School Enrollment

The in-house cohort survival does not directly incorporate the level of residential development and turnover in the existing housing stock when projecting school enrollment. Rather, the survival ratios used within cohort models reflect the historical impact of net migration (which is influenced by residential development and turnover) on school enrollment. If future residential development levels, turnover levels, or their relationship to net migration is significantly different from levels experienced in the past ten years, then cohort survival models may overstate or understate future enrollment. For school planning purposes, understanding the degree to which residential development activity will impact school enrollment is important.

1. Net Preschool Migration

To show the relationship between residential development and preschool net migration, the ratios between net preschool migration reflected in the first grade enrollment and the number of new housing units built in Scarborough between the year of the first grade enrollment and the six years prior. (*See Table IV-9*).

On average, for each of the five-year periods examined, 373 new housing units were built in Scarborough. The average net migration of preschool-aged children for each of the first grade enrollment years was an in-migration of 60 children, for a ratio of 0.159 children per unit, or a gain of about 16 children per 100 units built.

On average, over the last five-year period of 2009-13 to 2013-17, 387 new housing units were built in Scarborough, as similar level as the 10-year average. The average net migration of preschool-aged children for each of the first grade enrollment years was an in-migration of 61 children, for a ratio of 0.159 children per unit, or a gain of about 16 children per 100 units built, or the same average in-migration as seen over the 10-year period.

On average, over the last three-year period of 2011-15 to 2013-17, 441 new housing units were built in Scarborough, a higher level compared with what occurred over the last five-year period. The average in-migration of preschool-aged children for each of the first grade enrollment years was slightly lower compared with the last five-year average, or an average in-migration of 55 children occurred, for a ratio of 0.125 children per unit, or a gain of about 13 children per 100 units built.

To determine the average impact on future preschool in-migration levels from projected residential development, the three-year experience in Scarborough, or a ratio of 0.125 of preschool in-migration to residential development will be used for comparison.

**Table IV-9 - Births, First Grade Enrollment, Net Preschool Migration and New Housing Units Added
Scarborough**

Birth Year (Oct. 15-Oct. 14)	# of Births	1st Grade Class Year	1st Grade Enrollment	Net Migration	5-Year Periods	New Single-Family Homes	Ratio Migr/SFH	SF + Multi- Family Units	Ratio Migr/ All Units
2002-03	182	2009-10	246	64	2004-08	397	0.161	484	0.132
2003-04	158	2010-12	224	66	2005-09	325	0.203	386	0.171
2004-05	168	2011-12	208	40	2006-10	281	0.142	348	0.115
2005-06	152	2012-13	206	54	2007-11	260	0.208	300	0.180
2006-07	135	2013-14	199	64	2008-12	251	0.255	282	0.227
2007-08	142	2014-15	212	70	2009-13	274	0.255	289	0.242
2008-09	138	2015-16	209	71	2010-14	306	0.232	321	0.221
2009-10	129	2016-17	173	44	2011-15	345	0.128	386	0.114
2010-11	135	2017-18	199	64	2012-16	382	0.168	425	0.151
2011-12	129	2018-19	187	58	2013-17	397	0.146	513	0.113
10 Yr Avg. (02-11)	147	10 Yr Avg. (09-18)	206	60	Avg. (04-17)	322	0.185	373	0.159
5 Yr Avg. (07-11)	135	5 Yr Avg. (14-18)	196	61	Avg. (09-17)	341	0.180	387	0.159
3 Yr Avg. (09-11)	131	3 Yr Avg. (16-18)	186	55	Avg. (11-17)	375	0.148	441	0.125

Sources: Births - Bureau of Health Statistics and Data Management, Maine Department of Health and Human Services, Bureau of Vital Records Administration. 1st Grade Enrollments - October 1st, Resident Enrollment Reports 2004-2017 from MDOE, 2018 from Scarborough School Department. Residential New Housing Units - 2004-2018 from Scarborough Planning Department. All else calculated by Wandell Consulting

To determine how many new housing units are accounted for in the 2018-19 “best fit” model, the average ratio of preschool in-migration to housing units was applied to the average preschool in-migration projected by the 2018-19 “best fit” model. (See *Table IV-10*).

Based on this analysis, the 2018-19 “best fit” model accounts for the development of about 90 new housing units annually. Therefore, the 2018-19 “best fit” model would underestimate the impact of new housing development if 135 new housing units are added annually. Looking at the difference between what the 2018-19 “best fit” model accounts for and the estimated future development of 135 housing units added annually, the model accounts for 45 fewer units annually. If we take the difference of 45 units and apply it to the average ratio of preschool in-migration to new units, or 0.125, we find a difference of 5.6. In other words, if new housing unit development continues to meet the growth cap of 135 permits per year, to adequately account for the impact of those new housing units, an additional 5.6 students should be added to each first grade class.

Therefore, a second projection model for Scarborough was created called the 2018-19 “135 housing units added annually” model which includes the addition of 5.6 students in each projected first grade class size.

Table IV-10 - Comparison of the Potential Impact of Future New Home Development on Preschool In-Migration to “Best Fit” Enrollment Projections for Scarborough	
	2018-19 Best Fit Model
Projected Annual New Housing Units Added	90
Projected Housing Added Over a 6-Year Period (Time Between Birth and 1 st Grade Enrollment)	540
Average Ratio of Preschool In-migration to New Housing Units (Average 2011-15 to 2013-17)	0.125
Potential Annual Preschool In-migration Resulting from Projected Development Levels	67.5
Average Annual Preschool In-migration Levels reflected in the 2018-19 “best fit” model	67.9
<i>Difference - Potential Impact</i>	(0.4)
Difference between high estimate of future development (135 housing units) and units accounted for by the 2018-19 “best fit” model	45.0
Average Ratio of Preschool In-migration to New Housing Units (Average 2011-15 to 2013-17)	0.125
Impact from additional housing units (# of additional units X average in-migration/per unit)	5.6
Source: Calculated by Wandell Consulting.	

2. Net Elementary (Grades 1-6) Migration

Regarding the relationship between residential development levels and migration of students at the elementary grades (first to sixth), the ratio of annual net migration of students at each of the grade levels and annual new housing units built in Scarborough during the year was examined. (See *Table IV-11*).

In the ten years between 2008-09/2009-10 and 2017-18/2018-19, Scarborough experienced an average net in-migration of elementary students while migration fluctuated year-to-year between an out-migration of 11 students and an in-migration of 49 students. The average ratio of in-migration of elementary students (1-6) to new housing units was 0.269, or, on average, over the last ten years every 100 housing units built in Scarborough resulted in the in-migration of about 27 elementary-aged students.

Scarborough experienced an average in-migration of elementary students over the last five years (2013-14/2014-15 to 2017-18/2018-19), with an average in-migration ratio of 0.195. On average, over the last five years for every 100 housing units built in Scarborough an in-migration of about 20 elementary-aged students occurred.

Over the last three years (2015-16/2016-17 to 2017-18/2018-19), Scarborough experienced an average in-migration of elementary students, with an in-migration ratio of 0.265. Or, on average, over the last three years for every 100 housing units built in Scarborough an in-migration of about 27 elementary-aged students occurred, a higher level of migration compared with most recent five-year average, but a similar rate as the 10-year average.

To determine the impact on future elementary in-migration levels from projected levels of residential development based on the most recent 3-year ratio (ratio of 0.265) of elementary in-migration to residential development.

**Table IV-11 - Net Elementary (1-6) Migration and New Housing Units
Scarborough**

Enrollment Years	Net Migration (Grades 1-5 - 2-6)	Year	# of New Housing Units	Ratio Migr/HU
2008-09 to 2009-10	22	2008	70	0.314
2009-10 to 2010-11	24	2009	38	0.632
2010-11 to 2011-12	2	2010	58	0.034
2011-12 to 2012-13	35	2011	45	0.778
2012-13 to 2013-14	31	2012	71	0.437
2013-14 to 2014-15	14	2013	77	0.182
2014-15 to 2015-16	(11)	2014	70	(0.157)
2015-16 to 2016-17	49	2015	123	0.398
2016-17 to 2017-18	22	2016	84	0.262
2017-18 to 2018-19	26	2017	159	0.164
10 Yr Avg. (09-18)	21	10 Yr Avg. (08-17)	80	0.269
5 Yr Avg. (14-18)	20	5 Yr Avg. (13-17)	103	0.195
3 Yr Avg. (16-18)	32	3 Yr Avg. (15-17)	122	0.265

Sources: Net Migration - Calculated by Wandell Consulting based on October 1st Resident Enrollment Reports. Residential New Housing Units - 2008-2017 from Town Planning Department

To determine how many housing units are accounted for in the 2018-19 “best fit” model, the average ratio of elementary in-migration to housing units was applied to the average elementary in-migration projected by the 2018-19 “best fit” model. (See *Table III-12*). Based on this analysis, the 2018-19 “best fit” model accounts for the development of **132 new housing units added annually**, only slightly underestimating the impact of new housing development if 135 new housing units are added annually.

Next the impact of 3 additional housing units added annually was assessed using the enrollment per unit information discussed previously. If we take the difference of 3 units and apply it to the average ratio of preschool in-migration to new units over the last 3 years, or 0.265, we find a difference of 0.8 students, or 0.14 students per grade in grades 1-6. In other words, to adequately account for the impact of 135 new housing units added annually in Scarborough, an additional 0.14 students should be added to each grade in grades 1-6.

Table IV-12 - Comparison of the Potential Impact of Future New Housing Unit Development on Elementary In-Migration (Grades First through Sixth) to the “Best Fit” Enrollment Projections for Scarborough	
	2018-19 Best Fit Model
New Housing Units Added	132
Average Ratio of In-migration to New Housing Unit Added Between 2015-2017	0.265
Potential Annual In-grade In-migration Resulting from Projected Residential Development	35.0
Average Annual In-migration Levels for Grades 1-6 reflected in the 2018-19 “best fit” model	35.0
Difference - Potential Impact	0.0
<i>Difference per grade in grades 1 to 6</i>	<i>0.0</i>
	2018-19 135 Housing Units Added Annually Model
Difference - New Housing Units Added	135
Average Ratio of In-migration to New Housing Unit Added Between 2015-2017	0.265
Potential Annual In-grade In-migration Resulting from Projected Residential Development	35.8
Average Annual In-migration Levels for Grades 1-6 reflected in the 2018-19 “best fit” model	35.0
Difference - Potential Impact	0.8
<i>Difference per grade in grades 1 to 6</i>	<i>0.14</i>
Source: Calculated by Wandell Consulting	

F. Impact of Avesta and the Beacon Multi-Family Projects

Additionally, the impact of the currently under construction multi-family projects (Avesta and Beacon) would need to be considered since these projects are not adequately accounted for by the “best fit” model. The Avesta project has 38 total units with 18 1-bedroom units being discounted from the study, however the remaining 20 units would have an impact on enrollment as 12 are 2-bedroom units and 8 are 3-bedroom units. The Beacon project consists of 288 total units with 102 being discounted 1-bedroom units, leaving another 186 units (144 are 2-bedroom units and 42 are 3-bedroom units) which would impact enrollment.

To assess the impact of multi-family housing on enrollment, two different scenarios were used. The first scenario is based on the overall average impact of multi-family housing (using the impact from all 6 projects combined) on school enrollment, by bedroom type. The second scenario used was created based on the impact of similar projects to the Avesta and Beacon (those with 1, 2 and 3 bedroom units) project by bedroom type. (*See Table IV-13*)

Multi-Family Impact - Scenario 1:

- +23.1 students in K-2 or +7.7 students per grade
- +20.9 students in 3-5 or +7 students per grade
- +18.4 students in 6-8 or +6.1 students per grade
- +22 on 9-12 or +5.5 students per grade
- **+84.4 total additional students in grades K-12**

Multi-Family Impact, High - Scenario 2:

- +30.9 students in K-2 or +10.3 students per grade
- +25.6 students in 3-5 or +8.5 students per grade
- +23.1 students in 6-8 or +7.7 students per grade
- +26.7 on 9-12 or +6.7 students per grade
- **+106.3 total additional students in grades K-12**

Based on the two scenarios, four additional models were created. The first two models added the additional students from Scenario 1 and Scenario 2 to the “best fit” model, the other two models are based on the “135 housing units added annually” model then also add the impacts from both Scenarios. Since the Beacon project will not be completed until after 10/1/19 the additional impact on enrollment in 2019-20 was cut in half, with the full impact occurring between 2020-21 and 2028-29.

Table IV-13 Assessment of Additional Multi-Family Housing on Enrollment per Unit by Type of Development - Scarborough						
Development	Location	# of Units	Type of Units	# of 1-bedroom	# of 2-bedroom	# of 3-bedroom
Avesta Project	577 Route 1	38	1, 2, 3 bedrooms	18	12	8
Beacon (Gateway)	4000 Gateway Circle (Off of Haigis Parkway)	288	1, 2, 3 bedrooms	102	144	42
Total Units		326		120	156	50
Type of Development	Enrollment per Unit					
	Primary (K-2)	Intermediate (3-5)	Middle (6-8)	High (9-12)	Total (K-12)	
Scenario 1: All 6 Projects Analyzed (2 + 3-bedroom impact combined)	0.11	0.09	0.09	0.10	0.38	
2-bedroom unit impact ratio (students/unit)	0.10	0.07	0.07	0.08	0.32	
3-bedroom unit impact ratio (students/unit)	0.15	0.20	0.15	0.19	0.68	
Scenario 2: Projects Most Similar to Avesta/Beacon (2 + 3-bedroom impact combined)	0.15	0.13	0.12	0.14	0.53	
2-bedroom unit impact ratio (students/unit)	0.15	0.10	0.10	0.11	0.46	
3-bedroom unit impact ratio (students/unit)	0.15	0.20	0.15	0.19	0.68	
Impact from Scenario 1 (MFI)						
2-Bedrooms (156 Units)	15.6	10.9	10.9	12.5	49.9	
3-Bedrooms (50 Units)	7.5	10.0	7.5	9.5	34.5	
Total All Units (206 Units)	23.1	20.9	18.4	22.0	84.4	
Additional students per grade	7.7	7.0	6.1	5.5		
Impact from Scenario 2 (MFI High)						
2-Bedrooms (156 Units)	23.4	15.6	15.6	17.2	71.8	
3-Bedrooms (50 Units)	7.5	10.0	7.5	9.5	34.5	
Total All Units (206 Units)	30.9	25.6	23.1	26.7	106.3	
Additional students per grade	10.3	8.5	7.7	6.7		
Source: 1-bedroom units are discounted from the enrollment impact study. Calculated by Wandell Consulting						

G. **Potential Impact of Permits Left in Density Development Pool**

As discussed previously, the Town Council created a reserve pool of permits to be used for development in density zones. There are currently 283.5 permits available, with Beacon allowed to pull 48 permits from that pool, leaving approximately 235.5 permits available. (Note, if any of the units are 1-bedroom and 750 sq ft and under the permit pulled may account for only 0.5 permits.) Any future impact on enrollment could vary significantly based on the project type. For example, studio and 1-bedroom units would have no statistical impact on school enrollment. However, a project with 1 and 2-bedrooms could have some impact on enrollment, while a project with 1, 2 and 3-bedrooms could have a significant impact on enrollment.

Since most multi-family projects contain some mix of bedroom types, there is no way to predict how many units would be studio and 1-bedroom units and therefore would be discounted from the pool 235.5 available permits. For this analysis, the assessment will assume 26% percent of the units in pool are discounted as 1-bedroom units, or the percentage of 1-bedroom units found in currently built and approved multi-family projects.

Note: Projects including Avesta, Beacon, Dunstan Crossing, Burnham Woods, Carrier Woods, The Oaks/West Oaks, Coach Lantern, Meadow Woods, and Foxcroft. All projects have a total of 812 total units, 209 units are 1-bedrooms, or 26% of the total.

Therefore, if future project distribution follows what has historically happened, we can assume about 175 units from the pool could impact enrollment above and beyond what is estimated by any of the projection models.

Table IV-14 supplies three possible scenarios so that the Scarborough Public Schools are aware of the possible impact on enrollment if these permits are used.

Permit Pool - Scenario 1 - All Multi-Family Unit Impact Regardless of Bedroom Count:

- +67.7 total additional students in grades K-12

Permit Pool - Scenario 2 - Multi-Family Unit Impact of Projects with 1, 2, 3-bedrooms:

- +94.5 total additional students in grades K-12

Permit Pool - Scenario 3 - Multi-Family Unit Impact of Projects with 1 and 2-bedrooms:

- +28 total additional students in grades K-12

Since there is no concrete project in the works, these additional students were not added to any of the projection models. However, if a project does come into play, the impact can be estimated based on the nature of the project and the ratios that most closely fit the project being proposed.

Table IV-14
Estimated Impact of Reserve Pool by Type of Development - Scarborough

Possible Scenarios	Enrollment per Unit				
	Primary (K-2)	Intermediate (3-5)	Middle (6-8)	High (9-12)	Total (K-12)
Scenario 1: All 6 Projects Analyzed	0.11	0.09	0.09	0.10	0.38
Scenario 2: Projects with 1, 2, and 3 bedroom units	0.15	0.13	0.12	0.14	0.53
Scenario 3: Projects with 1 and 2 bedroom units	0.04	0.04	0.04	0.04	0.16
Impact from Scenario 1					
Total All Units (175 Units)	19.3	16.1	14.9	17.5	67.7
<i>Additional students per grade</i>	6.4	5.4	5.0	4.4	
Impact from Scenario 2					
Total All Units (175 Units)	26.3	22.8	21.0	24.5	94.5
<i>Additional students per grade</i>	8.8	7.6	7.0	6.1	
Impact from Scenario 3					
Total All Units (175 Units)	7.0	7.0	7.0	7.0	28.0
<i>Additional students per grade</i>	2.3	2.3	2.3	1.8	
Source: Calculated by Wandell Consulting					

V. ATTENDING RESIDENT ENROLLMENT TRENDS

These projections include all resident and non-resident students attending Scarborough Schools. (Data can be found in *Appendix Table 1 through 9*.)

A. Total Attending Enrollment in Grades K-2

Historical Trends:

- Total attending enrollment at Scarborough's three elementary schools fluctuated year-to-year, with enrollment declining from 753 students in 2008-09 to reach a low enrollment of 581 students in 2015-16
- Following 2015-16, enrollment began to increase, reaching 608 students by 2018-19

2018-19 Best Fit Model:

- Attending enrollment will continue to increase, reaching 706 students by 2021-22 and then will decline to 663 students by 2022-23
- Projected to decline after 2022-23, but will remain higher than the current enrollment, ranging between 622 and 640 students through 2028-29

2018-19 135 Housing Units Added Annually Model:

- Attending enrollment will continue to increase, reaching 723 students by 2021-22
- Projected to decline after 2021-22, but will remain higher than the current enrollment, ranging between 642 and 688 students through 2028-29

When considering the impact of the Avesta and Beacon multi-family projects that have been permitted but not yet completed, there were two different scenarios used.

+Multi-Family Impact, Scenario 1:

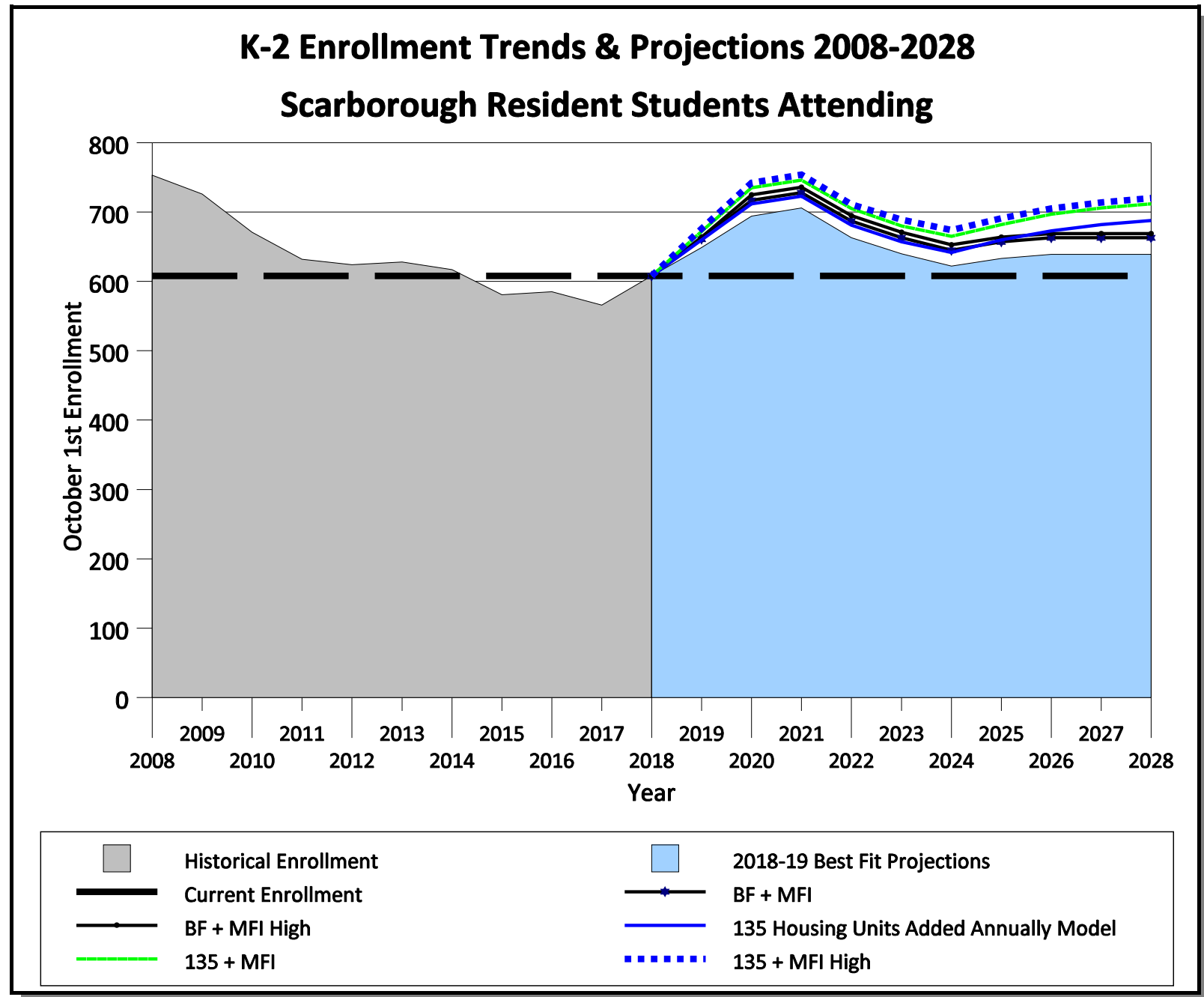
- Based on all multi-family housing units assessed
- +11 to 12 students will enter grades K-2 in 2019-20
- +23 students each year between 2020-21 and 2028-29

+Multi-Family Impact High, Scenario 2:

- Based on projects most similar to the Avesta and Beacon projects
- +15 to 16 students will enter grades K-2 in 2019-20
- +31 students each year between 2020-21 and 2028-29

Table V-1 K-2 Enrollment by Model - Scarborough - Attending Resident Enrollment						
School Year	Projection Model					
	Best Fit Model	+MFI	+ MFI High	135 Housing Units Model	+MFI	+MFI High
2018-19*	608					
2019-20	649	661	664	660	672	676
2020-21	694	717	725	712	735	742
2021-22	706	728	736	723	746	754
2022-23	663	687	695	681	705	711
2023-24	640	663	671	657	680	689
2024-25	622	645	653	642	665	674
2025-26	633	657	664	660	682	691
2026-27	639	663	669	673	697	705
2027-28	639	663	669	682	706	714
2028-29	639	663	669	688	712	720
Projected 10-Yr Avg. (2019-20 to 2028-29)	652	675	682	678	700	708
Projected by Wandell Consulting, January 2019						

Figure V-1



B. Total Attending Enrollment in Grades 3-5

Historical Trends:

- Total attending enrollment increased from 730 students in 2008-09 to reach a high enrollment of 776 students in 2011-12
- Following 2011-12 enrollment declined to reach a low enrollment of 639 students in 2015-16, before increasing again to range between 660 and 675 students through 2018-19

2018-19 Best Fit Model:

- Attending 3-5 enrollment will decline to reach 632 students in 2020-21 as the current small 3rd grade moves through Wentworth
- Following 2020-21, 3-5 enrollment will increase, reaching a high enrollment of 797 students by 2024-25
- Grades 3-5 enrollment is projected to decline after 2024-25, but will remain higher than the current enrollment, ranging between 704 and 749 students through 2028-29

2018-19 135 Housing Units Added Annually Model:

- Attending 3-5 enrollment will decline to reach 633 students in 2020-21 as the current small 3rd grade moves through Wentworth.
- Attending enrollment will then increase, reaching a high enrollment of 818 students by 2024-25
- Grades 3-5 enrollment is projected to decline after 2024-25, but will remain higher than the current enrollment, ranging between 728 and 770 students through 2028-29

When considering the impact of the Avesta and Beacon multi-family projects that have been permitted but not yet completed, there were two different scenarios used.

+Multi-Family Impact, Scenario 1:

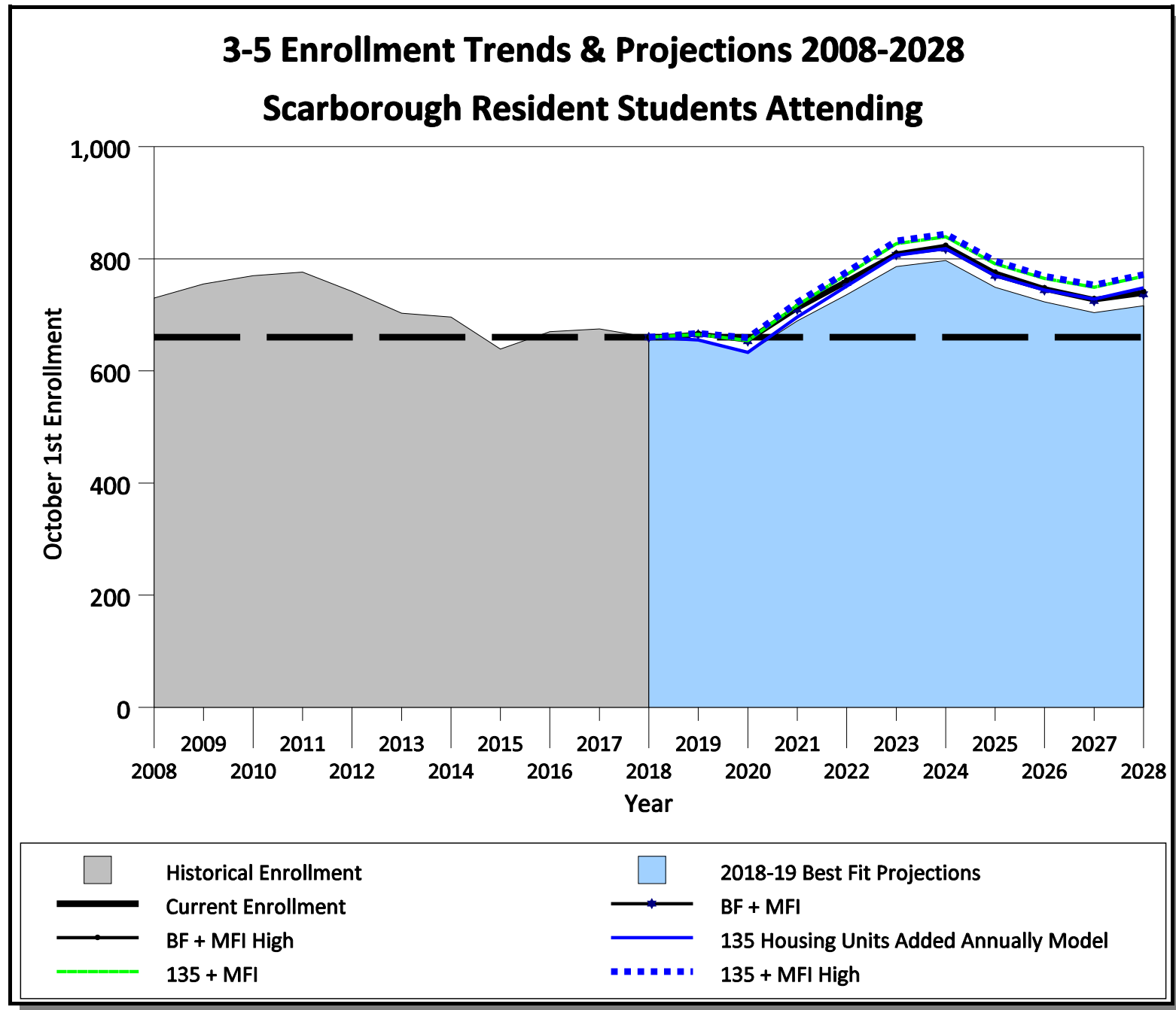
- Based on all multi-family housing units assessed
- +10 to 11 students will enter grades 3-5 in 2019-20
- +21 students each year between 2020-21 and 2028-29

+Multi-Family Impact High, Scenario 2:

- Based on projects most similar to the Avesta and Beacon projects
- +12 to 13 students will enter grades 3-5 in 2019-20
- +25 to 26 students each year between 2020-21 and 2028-29

Table V-2 3-5 Enrollment by Model - Scarborough - Attending Resident Enrollment						
School Year	Projection Model					
	Best Fit Model	+MFI	+ MFI High	135 Housing Units Model	+MFI	+MFI High
2018-19*	660					
2019-20	655	665	667	655	665	667
2020-21	632	653	657	633	654	659
2021-22	689	710	715	696	717	722
2022-23	736	757	762	751	772	776
2023-24	786	807	810	806	827	832
2024-25	797	818	824	818	839	844
2025-26	749	770	776	770	791	796
2026-27	723	744	748	744	765	769
2027-28	704	725	729	728	749	753
2028-29	716	737	742	748	769	772
Projected 10-Yr Avg. (2019-20 to 2028-29)	719	739	743	735	755	759
Projected by Wandell Consulting, January 2019						

Figure V-2



C. Total Attending Enrollment in Grades 6-8

Historical Trends:

- Total attending enrollment in grades 6-8 ranged between 779 and 807 students between 2008-09 and 2014-15
- Following 2014-15 enrollment declined to reach a low enrollment of 673 students in 2018-19

2018-19 Best Fit Model:

- Attending 6-8 enrollment will remain similar to the current enrollment, ranging between 677 and 694 students through 2022-23
- Enrollment will hit a low of 652 students in 2023-24
- Following 2023-24, 6-8 enrollment will increase, reaching a high enrollment of 823 students by 2027-28

2018-19 135 Housing Units Added Annually Model:

- Attending 6-8 enrollment will remain similar to the current enrollment, ranging between 676 and 694 students through 2022-23
- Enrollment will hit a low of 653 students in 2023-24
- Following 2023-24, 6-8 enrollment will increase, reaching a high enrollment of 844 students by 2027-28

When considering the impact of the Avesta and Beacon multi-family projects that have been permitted but not yet completed, there were two different scenarios used.

+Multi-Family Impact, Scenario 1:

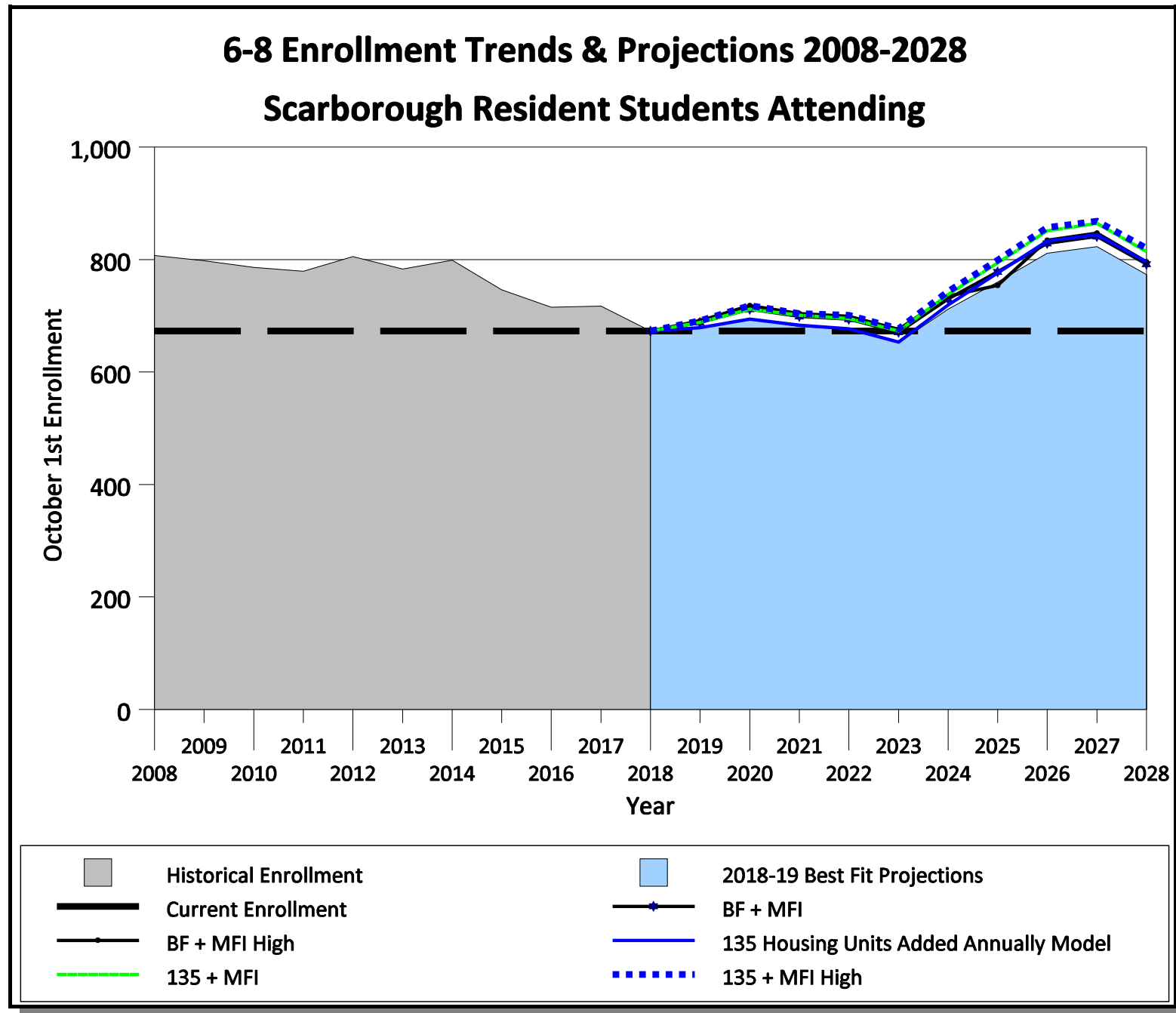
- Based on all multi-family housing units assessed
- +9 to 10 students will enter grades 6-8 in 2019-20
- +18 to 19 students each year between 2020-21 and 2028-29

+Multi-Family Impact High, Scenario 2:

- Based on projects most similar to the Avesta and Beacon projects
- +11 to 12 students will enter grades 6-8 in 2019-20
- +23 students each year between 2020-21 and 2028-29

Table V-3 6-8 Enrollment by Model - Scarborough - Attending Resident Enrollment						
School Year	Projection Models					
	Best Fit Model	+MFI	+ MFI High	135 Housing Units Model	+MFI	+MFI High
2018-19*	673					
2019-20	679	688	691	679	688	691
2020-21	694	712	718	694	712	718
2021-22	681	699	704	683	701	704
2022-23	676	694	699	677	695	701
2023-24	652	671	675	653	673	677
2024-25	712	730	735	719	738	743
2025-26	760	778	783	776	794	798
2026-27	811	829	833	833	851	856
2027-28	823	841	847	844	864	868
2028-29	773	792	796	796	814	819
Projected 10-Yr Avg. (2019-20 to 2028-29)	726	743	748	735	753	758
Projected by Wandell Consulting, January 2019						

Figure V-3



D. Total Attending Enrollment in Grades 9-12

Historical Trends:

- Between 2008-09 and 2013-14 total attending enrollment in grades 9-12 ranged between 1,028 and 1,088 students
- Following 2013-14 enrollment declined to range between 975 and 1,021 students through 2018-19

2018-19 Best Fit Model:

- Attending 9-12 enrollment will decline, reaching 859 students in 2024-25
- Following 2024-25, attending enrollment will then increase, reaching 960 students by 2028-29

2018-19 135 Housing Units Added Annually Model:

- Attending 9-12 enrollment will decline to reach 860 students in 2024-25
- Following 2024-25, attending enrollment will then increase, to reach 977 students by 2028-29

When considering the impact of the Avesta and Beacon multi-family projects that have been permitted but not yet completed, there were two different scenarios used.

+Multi-Family Impact, Scenario 1:

- ▶ Based on all multi-family housing units assessed
- ▶ +11 students will enter grades 9-12 in 2019-20
- ▶ +22 students each year between 2020-21 and 2028-29

+Multi-Family Impact High, Scenario 2:

- ▶ Based on projects most similar to the Avesta and Beacon projects
- ▶ +13 to 14 students will enter grades 9-12 in 2019-20
- ▶ +27 students each year between 2020-21 and 2028-29

Table V-4 9-12 Enrollment by Model - Scarborough - Attending Resident Enrollment						
School Year	Projection Model					
	Best Fit Model	+MFI	+ MFI High	135 Housing Units Model	+MFI	+MFI High
2018-19*	1,001					
2019-20	967	977	981	967	977	981
2020-21	935	955	961	935	955	961
2021-22	900	922	926	900	922	926
2022-23	881	902	907	882	902	907
2023-24	888	911	916	889	911	916
2024-25	859	881	886	860	882	886
2025-26	883	907	911	887	907	911
2026-27	863	887	891	866	887	892
2027-28	875	896	903	883	905	911
2028-29	960	982	987	977	998	1,002
Projected 10-Yr Avg. (2019-20 to 2028-29)	901	922	927	905	925	929
Projected by Wandell Consulting, January 2019						

Figure V-4

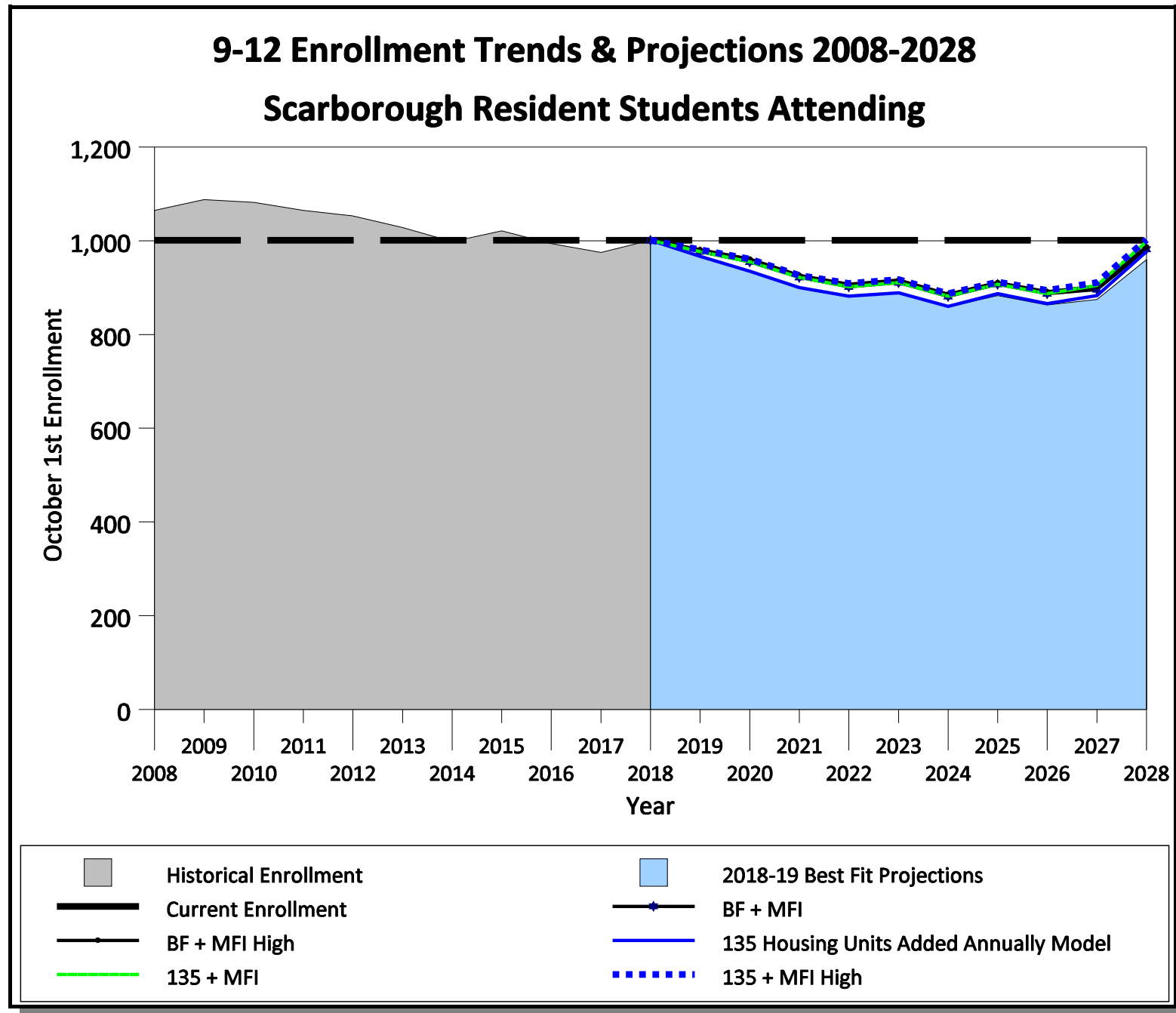
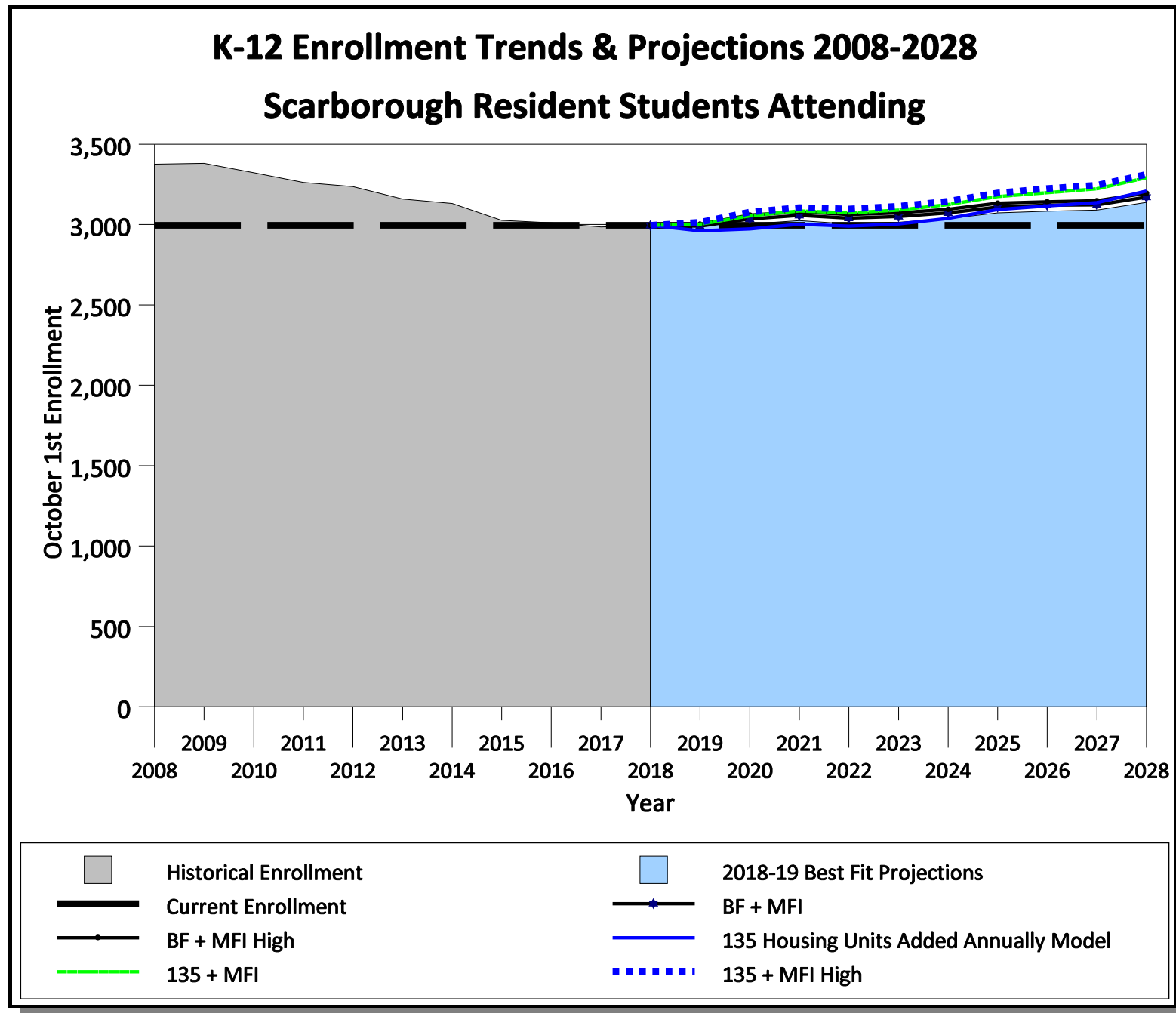


Table V-5 K-12 Enrollment by Model - Scarborough - Attending Resident Enrollment						
School Year	Projection Models					
	Best Fit Model	+MFI	+ MFI High	135 Housing Units Model	+MFI	+MFI High
2018-19*	2,942					
2019-20	2,950	2,991	3,003	2,961	3,002	3,015
2020-21	2,955	3,037	3,061	2,974	3,056	3,080
2021-22	2,976	3,059	3,081	3,002	3,086	3,106
2022-23	2,956	3,040	3,063	2,991	3,074	3,095
2023-24	2,966	3,052	3,072	3,005	3,091	3,114
2024-25	2,990	3,074	3,098	3,039	3,124	3,147
2025-26	3,025	3,112	3,134	3,093	3,174	3,196
2026-27	3,036	3,123	3,141	3,116	3,200	3,222
2027-28	3,041	3,125	3,148	3,137	3,224	3,246
2028-29	3,088	3,174	3,194	3,209	3,293	3,313
Projected 10-Yr Avg. (2019-20 to 2028-29)	2,998	3,079	3,100	3,053	3,132	3,153
Projected by Wandell Consulting, January 2019						

Figure V-5



Appendix Table 13 - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 Best Fit Model
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	585	650	715	590	656	722	612	680	748	922	970	1,019	2,709	2,956	3,204
2020-21	626	695	765	570	633	696	626	695	765	891	938	985	2,713	2,961	3,211
2021-22	636	707	778	621	690	759	614	682	750	858	903	948	2,729	2,982	3,235
2022-23	598	664	730	663	737	811	609	677	745	840	884	928	2,710	2,962	3,214
2023-24	577	641	705	708	787	866	588	653	718	846	891	936	2,719	2,972	3,225
2024-25	561	623	685	718	798	878	642	713	784	819	862	905	2,740	2,996	3,252
2025-26	571	634	697	675	750	825	685	761	837	842	886	930	2,773	3,031	3,289
2026-27	576	640	704	652	724	796	732	813	894	823	866	909	2,783	3,043	3,303
2027-28	576	640	704	635	705	776	743	825	908	834	878	922	2,788	3,048	3,310
2028-29	576	640	704	645	717	789	697	774	851	915	963	1,011	2,833	3,094	3,355

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	631	650	670	636	656	676	660	680	700	941	970	999	2,868	2,956	3,045
2020-21	674	695	716	614	633	652	674	695	716	910	938	966	2,872	2,961	3,050
2021-22	686	707	728	669	690	711	662	682	702	876	903	930	2,893	2,982	3,071
2022-23	644	664	684	715	737	759	657	677	697	857	884	911	2,873	2,962	3,051
2023-24	622	641	660	763	787	811	633	653	673	864	891	918	2,882	2,972	3,062
2024-25	604	623	642	774	798	822	692	713	734	836	862	888	2,906	2,996	3,086
2025-26	615	634	653	728	750	773	738	761	784	859	886	913	2,940	3,031	3,123
2026-27	621	640	659	702	724	746	789	813	837	840	866	892	2,952	3,043	3,134
2027-28	621	640	659	684	705	726	800	825	850	852	878	904	2,957	3,048	3,139
2028-29	621	640	659	695	717	739	751	774	797	934	963	992	3,001	3,094	3,187

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 13-A - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 Best Fit Model + MFI
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	606	673	740	599	666	733	620	689	758	931	980	1,029	2,756	3,008	3,260
2020-21	662	736	810	590	655	721	642	713	784	910	958	1,006	2,804	3,062	3,321
2021-22	672	747	822	646	718	790	632	702	772	879	925	971	2,829	3,092	3,355
2022-23	635	706	777	696	773	850	626	696	766	860	905	950	2,817	3,080	3,343
2023-24	613	681	749	745	828	911	607	674	741	868	914	960	2,833	3,097	3,361
2024-25	599	666	733	756	840	924	665	739	813	841	885	929	2,861	3,130	3,399
2025-26	615	683	751	713	792	871	716	795	875	865	910	956	2,909	3,180	3,453
2026-27	628	698	768	689	766	843	768	853	938	846	890	935	2,931	3,207	3,484
2027-28	636	707	778	675	750	825	779	866	953	863	908	953	2,953	3,231	3,509
2028-29	642	713	784	693	770	847	734	815	897	951	1,001	1,051	3,020	3,299	3,579

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	653	673	693	646	666	686	668	689	710	951	980	1,009	2,918	3,008	3,098
2020-21	714	736	758	635	655	675	692	713	734	929	958	987	2,970	3,062	3,154
2021-22	725	747	769	696	718	740	681	702	723	897	925	953	2,999	3,092	3,185
2022-23	685	706	727	750	773	796	675	696	717	878	905	932	2,988	3,080	3,172
2023-24	661	681	701	803	828	853	654	674	694	887	914	941	3,005	3,097	3,189
2024-25	646	666	686	815	840	865	717	739	761	858	885	912	3,036	3,130	3,224
2025-26	663	683	703	768	792	816	771	795	819	883	910	937	3,085	3,180	3,275
2026-27	677	698	719	743	766	789	827	853	879	863	890	917	3,110	3,207	3,304
2027-28	686	707	728	728	750	773	840	866	892	881	908	935	3,135	3,231	3,328
2028-29	692	713	734	747	770	793	791	815	839	971	1,001	1,031	3,201	3,299	3,397

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

**Appendix Table 13-B - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 Best Fit Model + MFI High
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment**

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	609	677	745	601	668	735	623	692	761	935	984	1,033	2,768	3,021	3,274
2020-21	669	743	817	594	660	726	647	719	791	916	964	1,012	2,826	3,086	3,346
2021-22	680	755	831	651	723	795	635	705	776	883	929	975	2,849	3,112	3,377
2022-23	641	712	783	699	777	855	632	702	772	865	910	956	2,837	3,101	3,366
2023-24	621	690	759	750	833	916	610	678	746	873	919	965	2,854	3,120	3,386
2024-25	608	675	743	761	845	930	670	744	818	845	889	933	2,884	3,153	3,424
2025-26	623	692	761	717	797	877	719	799	879	868	914	960	2,927	3,202	3,477
2026-27	635	706	777	693	770	847	772	858	944	850	895	940	2,950	3,229	3,508
2027-28	644	715	787	679	754	829	783	870	957	868	914	960	2,974	3,253	3,533
2028-29	649	721	793	696	773	850	738	820	902	955	1,005	1,055	3,038	3,319	3,600

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	657	677	697	648	668	688	671	692	713	954	984	1,014	2,930	3,021	3,112
2020-21	721	743	765	640	660	680	697	719	741	935	964	993	2,993	3,086	3,179
2021-22	732	755	778	701	723	745	684	705	726	901	929	957	3,018	3,112	3,206
2022-23	691	712	733	754	777	800	681	702	723	883	910	937	3,009	3,101	3,193
2023-24	669	690	711	808	833	858	658	678	698	891	919	947	3,026	3,120	3,214
2024-25	655	675	695	820	845	870	722	744	766	862	889	916	3,059	3,153	3,247
2025-26	671	692	713	773	797	821	775	799	823	887	914	941	3,106	3,202	3,298
2026-27	685	706	727	747	770	793	832	858	884	868	895	922	3,132	3,229	3,326
2027-28	694	715	736	731	754	777	844	870	896	887	914	941	3,156	3,253	3,350
2028-29	699	721	743	750	773	796	795	820	845	975	1,005	1,035	3,219	3,319	3,419

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 15 - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 135 Housing Units Added Annually Model
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	595	661	727	590	656	722	612	680	748	922	970	1,019	2,719	2,967	3,216
2020-21	642	713	784	571	634	697	626	695	765	891	938	985	2,730	2,980	3,231
2021-22	652	724	796	627	697	767	616	684	752	858	903	948	2,753	3,008	3,263
2022-23	614	682	750	677	752	827	610	678	746	841	885	929	2,742	2,997	3,252
2023-24	592	658	724	726	807	888	589	654	719	847	892	937	2,754	3,011	3,268
2024-25	579	643	707	737	819	901	648	720	792	820	863	906	2,784	3,045	3,306
2025-26	595	661	727	694	771	848	699	777	855	846	890	935	2,834	3,099	3,365
2026-27	607	674	741	671	745	820	752	835	919	826	869	912	2,856	3,123	3,392
2027-28	615	683	751	656	729	802	761	846	931	842	886	930	2,874	3,144	3,414
2028-29	620	689	758	674	749	824	717	797	877	931	980	1,029	2,942	3,215	3,488

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	641	661	681	636	656	676	660	680	700	941	970	999	2,878	2,967	3,056
2020-21	692	713	734	615	634	653	674	695	716	910	938	966	2,891	2,980	3,069
2021-22	702	724	746	676	697	718	663	684	705	876	903	930	2,917	3,008	3,099
2022-23	662	682	702	729	752	775	658	678	698	858	885	912	2,907	2,997	3,087
2023-24	638	658	678	783	807	831	634	654	674	865	892	919	2,920	3,011	3,102
2024-25	624	643	662	794	819	844	698	720	742	837	863	889	2,953	3,045	3,137
2025-26	641	661	681	748	771	794	754	777	800	863	890	917	3,006	3,099	3,192
2026-27	654	674	694	723	745	767	810	835	860	843	869	895	3,030	3,123	3,216
2027-28	663	683	703	707	729	751	821	846	871	859	886	913	3,050	3,144	3,238
2028-29	668	689	710	727	749	771	773	797	821	951	980	1,009	3,119	3,215	3,311

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 15-A - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 135 Housing Units Added Annually Model + MFI
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	606	673	740	599	666	733	620	689	758	931	980	1,029	2,756	3,008	3,260
2020-21	662	736	810	590	655	721	642	713	784	910	958	1,006	2,804	3,062	3,321
2021-22	672	747	822	646	718	790	632	702	772	879	925	971	2,829	3,092	3,355
2022-23	635	706	777	696	773	850	626	696	766	860	905	950	2,817	3,080	3,343
2023-24	613	681	749	745	828	911	607	674	741	868	914	960	2,833	3,097	3,361
2024-25	599	666	733	756	840	924	665	739	813	841	885	929	2,861	3,130	3,399
2025-26	615	683	751	713	792	871	716	795	875	865	910	956	2,909	3,180	3,453
2026-27	628	698	768	689	766	843	768	853	938	846	890	935	2,931	3,207	3,484
2027-28	636	707	778	675	750	825	779	866	953	863	908	953	2,953	3,231	3,509
2028-29	642	713	784	693	770	847	734	815	897	951	1,001	1,051	3,020	3,299	3,579

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	653	673	693	646	666	686	668	689	710	951	980	1,009	2,918	3,008	3,098
2020-21	714	736	758	635	655	675	692	713	734	929	958	987	2,970	3,062	3,154
2021-22	725	747	769	696	718	740	681	702	723	897	925	953	2,999	3,092	3,185
2022-23	685	706	727	750	773	796	675	696	717	878	905	932	2,988	3,080	3,172
2023-24	661	681	701	803	828	853	654	674	694	887	914	941	3,005	3,097	3,189
2024-25	646	666	686	815	840	865	717	739	761	858	885	912	3,036	3,130	3,224
2025-26	663	683	703	768	792	816	771	795	819	883	910	937	3,085	3,180	3,275
2026-27	677	698	719	743	766	789	827	853	879	863	890	917	3,110	3,207	3,304
2027-28	686	707	728	728	750	773	840	866	892	881	908	935	3,135	3,231	3,328
2028-29	692	713	734	747	770	793	791	815	839	971	1,001	1,031	3,201	3,299	3,397

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

**Appendix Table 15-B - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 135 Housing Units Added Annually Model + MFI High
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment**

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	609	677	745	601	668	735	623	692	761	935	984	1,033	2,768	3,021	3,274
2020-21	669	743	817	594	660	726	647	719	791	916	964	1,012	2,826	3,086	3,346
2021-22	680	755	831	651	723	795	635	705	776	883	929	975	2,849	3,112	3,377
2022-23	641	712	783	699	777	855	632	702	772	865	910	956	2,837	3,101	3,366
2023-24	621	690	759	750	833	916	610	678	746	873	919	965	2,854	3,120	3,386
2024-25	608	675	743	761	845	930	670	744	818	845	889	933	2,884	3,153	3,424
2025-26	623	692	761	717	797	877	719	799	879	868	914	960	2,927	3,202	3,477
2026-27	635	706	777	693	770	847	772	858	944	850	895	940	2,950	3,229	3,508
2027-28	644	715	787	679	754	829	783	870	957	868	914	960	2,974	3,253	3,533
2028-29	649	721	793	696	773	850	738	820	902	955	1,005	1,055	3,038	3,319	3,600

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	657	677	697	648	668	688	671	692	713	954	984	1,014	2,930	3,021	3,112
2020-21	721	743	765	640	660	680	697	719	741	935	964	993	2,993	3,086	3,179
2021-22	732	755	778	701	723	745	684	705	726	901	929	957	3,018	3,112	3,206
2022-23	691	712	733	754	777	800	681	702	723	883	910	937	3,009	3,101	3,193
2023-24	669	690	711	808	833	858	658	678	698	891	919	947	3,026	3,120	3,214
2024-25	655	675	695	820	845	870	722	744	766	862	889	916	3,059	3,153	3,247
2025-26	671	692	713	773	797	821	775	799	823	887	914	941	3,106	3,202	3,298
2026-27	685	706	727	747	770	793	832	858	884	868	895	922	3,132	3,229	3,326
2027-28	694	715	736	731	754	777	844	870	896	887	914	941	3,156	3,253	3,350
2028-29	699	721	743	750	773	796	795	820	845	975	1,005	1,035	3,219	3,319	3,419

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

APPENDIX A

GRADE BY GRADE HISTORICAL & PROJECTED ENROLLMENT

Appendix Table 1 - Entering Class to Births Ratio Worksheet
Attending Resident Enrollment - Scarborough Resident Students - 2018-19 Best Fit Model

Oct 15-Oct 14 Births	Number Births	KG Year	KG Class Size	1st Grade Year	1st Class Size	Ratio 1st/Birth	Ratio 1st/K	Proj. 1st Grade	Net Preschool Migration
2002-03	182	10/08	237	10/09	246	1.352	1.038		64
2003-04	158	10/09	223	10/10	224	1.418	1.004		66
2004-05	168	10/10	202	10/11	208	1.238	1.030		40
2005-06	152	10/11	199	10/12	206	1.355	1.035		54
2006-07	135	10/12	202	10/13	199	1.474	0.985		64
2007-08	142	10/13	204	10/14	212	1.493	1.039		70
2008-09	138	10/14	207	10/15	209	1.514	1.010		71
2009-10	129	10/15	156	10/16	173	1.341	1.109		44
2010-11	135	10/16	193	10/17	199	1.474	1.031		64
2011-12	129	10/17	186	10/18	187	1.450	1.005		58
2012-13	150	10/18	209	10/19		1.454	1.044	218	68
2013-14	167	10/19		10/20		1.454		243	76
2014-15	158	10/20		10/21		1.454		230	72
2015-16	157	10/21		10/22		1.454		228	71
2016-17	138	10/22		10/23		1.454		201	63
2017-18 *	142	10/23		10/24		1.454		207	65
2018-19 est	146	10/24		10/25		1.454		212	66
2019-20 est	146	10/25		10/26		1.454		212	66
2020-21 est	146	10/26		10/27		1.454		212	66
2021-22 est	146	10/27		10/28		1.454		212	66
10yr Total (02-11)	1,468	10yr Total (08-17)	2,009	10yr Total (09-18)	2,063	1.405	1.027	Last 10yr	59.5
10yr Avg (02-11)	147	10yr Avg (08-17)	201	10yr Avg (09-18)	206	1.411	1.027	Last 5yr	61.4
5yr Avg (14-18)	152							Last 3yr	55.3
5yr Max (14-18)	167							Proj.	67.9
5yr Min (14-18)	138								
3 yr Avg (16-18)	146								
First Grade to Births Correlation Coefficients		First Grade to Kindergarten Correlation Coefficients							
10 YEAR	0.848	10 YEAR	0.967						
9 YEAR	0.702	9 YEAR	0.962						
8 YEAR	0.622	8 YEAR	0.946						
7 YEAR	0.734	7 YEAR	0.946						
6 YEAR	0.933	6 YEAR	0.948						
5 YEAR	0.934	5 YEAR	0.965						
4 YEAR	0.930	4 YEAR	0.973						
3 YEAR	0.843	3 YEAR	0.955						
				Ratios		1st/Birth	1st/K		
				Avg last 10		1.411	1.029		
				Avg last 9		1.417	1.028		
				Avg last 8		1.417	1.031		
				Avg last 7		1.443	1.031		
				Avg last 6		1.458	1.030		
				Avg last 5		1.454	1.039		
				Avg last 4		1.445	1.039		
				Avg last 3		1.422	1.048		
				av 1st 5		1.367	1.018		
				10yr Weighted		1.432	1.031		
				5yr Weighted		1.446	1.036		
				3yr Weighted		1.440	1.037		

Notes: Attending enrollment data contains all resident students attending district schools, excludes 100% homeschooled students. Data from 2008-2017 from MDOE October 1st enrollment counts, and 2018 data from Scarborough Public Schools. Three-year average of births (2015-16 to 2017-18) used to estimate births from 2018-19 to 2021-22. *2018 birth data is preliminary and provisional from the Maine Department of Health and Human Services, Office of Data, Research, and Vital Statistics. The first grade from 2019-20 to 2028-29 was projected using the 5-year ratio of first grade to births.

2018-19 Enrollment Projections for Scarborough, Completed January 2019
 Data produced by Wandell Consulting

Appendix Table 2 - Enrollment Trends & Projections - Scarborough Attending Resident Enrollment - 2018-19 Best Fit Model

October 1st Enrollment

School Year	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																			
2008-09	237	258	258	216	257	257	251	285	271	268	264	285	248	753	730	807	2,290	1,065	3,355
2009-10	223	246	257	263	228	264	256	253	289	274	269	255	290	726	755	798	2,279	1,088	3,367
2010-11	202	224	245	259	270	241	267	261	258	280	271	270	261	671	770	786	2,227	1,082	3,309
2011-12	199	208	225	242	259	275	240	275	264	243	282	265	275	632	776	779	2,187	1,065	3,252
2012-13	202	206	216	241	240	261	286	243	276	253	242	278	280	624	742	805	2,171	1,053	3,224
2013-14	204	199	225	211	252	240	267	282	234	255	249	241	283	628	703	783	2,114	1,028	3,142
2014-15	207	212	198	223	223	250	247	263	289	226	258	260	254	617	696	799	2,112	998	3,110
2015-16	156	209	216	199	222	218	240	244	262	263	228	259	271	581	639	746	1,966	1,021	2,987
2016-17	193	173	219	238	206	226	224	247	244	249	261	227	257	585	670	715	1,970	994	2,964
2017-18	186	199	181	231	238	206	228	238	251	230	250	257	238	566	675	717	1,958	975	2,933
2018-19	209	187	212	188	237	235	209	228	236	247	238	250	266	608	660	673	1,941	1,001	2,942
Projected																			
2019-20	234	218	197	226	192	237	239	211	229	223	250	236	258	649	655	679	1,983	967	2,950
2020-21	221	243	230	210	230	192	241	241	212	217	226	248	244	694	632	694	2,020	935	2,955
2021-22	220	230	256	245	214	230	195	243	243	201	219	224	256	706	689	681	2,076	900	2,976
2022-23	193	228	242	272	250	214	234	197	245	229	203	218	231	663	736	676	2,075	881	2,956
2023-24	199	201	240	258	278	250	218	236	198	231	232	201	224	640	786	652	2,078	888	2,966
2024-25	204	207	211	256	263	278	254	220	238	187	234	230	208	622	797	712	2,131	859	2,990
2025-26	204	212	217	225	261	263	283	256	221	225	189	232	237	633	749	760	2,142	883	3,025
2026-27	204	212	223	232	230	261	268	285	258	209	227	188	239	639	723	811	2,173	863	3,036
2027-28	204	212	223	238	236	230	266	270	287	244	211	226	194	639	704	823	2,166	875	3,041
2028-29	204	212	223	238	242	236	234	268	271	271	246	210	233	639	716	773	2,128	960	3,088

Notes: Enrollment data contains all attending resident students based on the 10/1 data from MDOE for 2008-09 through 2017-18. 2018-19 10/1 data from Scarborough Public Schools

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 3 - Scarborough Attending Resident Enrollment - Average Grade-To-Grade Survival Ratios
2018-19 Enrollment Projections

School Year	Grade											
	K-1		1-2		2-3		3-4		4-5		5-6	
	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-
10 Year Avg. (09-18)	1.029	2.9%	1.030	3.0%	1.025	2.5%	1.023	2.3%	1.009	0.9%	1.011	1.1%
1st 5-Year Avg. (09-13)	1.018	1.8%	1.025	2.5%	1.013	1.3%	1.024	2.4%	1.022	2.2%	1.013	1.3%
Last 5-Year Avg. (14-18)	1.039	3.9%	1.035	3.5%	1.038	3.8%	1.023	2.3%	0.995	-0.5%	1.008	0.8%
Last 4-Year Avg. (15-18)	1.039	3.9%	1.045	4.5%	1.050	5.0%	1.014	1.4%	0.996	-0.4%	1.003	0.3%
Last 3-Year Avg. (16-18)	1.048	4.8%	1.053	5.3%	1.065	6.5%	1.020	2.0%	1.002	0.2%	1.017	1.7%

School Year	Grade											
	6-7		7-8		8-9		9-10		10-11		11-12	
	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-	Ratio	% +/-
10 Year Avg. (09-18)	1.012	1.2%	1.004	0.4%	0.956	-4.4%	1.003	0.3%	0.996	-0.4%	1.031	3.1%
1st 5-Year Avg. (09-13)	1.011	1.1%	1.002	0.2%	0.961	-3.9%	0.996	-0.4%	0.986	-1.4%	1.027	2.7%
Last 5-Year Avg. (14-18)	1.013	1.3%	1.006	0.6%	0.951	-4.9%	1.010	1.0%	1.006	0.6%	1.034	3.4%
Last 4-Year Avg. (15-18)	1.020	2.0%	1.001	0.1%	0.947	-5.3%	1.010	1.0%	0.996	-0.4%	1.030	3.0%
Last 3-Year Avg. (16-18)	1.031	3.1%	1.003	0.3%	0.959	-4.1%	1.010	1.0%	0.993	-0.7%	1.025	2.5%

2018-19 Enrollment Projections for Scarborough, Completed January 2019
 Data produced by Wandell Consulting

Appendix Table 4 - Enrollment Trends & Projections - Scarborough Attending Resident Enrollment - 2018-19 Best Fit Model + MFI

October 1st Enrollment

School Year	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																			
2008-09	237	258	258	216	257	257	251	285	271	268	264	285	248	753	730	807	2,290	1,065	3,355
2009-10	223	246	257	263	228	264	256	253	289	274	269	255	290	726	755	798	2,279	1,088	3,367
2010-11	202	224	245	259	270	241	267	261	258	280	271	270	261	671	770	786	2,227	1,082	3,309
2011-12	199	208	225	242	259	275	240	275	264	243	282	265	275	632	776	779	2,187	1,065	3,252
2012-13	202	206	216	241	240	261	286	243	276	253	242	278	280	624	742	805	2,171	1,053	3,224
2013-14	204	199	225	211	252	240	267	282	234	255	249	241	283	628	703	783	2,114	1,028	3,142
2014-15	207	212	198	223	223	250	247	263	289	226	258	260	254	617	696	799	2,112	998	3,110
2015-16	156	209	216	199	222	218	240	244	262	263	228	259	271	581	639	746	1,966	1,021	2,987
2016-17	193	173	219	238	206	226	224	247	244	249	261	227	257	585	670	715	1,970	994	2,964
2017-18	186	199	181	231	238	206	228	238	251	230	250	257	238	566	675	717	1,958	975	2,933
2018-19	209	187	212	188	237	235	209	228	236	247	238	250	266	608	660	673	1,941	1,001	2,942
Projected																			
2019-20	238	222	201	229	195	241	242	214	232	226	252	239	260	661	665	688	2,014	977	2,991
2020-21	229	251	237	217	237	199	247	247	218	222	231	253	249	717	653	712	2,082	955	3,037
2021-22	228	237	263	252	221	237	201	249	249	206	225	230	261	728	710	699	2,137	922	3,059
2022-23	201	236	250	279	257	221	240	203	251	235	208	223	236	687	757	694	2,138	902	3,040
2023-24	207	208	248	265	285	257	224	243	204	237	237	207	230	663	807	671	2,141	911	3,052
2024-25	212	214	219	263	270	285	260	226	244	193	239	236	213	645	818	730	2,193	881	3,074
2025-26	212	220	225	232	268	270	289	262	227	231	195	238	243	657	770	778	2,205	907	3,112
2026-27	212	220	231	239	237	268	274	291	264	215	233	194	245	663	744	829	2,236	887	3,123
2027-28	212	220	231	245	243	237	272	276	293	249	217	231	199	663	725	841	2,229	896	3,125
2028-29	212	220	231	245	249	243	240	274	278	277	252	215	238	663	737	792	2,192	982	3,174

Notes: Enrollment data contains all attending resident students based on the 10/1 data from MDOE for 2008-09 through 2017-18. 2018-19 10/1 data from Scarborough Public Schools. Includes additional students to account for the Beacon/Gateway project and the Avesta Housing Project. Ratio of MFI impact used included data from all multifamily projects assessed.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 5 - Enrollment Trends & Projections - Scarborough Attending Resident Enrollment - 2018-19 Best Fit Model + High MFI

October 1st Enrollment

School Year	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																			
2008-09	237	258	258	216	257	257	251	285	271	268	264	285	248	753	730	807	2,290	1,065	3,355
2009-10	223	246	257	263	228	264	256	253	289	274	269	255	290	726	755	798	2,279	1,088	3,367
2010-11	202	224	245	259	270	241	267	261	258	280	271	270	261	671	770	786	2,227	1,082	3,309
2011-12	199	208	225	242	259	275	240	275	264	243	282	265	275	632	776	779	2,187	1,065	3,252
2012-13	202	206	216	241	240	261	286	243	276	253	242	278	280	624	742	805	2,171	1,053	3,224
2013-14	204	199	225	211	252	240	267	282	234	255	249	241	283	628	703	783	2,114	1,028	3,142
2014-15	207	212	198	223	223	250	247	263	289	226	258	260	254	617	696	799	2,112	998	3,110
2015-16	156	209	216	199	222	218	240	244	262	263	228	259	271	581	639	746	1,966	1,021	2,987
2016-17	193	173	219	238	206	226	224	247	244	249	261	227	257	585	670	715	1,970	994	2,964
2017-18	186	199	181	231	238	206	228	238	251	230	250	257	238	566	675	717	1,958	975	2,933
2018-19	209	187	212	188	237	235	209	228	236	247	238	250	266	608	660	673	1,941	1,001	2,942
Projected																			
2019-20	239	223	202	230	196	241	243	215	233	227	253	240	261	664	667	691	2,022	981	3,003
2020-21	232	253	240	218	239	200	249	249	220	224	232	255	250	725	657	718	2,100	961	3,061
2021-22	230	240	266	253	223	239	203	251	250	207	226	231	262	736	715	704	2,155	926	3,081
2022-23	204	239	252	281	258	223	242	205	252	236	209	224	238	695	762	699	2,156	907	3,063
2023-24	209	211	251	266	286	258	225	244	206	238	239	208	231	671	810	675	2,156	916	3,072
2024-25	214	217	222	265	272	287	262	227	246	194	241	237	214	653	824	735	2,212	886	3,098
2025-26	214	222	228	234	270	272	290	264	229	232	196	239	244	664	776	783	2,223	911	3,134
2026-27	214	222	233	240	238	270	275	293	265	216	234	195	246	669	748	833	2,250	891	3,141
2027-28	214	222	233	246	245	238	274	278	295	251	218	233	201	669	729	847	2,245	903	3,148
2028-29	214	222	233	246	251	245	241	276	279	278	253	217	239	669	742	796	2,207	987	3,194

Notes: Enrollment data contains all attending resident students based on the 10/1 data from MDOE for 2008-09 through 2017-18. 2018-19 10/1 data from Scarborough Public Schools. Includes additional students to account for the Beacon/Gateway project and the Avesta Housing Project. Ratio of MFI impact used included data from multifamily projects assessed that are similar to the Beacon/Gateway and Avesta Projects.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 6 - Entering Class to Births Ratio Worksheet									
Attending Resident Enrollment - Scarborough Resident Students - 2018-19 135 Housing Units Added Annually Model									
Oct 15-Oct 14 Births	Number Births	KG Year	KG Class Size	1st Grade Year	1st Class Size	Ratio 1st/Birth	Ratio 1st/K	Proj. 1st Grade	Net Preschool Migration
2002-03	182	10/08	237	10/09	246	1.352	1.038		64
2003-04	158	10/09	223	10/10	224	1.418	1.004		66
2004-05	168	10/10	202	10/11	208	1.238	1.030		40
2005-06	152	10/11	199	10/12	206	1.355	1.035		54
2006-07	135	10/12	202	10/13	199	1.474	0.985		64
2007-08	142	10/13	204	10/14	212	1.493	1.039		70
2008-09	138	10/14	207	10/15	209	1.514	1.010		71
2009-10	129	10/15	156	10/16	173	1.341	1.109		44
2010-11	135	10/16	193	10/17	199	1.474	1.031		64
2011-12	129	10/17	186	10/18	187	1.450	1.005		58
2012-13	150	10/18	209	10/19		1.493	1.071	224	74
2013-14	167	10/19		10/20		1.489		249	82
2014-15	158	10/20		10/21		1.491		236	78
2015-16	157	10/21		10/22		1.491		234	77
2016-17	138	10/22		10/23		1.496		206	68
2017-18 *	142	10/23		10/24		1.495		212	70
2018-19 est	148	10/24		10/25		1.493		221	73
2019-20 est	150	10/25		10/26		1.493		223	74
2020-21 est	152	10/26		10/27		1.492		226	75
2021-22 est	154	10/27		10/28		1.492		229	76
10yr Total (02-11)	1,468	10yr Total (08-17)	2,009	10yr Total (09-18)	2,063	1.405	1.027	Last 10yr	59.5
10yr Avg (02-11)	147	10yr Avg (08-17)	201	10yr Avg (09-18)	206	1.411	1.027	Last 5yr	61.4
5yr Avg (14-18)	152							Last 3yr	55.3
5yr Max (14-18)	167							Proj.	74.6
5yr Min (14-18)	138								
3 yr Avg (16-18)	146								
First Grade to Births Correlation Coefficients		First Grade to Kindergarten Correlation Coefficients							
10 YEAR	0.848	10 YEAR	0.967						
9 YEAR	0.702	9 YEAR	0.962						
8 YEAR	0.622	8 YEAR	0.946						
7 YEAR	0.734	7 YEAR	0.946						
6 YEAR	0.933	6 YEAR	0.948						
5 YEAR	0.934	5 YEAR	0.965						
4 YEAR	0.930	4 YEAR	0.973						
3 YEAR	0.843	3 YEAR	0.955						
Notes: Attending enrollment data contains all resident students attending district schools, excludes 100% homeschooled students. Data from 2008-2017 from MDOE October 1st enrollment counts, and 2018 data from Scarborough Public Schools. Three-year average of births (2015-16 to 2017-18) used to estimate births from 2018-19 to 2021-22, along with the addition of +2 births in 2018-19, +4 births in 2019-20, +6 births for 2020-21 and +8 births in 2021-22. *2018 birth data is preliminary and provisional from the Maine Department of Health and Human Services, Office of Data, Research, and Vital Statistics. The first grade from 2019-20 to 2028-29 was projected using the 5-year ratio of first grade to births. To account for the impact of 135 new housing units added annually, the model includes an additional 5.6 students in each first grade class to account for an increase in preschool in-migration, and an additional 0.14 students in each first grade class to account for the impact on elementary in-migration.									

Notes: Attending enrollment data contains all resident students attending district schools, excludes 100% homeschooled students. Data from 2008-2017 from MDOE October 1st enrollment counts, and 2018 data from Scarborough Public Schools. Three-year average of births (2015-16 to 2017-18) used to estimate births from 2018-19 to 2021-22, along with the addition of +2 births in 2018-19, +4 births in 2019-20, +6 births for 2020-21 and +8 births in 2021-22. *2018 birth data is preliminary and provisional from the Maine Department of Health and Human Services, Office of Data, Research, and Vital Statistics. The first grade from 2019-20 to 2028-29 was projected using the 5-year ratio of first grade to births. To account for the impact of 135 new housing units added annually, the model includes an additional 5.6 students in each first grade class to account for an increase in preschool in-migration, and an additional 0.14 students in each first grade class to account for the impact on elementary in-migration.

Appendix Table 7 - Enrollment Trends & Projections - Scarborough Attending Resident Enrollment - 2018-19 135 Housing Units Added Annually Model

October 1st Enrollment

School Year	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																			
2008-09	237	258	258	216	257	257	251	285	271	268	264	285	248	753	730	807	2,290	1,065	3,355
2009-10	223	246	257	263	228	264	256	253	289	274	269	255	290	726	755	798	2,279	1,088	3,367
2010-11	202	224	245	259	270	241	267	261	258	280	271	270	261	671	770	786	2,227	1,082	3,309
2011-12	199	208	225	242	259	275	240	275	264	243	282	265	275	632	776	779	2,187	1,065	3,252
2012-13	202	206	216	241	240	261	286	243	276	253	242	278	280	624	742	805	2,171	1,053	3,224
2013-14	204	199	225	211	252	240	267	282	234	255	249	241	283	628	703	783	2,114	1,028	3,142
2014-15	207	212	198	223	223	250	247	263	289	226	258	260	254	617	696	799	2,112	998	3,110
2015-16	156	209	216	199	222	218	240	244	262	263	228	259	271	581	639	746	1,966	1,021	2,987
2016-17	193	173	219	238	206	226	224	247	244	249	261	227	257	585	670	715	1,970	994	2,964
2017-18	186	199	181	231	238	206	228	238	251	230	250	257	238	566	675	717	1,958	975	2,933
2018-19	209	187	212	188	237	235	209	228	236	247	238	250	266	608	660	673	1,941	1,001	2,942
Projected																			
2019-20	239	224	197	226	192	237	239	211	229	223	250	236	258	660	655	679	1,994	967	2,961
2020-21	227	249	236	210	231	192	241	241	212	217	226	248	244	712	633	694	2,039	935	2,974
2021-22	225	236	262	251	214	231	196	244	243	201	219	224	256	723	696	683	2,102	900	3,002
2022-23	199	234	248	279	257	215	235	197	245	230	203	218	231	681	751	677	2,109	882	2,991
2023-24	204	206	247	264	285	257	218	237	198	232	232	201	224	657	806	653	2,116	889	3,005
2024-25	212	212	218	263	270	285	261	220	238	188	234	230	208	642	818	719	2,179	860	3,039
2025-26	215	221	224	232	268	270	290	264	222	226	190	233	238	660	770	776	2,206	887	3,093
2026-27	218	223	232	238	237	269	275	293	265	210	228	188	240	673	744	833	2,250	866	3,116
2027-28	221	226	235	248	243	237	273	277	294	251	212	226	194	682	728	844	2,254	883	3,137
2028-29	221	229	238	251	253	244	241	276	279	279	254	211	233	688	748	796	2,232	977	3,209

Notes: Enrollment data contains all attending resident students based on the 10/1 data from MDOE for 2008-09 through 2017-18. 2018-19 10/1 data from Scarborough Public Schools. Based on the "best fit" model then includes additional 0.14 students per grade in grades 1-6 to account for the impact of 135 new housing units added annually on elementary in-migration.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 8 - Enrollment Trends & Projections - Scarborough Attending Resident Enrollment - 2018-19 135 Housing Units Added Annually Model + MFI																			
October 1st Enrollment																			
School Year	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																			
2008-09	237	258	258	216	257	257	251	285	271	268	264	285	248	753	730	807	2,290	1,065	3,355
2009-10	223	246	257	263	228	264	256	253	289	274	269	255	290	726	755	798	2,279	1,088	3,367
2010-11	202	224	245	259	270	241	267	261	258	280	271	270	261	671	770	786	2,227	1,082	3,309
2011-12	199	208	225	242	259	275	240	275	264	243	282	265	275	632	776	779	2,187	1,065	3,252
2012-13	202	206	216	241	240	261	286	243	276	253	242	278	280	624	742	805	2,171	1,053	3,224
2013-14	204	199	225	211	252	240	267	282	234	255	249	241	283	628	703	783	2,114	1,028	3,142
2014-15	207	212	198	223	223	250	247	263	289	226	258	260	254	617	696	799	2,112	998	3,110
2015-16	156	209	216	199	222	218	240	244	262	263	228	259	271	581	639	746	1,966	1,021	2,987
2016-17	193	173	219	238	206	226	224	247	244	249	261	227	257	585	670	715	1,970	994	2,964
2017-18	186	199	181	231	238	206	228	238	251	230	250	257	238	566	675	717	1,958	975	2,933
2018-19	209	187	212	188	237	235	209	228	236	247	238	250	266	608	660	673	1,941	1,001	2,942
Projected																			
2019-20	243	228	201	229	195	241	242	214	232	226	252	239	260	672	665	688	2,025	977	3,002
2020-21	235	256	244	217	238	199	247	247	218	222	231	253	249	735	654	712	2,101	955	3,056
2021-22	233	243	270	258	221	238	202	250	249	206	225	230	261	746	717	701	2,164	922	3,086
2022-23	207	242	256	286	264	222	241	203	251	235	208	223	236	705	772	695	2,172	902	3,074
2023-24	212	214	254	271	292	264	225	243	205	237	237	207	230	680	827	673	2,180	911	3,091
2024-25	220	220	225	270	277	292	267	226	245	193	240	236	213	665	839	738	2,242	882	3,124
2025-26	223	228	231	239	275	277	296	270	228	231	195	238	243	682	791	794	2,267	907	3,174
2026-27	226	231	240	245	244	276	281	299	271	215	233	194	245	697	765	851	2,313	887	3,200
2027-28	229	234	243	255	250	244	279	284	301	256	217	232	200	706	749	864	2,319	905	3,224
2028-29	229	237	246	258	260	251	247	282	285	284	259	216	239	712	769	814	2,295	998	3,293

Notes: Enrollment data contains all attending resident students based on the 10/1 data from MDOE for 2008-09 through 2017-18. 2018-19 10/1 data from Scarborough Public Schools. Based on the "best fit" model then Includes additional students to account for the addition of 135 new housing units added annually. Includes additional students to account for the Beacon/Gateway project and the Avesta Housing Project. Ratio of MFI impact used included data from all multifamily projects assessed.

2018-19 Enrollment Projections for Scarborough, Completed January 2019
Data produced by Wandell Consulting

Appendix Table 9 - Enrollment Trends & Projections - Scarborough Attending Resident Enrollment - 2018-19 135 Housing Units Added Annually Model + High MFI

October 1st Enrollment

School Year	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																			
2008-09	237	258	258	216	257	257	251	285	271	268	264	285	248	753	730	807	2,290	1,065	3,355
2009-10	223	246	257	263	228	264	256	253	289	274	269	255	290	726	755	798	2,279	1,088	3,367
2010-11	202	224	245	259	270	241	267	261	258	280	271	270	261	671	770	786	2,227	1,082	3,309
2011-12	199	208	225	242	259	275	240	275	264	243	282	265	275	632	776	779	2,187	1,065	3,252
2012-13	202	206	216	241	240	261	286	243	276	253	242	278	280	624	742	805	2,171	1,053	3,224
2013-14	204	199	225	211	252	240	267	282	234	255	249	241	283	628	703	783	2,114	1,028	3,142
2014-15	207	212	198	223	223	250	247	263	289	226	258	260	254	617	696	799	2,112	998	3,110
2015-16	156	209	216	199	222	218	240	244	262	263	228	259	271	581	639	746	1,966	1,021	2,987
2016-17	193	173	219	238	206	226	224	247	244	249	261	227	257	585	670	715	1,970	994	2,964
2017-18	186	199	181	231	238	206	228	238	251	230	250	257	238	566	675	717	1,958	975	2,933
2018-19	209	187	212	188	237	235	209	228	236	247	238	250	266	608	660	673	1,941	1,001	2,942
Projected																			
2019-20	245	229	202	230	196	241	243	215	233	227	253	240	261	676	667	691	2,034	981	3,015
2020-21	237	259	246	219	239	201	249	249	220	224	232	255	250	742	659	718	2,119	961	3,080
2021-22	236	246	272	260	223	239	203	251	250	207	226	231	262	754	722	704	2,180	926	3,106
2022-23	209	244	258	288	265	223	243	205	253	236	209	224	238	711	776	701	2,188	907	3,095
2023-24	215	217	257	273	294	265	226	245	206	238	239	208	231	689	832	677	2,198	916	3,114
2024-25	223	223	228	271	279	294	269	228	246	194	241	237	214	674	844	743	2,261	886	3,147
2025-26	226	231	234	240	277	279	298	271	229	232	196	239	244	691	796	798	2,285	911	3,196
2026-27	228	234	243	247	245	277	283	300	273	216	235	195	246	705	769	856	2,330	892	3,222
2027-28	231	237	246	256	252	245	281	285	302	258	219	233	201	714	753	868	2,335	911	3,246
2028-29	231	240	249	259	261	252	249	283	287	285	260	217	240	720	772	819	2,311	1,002	3,313

Notes: Enrollment data contains all attending resident students based on the 10/1 data from MDOE for 2008-09 through 2017-18. 2018-19 10/1 data from Scarborough Public Schools. Based on the "best fit" model then Includes additional students to account for the addition of 135 new housing units added annually. Includes additional students to account for the Beacon/Gateway project and the Avesta Housing Project. Ratio of MFI impact used included data from multifamily projects assessed that are similar to the Beacon/Gateway and Avesta Projects.

2018-19 Enrollment Projections for Scarborough, Completed January 2019
Data produced by Wandell Consulting

Appendix Table 10 - Enrollment Trends & Projections - Scarborough Resident Enrollment - 2018-19 Best Fit Model

October 1st Enrollment																		
School Year	Resident Students Attending District Schools						Resident Students at NON-District Schools						Total All Scarborough Students					
	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																		
2008-09	753	730	807	2,290	1,065	3,355	1	2	4	7	14	21	754	732	811	2,297	1,079	3,376
2009-10	726	755	798	2,279	1,088	3,367	1	2	2	5	10	15	727	757	800	2,284	1,098	3,382
2010-11	671	770	786	2,227	1,082	3,309	1	1	2	4	9	13	672	771	788	2,231	1,091	3,322
2011-12	632	776	779	2,187	1,065	3,252	0	2	0	2	8	10	632	778	779	2,189	1,073	3,262
2012-13	624	742	805	2,171	1,053	3,224	1	1	0	2	10	12	625	743	805	2,173	1,063	3,236
2013-14	628	703	783	2,114	1,028	3,142	2	2	1	5	12	17	630	705	784	2,119	1,040	3,159
2014-15	617	696	799	2,112	998	3,110	2	1	3	6	16	22	619	697	802	2,118	1,014	3,132
2015-16	581	639	746	1,966	1,021	2,987	2	1	4	7	32	39	583	640	750	1,973	1,053	3,026
2016-17	585	670	715	1,970	994	2,964	1	2	2	5	42	47	586	672	717	1,975	1,036	3,011
2017-18	566	675	717	1,958	975	2,933	4	1	5	10	43	53	570	676	722	1,968	1,018	2,986
2018-19	608	660	673	1,941	1,001	2,942	3	6	3	12	41	53	611	666	676	1,953	1,042	2,995
Projected																		
2019-20	649	655	679	1,983	967	2,950	4	4	4	12	40	52	653	659	683	1,995	1,007	3,002
2020-21	694	632	694	2,020	935	2,955	4	4	4	12	38	50	698	636	698	2,032	973	3,005
2021-22	706	689	681	2,076	900	2,976	4	4	4	12	37	49	710	693	685	2,088	937	3,025
2022-23	663	736	676	2,075	881	2,956	4	4	4	12	36	48	667	740	680	2,087	917	3,004
2023-24	640	786	652	2,078	888	2,966	4	4	4	12	36	48	644	790	656	2,090	924	3,014
2024-25	622	797	712	2,131	859	2,990	4	4	4	12	35	47	626	801	716	2,143	894	3,037
2025-26	633	749	760	2,142	883	3,025	4	4	4	12	36	48	637	753	764	2,154	919	3,073
2026-27	639	723	811	2,173	863	3,036	4	4	5	13	35	48	643	727	816	2,186	898	3,084
2027-28	639	704	823	2,166	875	3,041	4	4	5	13	36	49	643	708	828	2,179	911	3,090
2028-29	639	716	773	2,128	960	3,088	4	4	4	12	39	51	643	720	777	2,140	999	3,139

Notes: Enrollment data contains all resident students EXCEPT 100% homeschooled students and students attending privatized paid schools such as the Greater Portland Christian School, North Yarmouth Academy, and Waynflete etc.... it does however contain any resident students attending a Charter School or non-district publicly funded school.

2018-19 Enrollment Projections for Scarborough, Completed January 2018

Data produced by Wandell Consulting

**Appendix Table 11 - All Scarborough Resident Students - 2018-19 Best Fit Model
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment**

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	611			666			676			1,042			2,995		
2019-20	588	653	718	593	659	725	615	683	751	957	1,007	1,057	2,753	3,002	3,251
2020-21	628	698	768	572	636	700	628	698	768	924	973	1,022	2,752	3,005	3,258
2021-22	639	710	781	624	693	762	617	685	754	890	937	984	2,770	3,025	3,281
2022-23	600	667	734	666	740	814	612	680	748	871	917	963	2,749	3,004	3,259
2023-24	580	644	708	711	790	869	590	656	722	878	924	970	2,759	3,014	3,269
2024-25	563	626	689	721	801	881	644	716	788	849	894	939	2,777	3,037	3,297
2025-26	573	637	701	678	753	828	688	764	840	873	919	965	2,812	3,073	3,334
2026-27	579	643	707	654	727	800	734	816	898	853	898	943	2,820	3,084	3,348
2027-28	579	643	707	637	708	779	745	828	911	865	911	957	2,826	3,090	3,354
2028-29	579	643	707	648	720	792	699	777	855	949	999	1,049	2,875	3,139	3,403

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	611			666			676			1,042			2,995		
2019-20	633	653	673	639	659	679	663	683	703	977	1,007	1,037	2,912	3,002	3,092
2020-21	677	698	719	617	636	655	677	698	719	944	973	1,002	2,915	3,005	3,095
2021-22	689	710	731	672	693	714	664	685	706	909	937	965	2,934	3,025	3,116
2022-23	647	667	687	718	740	762	660	680	700	889	917	945	2,914	3,004	3,094
2023-24	625	644	663	766	790	814	636	656	676	896	924	952	2,923	3,014	3,105
2024-25	607	626	645	777	801	825	695	716	737	867	894	921	2,946	3,037	3,128
2025-26	618	637	656	730	753	776	741	764	787	891	919	947	2,980	3,073	3,166
2026-27	624	643	662	705	727	749	792	816	840	871	898	925	2,992	3,084	3,176
2027-28	624	643	662	687	708	729	803	828	853	884	911	938	2,998	3,090	3,182
2028-29	624	643	662	698	720	742	754	777	800	969	999	1,029	3,045	3,139	3,233

Notes: Enrollment data contains all resident students EXCEPT 100% homeschooled students and students attending privatized paid schools such as the Greater Portland Christian School, North Yarmouth Academy, and Waynflet

2018-19 Enrollment Projections for Scarborough, Completed January 2015

Data produced by Wandell Consulting

Appendix Table 12 - Enrollment Trends & Projections - Attending Enrollment (Resident & Non-Resident) - 2018-19 Best Fit Model

October 1st Enrollment																		
School Year	Resident Students Attending District Schools						NON Resident Students Attending District Schools						Total All Attending Students					
	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																		
2008-09	753	730	807	2,290	1,065	3,355	0	0	0	0	0	0	753	730	807	2,290	1,065	3,355
2009-10	726	755	798	2,279	1,088	3,367	0	0	0	0	1	1	726	755	798	2,279	1,089	3,368
2010-11	671	770	786	2,227	1,082	3,309	0	0	0	0	1	1	671	770	786	2,227	1,083	3,310
2011-12	632	776	779	2,187	1,065	3,252	0	0	0	0	1	1	632	776	779	2,187	1,066	3,253
2012-13	624	742	805	2,171	1,053	3,224	0	1	0	1	0	1	624	743	805	2,172	1,053	3,225
2013-14	628	703	783	2,114	1,028	3,142	0	0	1	1	1	2	628	703	784	2,115	1,029	3,144
2014-15	617	696	799	2,112	998	3,110	0	1	0	1	0	1	617	697	799	2,113	998	3,111
2015-16	581	639	746	1,966	1,021	2,987	0	0	1	1	1	2	581	639	747	1,967	1,022	2,989
2016-17	585	670	715	1,970	994	2,964	0	0	1	1	1	2	585	670	716	1,971	995	2,966
2017-18	566	675	717	1,958	975	2,933	1	0	0	1	4	5	567	675	717	1,959	979	2,938
2018-19	608	660	673	1,941	1,001	2,942	1	1	2	4	2	6	609	661	675	1,945	1,003	2,948
Projected																		
2019-20	649	655	679	1,983	967	2,950	1	1	1	3	3	6	650	656	680	1,330	970	2,956
2020-21	694	632	694	2,020	935	2,955	1	1	1	3	3	6	695	633	695	1,390	938	2,961
2021-22	706	689	681	2,076	900	2,976	1	1	1	3	3	6	707	690	682	1,389	903	2,982
2022-23	663	736	676	2,075	881	2,956	1	1	1	3	3	6	664	737	677	1,341	884	2,962
2023-24	640	786	652	2,078	888	2,966	1	1	1	3	3	6	641	787	653	1,294	891	2,972
2024-25	622	797	712	2,131	859	2,990	1	1	1	3	3	6	623	798	713	1,336	862	2,996
2025-26	633	749	760	2,142	883	3,025	1	1	1	3	3	6	634	750	761	1,395	886	3,031
2026-27	639	723	811	2,173	863	3,036	1	1	2	4	3	7	640	724	813	1,453	866	3,043
2027-28	639	704	823	2,166	875	3,041	1	1	2	4	3	7	640	705	825	1,465	878	3,048
2028-29	639	716	773	2,128	960	3,088	1	1	1	3	3	6	640	717	774	1,414	963	3,094

Notes: Enrollment data contains all resident students attending district schools (EXCEPT 100% homeschooled students) and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 13 - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 Best Fit Model
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	585	650	715	590	656	722	612	680	748	922	970	1,019	2,709	2,956	3,204
2020-21	626	695	765	570	633	696	626	695	765	891	938	985	2,713	2,961	3,211
2021-22	636	707	778	621	690	759	614	682	750	858	903	948	2,729	2,982	3,235
2022-23	598	664	730	663	737	811	609	677	745	840	884	928	2,710	2,962	3,214
2023-24	577	641	705	708	787	866	588	653	718	846	891	936	2,719	2,972	3,225
2024-25	561	623	685	718	798	878	642	713	784	819	862	905	2,740	2,996	3,252
2025-26	571	634	697	675	750	825	685	761	837	842	886	930	2,773	3,031	3,289
2026-27	576	640	704	652	724	796	732	813	894	823	866	909	2,783	3,043	3,303
2027-28	576	640	704	635	705	776	743	825	908	834	878	922	2,788	3,048	3,310
2028-29	576	640	704	645	717	789	697	774	851	915	963	1,011	2,833	3,094	3,355

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	631	650	670	636	656	676	660	680	700	941	970	999	2,868	2,956	3,045
2020-21	674	695	716	614	633	652	674	695	716	910	938	966	2,872	2,961	3,050
2021-22	686	707	728	669	690	711	662	682	702	876	903	930	2,893	2,982	3,071
2022-23	644	664	684	715	737	759	657	677	697	857	884	911	2,873	2,962	3,051
2023-24	622	641	660	763	787	811	633	653	673	864	891	918	2,882	2,972	3,062
2024-25	604	623	642	774	798	822	692	713	734	836	862	888	2,906	2,996	3,086
2025-26	615	634	653	728	750	773	738	761	784	859	886	913	2,940	3,031	3,123
2026-27	621	640	659	702	724	746	789	813	837	840	866	892	2,952	3,043	3,134
2027-28	621	640	659	684	705	726	800	825	850	852	878	904	2,957	3,048	3,139
2028-29	621	640	659	695	717	739	751	774	797	934	963	992	3,001	3,094	3,187

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 13-A - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 Best Fit Model + MFI (EDITED)

Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	596	662	728	599	666	733	620	689	758	931	980	1,029	2,746	2,997	3,248
2020-21	646	718	790	589	654	719	642	713	784	910	958	1,006	2,787	3,043	3,299
2021-22	656	729	802	640	711	782	630	700	770	879	925	971	2,805	3,065	3,325
2022-23	619	688	757	682	758	834	626	695	765	860	905	950	2,787	3,046	3,306
2023-24	598	664	730	727	808	889	605	672	739	868	914	960	2,798	3,058	3,318
2024-25	581	646	711	737	819	901	658	731	804	840	884	928	2,816	3,080	3,344
2025-26	592	658	724	694	771	848	701	779	857	865	910	956	2,852	3,118	3,385
2026-27	598	664	730	671	745	820	748	831	914	846	890	935	2,863	3,130	3,399
2027-28	598	664	730	653	726	799	759	843	927	854	899	944	2,864	3,132	3,400
2028-29	598	664	730	664	738	812	714	793	872	936	985	1,034	2,912	3,180	3,448

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	642	662	682	646	666	686	668	689	710	951	980	1,009	2,907	2,997	3,087
2020-21	696	718	740	634	654	674	692	713	734	929	958	987	2,951	3,043	3,135
2021-22	707	729	751	690	711	732	679	700	721	897	925	953	2,973	3,065	3,157
2022-23	667	688	709	735	758	781	674	695	716	878	905	932	2,954	3,046	3,138
2023-24	644	664	684	784	808	832	652	672	692	887	914	941	2,967	3,058	3,149
2024-25	627	646	665	794	819	844	709	731	753	857	884	911	2,987	3,080	3,173
2025-26	638	658	678	748	771	794	756	779	802	883	910	937	3,025	3,118	3,211
2026-27	644	664	684	723	745	767	806	831	856	863	890	917	3,036	3,130	3,224
2027-28	644	664	684	704	726	748	818	843	868	872	899	926	3,038	3,132	3,226
2028-29	644	664	684	716	738	760	769	793	817	955	985	1,015	3,084	3,180	3,276

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools. Edit on 1/22/20 to best fit model data, not the 135 HU model data as original table included.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 13-B - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 Best Fit Model + MFI High (EDITED)

Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	599	665	732	601	668	735	623	692	761	935	984	1,033	2,758	3,009	3,261
2020-21	653	726	799	592	658	724	647	719	791	916	964	1,012	2,808	3,067	3,326
2021-22	663	737	811	644	716	788	635	705	776	883	929	975	2,825	3,087	3,350
2022-23	626	696	766	687	763	839	630	700	770	865	910	956	2,808	3,069	3,331
2023-24	605	672	739	730	811	892	608	676	744	873	919	965	2,816	3,078	3,340
2024-25	589	654	719	743	825	908	662	736	810	845	889	933	2,839	3,104	3,370
2025-26	599	665	732	699	777	855	706	784	862	868	914	960	2,872	3,140	3,409
2026-27	603	670	737	674	749	824	752	835	919	849	894	939	2,878	3,148	3,419
2027-28	603	670	737	657	730	803	764	849	934	861	906	951	2,885	3,155	3,425
2028-29	603	670	737	669	743	817	717	797	877	941	990	1,040	2,930	3,200	3,471

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	645	665	685	648	668	688	671	692	713	954	984	1,014	2,918	3,009	3,100
2020-21	704	726	748	638	658	678	697	719	741	935	964	993	2,974	3,067	3,160
2021-22	715	737	759	695	716	737	684	705	726	901	929	957	2,995	3,087	3,179
2022-23	675	696	717	740	763	786	679	700	721	883	910	937	2,977	3,069	3,161
2023-24	652	672	692	787	811	835	656	676	696	891	919	947	2,986	3,078	3,170
2024-25	634	654	674	800	825	850	714	736	758	862	889	916	3,010	3,104	3,198
2025-26	645	665	685	754	777	800	760	784	808	887	914	941	3,046	3,140	3,234
2026-27	650	670	690	727	749	771	810	835	860	867	894	921	3,054	3,148	3,242
2027-28	650	670	690	708	730	752	824	849	874	879	906	933	3,061	3,155	3,249
2028-29	650	670	690	721	743	765	773	797	821	960	990	1,020	3,104	3,200	3,296

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools. Edit on 1/22/20 to best fit model data, not the 135 HU model data as original table included.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 14 - Enrollment Trends & Projections - Attending Enrollment (Resident & Non-Resident) - 2018-19 Best Fit Model

October 1st Enrollment																		
School Year	Resident Students Attending District Schools						NON Resident Students Attending District Schools						Total All Attending Students					
	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12	Total K-2	Total 3-5	Total 6-8	Total K-8	Total 9-12	Total K-12
Historical																		
2008-09	753	730	807	2,290	1,065	3,355	0	0	0	0	0	0	753	730	807	2,290	1,065	3,355
2009-10	726	755	798	2,279	1,088	3,367	0	0	0	0	1	1	726	755	798	2,279	1,089	3,368
2010-11	671	770	786	2,227	1,082	3,309	0	0	0	0	1	1	671	770	786	2,227	1,083	3,310
2011-12	632	776	779	2,187	1,065	3,252	0	0	0	0	1	1	632	776	779	2,187	1,066	3,253
2012-13	624	742	805	2,171	1,053	3,224	0	1	0	1	0	1	624	743	805	2,172	1,053	3,225
2013-14	628	703	783	2,114	1,028	3,142	0	0	1	1	1	2	628	703	784	2,115	1,029	3,144
2014-15	617	696	799	2,112	998	3,110	0	1	0	1	0	1	617	697	799	2,113	998	3,111
2015-16	581	639	746	1,966	1,021	2,987	0	0	1	1	1	2	581	639	747	1,967	1,022	2,989
2016-17	585	670	715	1,970	994	2,964	0	0	1	1	1	2	585	670	716	1,971	995	2,966
2017-18	566	675	717	1,958	975	2,933	1	0	0	1	4	5	567	675	717	1,959	979	2,938
2018-19	608	660	673	1,941	1,001	2,942	1	1	2	4	2	6	609	661	675	1,945	1,003	2,948
Projected																		
2019-20	660	655	679	1,994	967	2,961	1	1	1	3	3	6	661	656	680	1,341	970	2,967
2020-21	712	633	694	2,039	935	2,974	1	1	1	3	3	6	713	634	695	1,408	938	2,980
2021-22	723	696	683	2,102	900	3,002	1	1	1	3	3	6	724	697	684	1,408	903	3,008
2022-23	681	751	677	2,109	882	2,991	1	1	1	3	3	6	682	752	678	1,360	885	2,997
2023-24	657	806	653	2,116	889	3,005	1	1	1	3	3	6	658	807	654	1,312	892	3,011
2024-25	642	818	719	2,179	860	3,039	1	1	1	3	3	6	643	819	720	1,363	863	3,045
2025-26	660	770	776	2,206	887	3,093	1	1	1	3	3	6	661	771	777	1,438	890	3,099
2026-27	673	744	833	2,250	866	3,116	1	1	2	4	3	7	674	745	835	1,509	869	3,123
2027-28	682	728	844	2,254	883	3,137	1	1	2	4	3	7	683	729	846	1,529	886	3,144
2028-29	688	748	796	2,232	977	3,209	1	1	1	3	3	6	689	749	797	1,486	980	3,215

Notes: Enrollment data contains all resident students attending district schools (EXCEPT 100% homeschooled students) and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 15 - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 135 Housing Units Added Annually Model
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	595	661	727	590	656	722	612	680	748	922	970	1,019	2,719	2,967	3,216
2020-21	642	713	784	571	634	697	626	695	765	891	938	985	2,730	2,980	3,231
2021-22	652	724	796	627	697	767	616	684	752	858	903	948	2,753	3,008	3,263
2022-23	614	682	750	677	752	827	610	678	746	841	885	929	2,742	2,997	3,252
2023-24	592	658	724	726	807	888	589	654	719	847	892	937	2,754	3,011	3,268
2024-25	579	643	707	737	819	901	648	720	792	820	863	906	2,784	3,045	3,306
2025-26	595	661	727	694	771	848	699	777	855	846	890	935	2,834	3,099	3,365
2026-27	607	674	741	671	745	820	752	835	919	826	869	912	2,856	3,123	3,392
2027-28	615	683	751	656	729	802	761	846	931	842	886	930	2,874	3,144	3,414
2028-29	620	689	758	674	749	824	717	797	877	931	980	1,029	2,942	3,215	3,488

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	641	661	681	636	656	676	660	680	700	941	970	999	2,878	2,967	3,056
2020-21	692	713	734	615	634	653	674	695	716	910	938	966	2,891	2,980	3,069
2021-22	702	724	746	676	697	718	663	684	705	876	903	930	2,917	3,008	3,099
2022-23	662	682	702	729	752	775	658	678	698	858	885	912	2,907	2,997	3,087
2023-24	638	658	678	783	807	831	634	654	674	865	892	919	2,920	3,011	3,102
2024-25	624	643	662	794	819	844	698	720	742	837	863	889	2,953	3,045	3,137
2025-26	641	661	681	748	771	794	754	777	800	863	890	917	3,006	3,099	3,192
2026-27	654	674	694	723	745	767	810	835	860	843	869	895	3,030	3,123	3,216
2027-28	663	683	703	707	729	751	821	846	871	859	886	913	3,050	3,144	3,238
2028-29	668	689	710	727	749	771	773	797	821	951	980	1,009	3,119	3,215	3,311

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 15-A - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 135 Housing Units Added Annually Model + MFI
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	606	673	740	599	666	733	620	689	758	931	980	1,029	2,756	3,008	3,260
2020-21	662	736	810	590	655	721	642	713	784	910	958	1,006	2,804	3,062	3,321
2021-22	672	747	822	646	718	790	632	702	772	879	925	971	2,829	3,092	3,355
2022-23	635	706	777	696	773	850	626	696	766	860	905	950	2,817	3,080	3,343
2023-24	613	681	749	745	828	911	607	674	741	868	914	960	2,833	3,097	3,361
2024-25	599	666	733	756	840	924	665	739	813	841	885	929	2,861	3,130	3,399
2025-26	615	683	751	713	792	871	716	795	875	865	910	956	2,909	3,180	3,453
2026-27	628	698	768	689	766	843	768	853	938	846	890	935	2,931	3,207	3,484
2027-28	636	707	778	675	750	825	779	866	953	863	908	953	2,953	3,231	3,509
2028-29	642	713	784	693	770	847	734	815	897	951	1,001	1,051	3,020	3,299	3,579

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	653	673	693	646	666	686	668	689	710	951	980	1,009	2,918	3,008	3,098
2020-21	714	736	758	635	655	675	692	713	734	929	958	987	2,970	3,062	3,154
2021-22	725	747	769	696	718	740	681	702	723	897	925	953	2,999	3,092	3,185
2022-23	685	706	727	750	773	796	675	696	717	878	905	932	2,988	3,080	3,172
2023-24	661	681	701	803	828	853	654	674	694	887	914	941	3,005	3,097	3,189
2024-25	646	666	686	815	840	865	717	739	761	858	885	912	3,036	3,130	3,224
2025-26	663	683	703	768	792	816	771	795	819	883	910	937	3,085	3,180	3,275
2026-27	677	698	719	743	766	789	827	853	879	863	890	917	3,110	3,207	3,304
2027-28	686	707	728	728	750	773	840	866	892	881	908	935	3,135	3,231	3,328
2028-29	692	713	734	747	770	793	791	815	839	971	1,001	1,031	3,201	3,299	3,397

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

**Appendix Table 15-B - Scarborough Attending Enrollment (Resident & Non-Resident) - 2018-19 135 Housing Units Added Annually Model + MFI High
Enrollment Projection Ranges (+/-5% and +/-10%) - October 1st Enrollment**

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-5%	Proj.	+5%	-Range	Proj.	+Range
2018-19*	609			661			675			1,003			2,948		
2019-20	609	677	745	601	668	735	623	692	761	935	984	1,033	2,768	3,021	3,274
2020-21	669	743	817	594	660	726	647	719	791	916	964	1,012	2,826	3,086	3,346
2021-22	680	755	831	651	723	795	635	705	776	883	929	975	2,849	3,112	3,377
2022-23	641	712	783	699	777	855	632	702	772	865	910	956	2,837	3,101	3,366
2023-24	621	690	759	750	833	916	610	678	746	873	919	965	2,854	3,120	3,386
2024-25	608	675	743	761	845	930	670	744	818	845	889	933	2,884	3,153	3,424
2025-26	623	692	761	717	797	877	719	799	879	868	914	960	2,927	3,202	3,477
2026-27	635	706	777	693	770	847	772	858	944	850	895	940	2,950	3,229	3,508
2027-28	644	715	787	679	754	829	783	870	957	868	914	960	2,974	3,253	3,533
2028-29	649	721	793	696	773	850	738	820	902	955	1,005	1,055	3,038	3,319	3,600

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Grades K-2			Grades 3-5			Grades 6-8			Grades 9-12			Total All Grades K-12		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	609			661			675			1,003			2,948		
2019-20	657	677	697	648	668	688	671	692	713	954	984	1,014	2,930	3,021	3,112
2020-21	721	743	765	640	660	680	697	719	741	935	964	993	2,993	3,086	3,179
2021-22	732	755	778	701	723	745	684	705	726	901	929	957	3,018	3,112	3,206
2022-23	691	712	733	754	777	800	681	702	723	883	910	937	3,009	3,101	3,193
2023-24	669	690	711	808	833	858	658	678	698	891	919	947	3,026	3,120	3,214
2024-25	655	675	695	820	845	870	722	744	766	862	889	916	3,059	3,153	3,247
2025-26	671	692	713	773	797	821	775	799	823	887	914	941	3,106	3,202	3,298
2026-27	685	706	727	747	770	793	832	858	884	868	895	922	3,132	3,229	3,326
2027-28	694	715	736	731	754	777	844	870	896	887	914	941	3,156	3,253	3,350
2028-29	699	721	743	750	773	796	795	820	845	975	1,005	1,035	3,219	3,319	3,419

Notes: Enrollment data contains all resident students attending district schools EXCEPT 100% homeschooled students and includes any non-resident students attending district schools.

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 16 - Enrollment Trends & Projections - Scarborough Resident Attending by Elementary School - 2018-19 Best Fit Model

October 1st Enrollment

School Year	Pleasant Hill				Blue Point				Eight Corners				Total			
	K	1st	2nd	Total K-2	K	1st	2nd	Total K-2	K	1st	2nd	Total K-2	K	1st	2nd	Total K-2
Historical																
2008-09	77	65	73	215	74	96	103	273	86	97	82	265	237	258	258	753
2009-10	56	71	65	192	95	77	96	268	72	98	96	266	223	246	257	726
2010-11	47	53	69	169	72	96	78	246	83	75	98	256	202	224	245	671
2011-12	53	51	55	159	74	71	96	241	72	86	74	232	199	208	225	632
2012-13	42	55	57	154	81	73	70	224	79	78	89	246	202	206	216	624
2013-14	59	48	58	165	68	81	81	230	77	70	86	233	204	199	225	628
2014-15	61	61	51	173	79	66	78	223	67	85	69	221	207	212	198	617
2015-16	51	60	62	173	42	78	70	190	63	71	84	218	156	209	216	581
2016-17	60	52	60	172	63	49	78	190	70	72	81	223	193	173	219	585
2017-18	56	60	55	171	60	63	49	172	70	76	77	223	186	199	181	566
2018-19	70	53	65	188	62	66	69	197	77	68	78	223	209	187	212	608
Projected																
2019-20	74	70	56	200	72	66	68	206	88	82	73	243	234	218	197	649
2020-21	69	72	74	215	69	77	69	215	83	94	87	264	221	243	230	694
2021-22	70	68	76	214	68	73	79	220	82	89	101	272	220	230	256	706
2022-23	60	68	71	199	60	72	75	207	73	88	96	257	193	228	242	663
2023-24	62	59	72	193	62	64	74	200	75	78	94	247	199	201	240	640
2024-25	64	61	62	187	63	66	66	195	77	80	83	240	204	207	211	622
2025-26	64	63	64	191	63	67	68	198	77	82	85	244	204	212	217	633
2026-27	64	63	66	193	63	67	69	199	77	82	88	247	204	212	223	639
2027-28	64	63	66	193	63	67	69	199	77	82	88	247	204	212	223	639
2028-29	64	63	66	193	63	67	69	199	77	82	88	247	204	212	223	639

Notes: Enrollment data contains all resident students EXCEPT homeschooled students and students attending private schools. Due to rounding of the data, the sum of these projections may differ slightly from the projected total K-2 enrollment

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 17 - Resident Students Attending Elementary Schools in Scarborough - 2018-19 Best Fit Model
Enrollment Projection Ranges (+/-10%) - October 1st Enrollment

School Year	Pleasant Hill			Blue Point			Eight Corners			Total All Grades K-2		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-Range	Proj.	+Range
2018-19*		188			197			223			608	
2019-20	180	200	220	185	206	227	219	243	267	584	649	714
2020-21	194	215	237	194	215	237	238	264	290	626	694	764
2021-22	193	214	235	198	220	242	245	272	299	636	706	776
2022-23	179	199	219	186	207	228	231	257	283	596	663	730
2023-24	174	193	212	180	200	220	222	247	272	576	640	704
2024-25	168	187	206	176	195	215	216	240	264	560	622	685
2025-26	172	191	210	178	198	218	220	244	268	570	633	696
2026-27	174	193	212	179	199	219	222	247	272	575	639	703
2027-28	174	193	212	179	199	219	222	247	272	575	639	703
2028-29	174	193	212	179	199	219	222	247	272	575	639	703

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Pleasant Hill			Blue Point			Eight Corners			Total All Grades K-2		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*		188			197			223			608	
2019-20	194	200	206	200	206	212	236	243	250	630	649	668
2020-21	209	215	221	209	215	221	256	264	272	674	694	714
2021-22	208	214	220	213	220	227	264	272	280	685	706	727
2022-23	193	199	205	201	207	213	249	257	265	643	663	683
2023-24	187	193	199	194	200	206	240	247	254	621	640	659
2024-25	181	187	193	189	195	201	233	240	247	603	622	641
2025-26	185	191	197	192	198	204	237	244	251	614	633	652
2026-27	187	193	199	193	199	205	240	247	254	620	639	658
2027-28	187	193	199	193	199	205	240	247	254	620	639	658
2028-29	187	193	199	193	199	205	240	247	254	620	639	658

Notes: Enrollment data contains all resident students EXCEPT 100% homeschooled students and students attending privatized paid schools such as the Greater Portland Christian School, North Yarmouth Academy, and Waynflete.

2018-19 Enrollment Projections for Scarborough, Completed January 2019
 Data produced by Wandell Consulting

Appendix Table 18 - Enrollment Trends & Projections - Scarborough Resident Attending by Elementary School - 2018-19 135 Housing Units Model

October 1st Enrollment

School Year	Pleasant Hill				Blue Point				Eight Corners				Total			
	K	1st	2nd	Total K-2	K	1st	2nd	Total K-2	K	1st	2nd	Total K-2	K	1st	2nd	Total K-2
Historical																
2008-09	77	65	73	215	74	96	103	273	86	97	82	265	237	258	258	753
2009-10	56	71	65	192	95	77	96	268	72	98	96	266	223	246	257	726
2010-11	47	53	69	169	72	96	78	246	83	75	98	256	202	224	245	671
2011-12	53	51	55	159	74	71	96	241	72	86	74	232	199	208	225	632
2012-13	42	55	57	154	81	73	70	224	79	78	89	246	202	206	216	624
2013-14	59	48	58	165	68	81	81	230	77	70	86	233	204	199	225	628
2014-15	61	61	51	173	79	66	78	223	67	85	69	221	207	212	198	617
2015-16	51	60	62	173	42	78	70	190	63	71	84	218	156	209	216	581
2016-17	60	52	60	172	63	49	78	190	70	72	81	223	193	173	219	585
2017-18	56	60	55	171	60	63	49	172	70	76	77	223	186	199	181	566
2018-19	70	53	65	188	62	66	69	197	77	68	78	223	209	187	212	608
Projected																
2019-20	76	72	56	204	74	68	68	210	89	84	73	246	239	224	197	660
2020-21	71	74	76	221	71	79	71	221	85	96	89	270	227	249	236	712
2021-22	72	70	78	220	70	75	81	226	83	91	103	277	225	236	262	723
2022-23	62	70	73	205	62	74	77	213	75	90	98	263	199	234	248	681
2023-24	64	61	75	200	64	66	76	206	76	79	96	251	204	206	247	657
2024-25	67	63	65	195	66	68	68	202	79	81	85	245	212	212	218	642
2025-26	68	66	67	201	67	70	70	207	80	85	87	252	215	221	224	660
2026-27	69	67	69	205	68	71	72	211	81	85	91	257	218	223	232	673
2027-28	70	68	70	208	69	72	73	214	82	86	92	260	221	226	235	682
2028-29	70	69	71	210	69	73	74	216	82	87	93	262	221	229	238	688

Notes: Enrollment data contains all resident students EXCEPT homeschooled students and students attending private schools. Due to rounding of the data, the sum of these projections may differ slightly from the projected total K-2 enrollment

2018-19 Enrollment Projections for Scarborough, Completed January 2019

Data produced by Wandell Consulting

Appendix Table 19 - Resident Students Attending Elementary Schools in Scarborough - 2018-19 135 Housing Units Added Annually Model
Enrollment Projection Ranges (+/-10%) - October 1st Enrollment

School Year	Pleasant Hill			Blue Point			Eight Corners			Total All Grades K-2		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-Range	Proj.	+Range
2018-19*	188			197			223			608		
2019-20	184	204	224	189	210	231	221	246	271	594	660	726
2020-21	199	221	243	199	221	243	243	270	297	641	712	783
2021-22	198	220	242	203	226	249	249	277	305	650	723	796
2022-23	185	205	226	192	213	234	237	263	289	614	681	749
2023-24	180	200	220	185	206	227	226	251	276	591	657	723
2024-25	176	195	215	182	202	222	221	245	270	579	642	707
2025-26	181	201	221	186	207	228	227	252	277	594	660	726
2026-27	185	205	226	190	211	232	231	257	283	606	673	741
2027-28	187	208	229	193	214	235	234	260	286	614	682	750
2028-29	189	210	231	194	216	238	236	262	288	619	688	757

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Pleasant Hill			Blue Point			Eight Corners			Total All Grades K-2		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	3%
2018-19*	188			197			223			608		
2019-20	198	204	210	204	210	216	239	246	253	641	660	679
2020-21	214	221	228	214	221	228	262	270	278	690	712	734
2021-22	213	220	227	219	226	233	269	277	285	701	723	745
2022-23	199	205	211	207	213	219	255	263	271	661	681	701
2023-24	194	200	206	200	206	212	243	251	259	637	657	677
2024-25	189	195	201	196	202	208	238	245	252	623	642	661
2025-26	195	201	207	201	207	213	244	252	260	640	660	680
2026-27	199	205	211	205	211	217	249	257	265	653	673	693
2027-28	202	208	214	208	214	220	252	260	268	662	682	702
2028-29	204	210	216	210	216	222	254	262	270	668	688	708

Notes: Enrollment data contains all resident students EXCEPT 100% homeschooled students and students attending privatized paid schools such as the Greater Portland Christian School, North Yarmouth Academy, and Waynflete.

2018-19 Enrollment Projections for Scarborough, Completed January 2019
 Data produced by Wandell Consulting

Appendix Table 20 - Resident Students Attending Blue Point School - Scarborough
Enrollment Projection Ranges (+/-10%) - October 1st Enrollment

School Year	Best Fit Model			Best Fit + MFI			Best Fit + MFI High			135 HU Added Model			135 HU Added + MFI			135 HU Added + MFI High		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%
2018-19*	197			197			197			197			197			197		
2019-20	185	206	227	191	212	233	189	210	231	189	210	231	193	214	235	194	215	237
2020-21	194	215	237	197	219	241	198	220	242	199	221	243	203	226	249	203	226	249
2021-22	198	220	242	201	223	245	202	224	246	203	226	249	208	231	254	208	231	254
2022-23	186	207	228	190	211	232	192	213	234	192	213	234	196	218	240	195	217	239
2023-24	180	200	220	183	203	223	185	206	227	185	206	227	190	211	232	191	212	233
2024-25	176	195	215	178	198	218	181	201	221	182	202	222	186	207	228	187	208	229
2025-26	178	198	218	182	202	222	182	202	222	186	207	228	190	211	232	192	213	234
2026-27	179	199	219	183	203	223	183	203	223	190	211	232	194	216	238	196	218	240
2027-28	179	199	219	183	203	223	183	203	223	193	214	235	197	219	241	198	220	242
2028-29	179	199	219	183	203	223	183	203	223	194	216	238	199	221	243	200	222	244

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Best Fit Model			Best Fit + MFI			Best Fit + MFI High			135 HU Added Model			135 HU Added + MFI			135 HU Added + MFI High		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%
2018-19*	197			197			197			197			197			197		
2019-20	200	206	212	206	212	218	204	210	216	204	210	216	208	214	220	209	215	221
2020-21	209	215	221	212	219	226	213	220	227	214	221	228	219	226	233	219	226	233
2021-22	213	220	227	216	223	230	217	224	231	219	226	233	224	231	238	224	231	238
2022-23	201	207	213	205	211	217	207	213	219	207	213	219	211	218	225	210	217	224
2023-24	194	200	206	197	203	209	200	206	212	200	206	212	205	211	217	206	212	218
2024-25	189	195	201	192	198	204	195	201	207	196	202	208	201	207	213	202	208	214
2025-26	192	198	204	196	202	208	196	202	208	201	207	213	205	211	217	207	213	219
2026-27	193	199	205	197	203	209	197	203	209	205	211	217	210	216	222	211	218	225
2027-28	193	199	205	197	203	209	197	203	209	208	214	220	212	219	226	213	220	227
2028-29	193	199	205	197	203	209	197	203	209	210	216	222	214	221	228	215	222	229

Notes: Enrollment data contains all resident students EXCEPT 100% homeschooled students and students attending private paid schools such as the Greater Portland Christian School, North Yarmouth Academy, and Waynflete.

2018-19 Enrollment Projections for Scarborough, Completed January 2019
 Data produced by Wandell Consulting

Appendix Table 21 - Resident Students Attending Eight Corners School - Scarborough
Enrollment Projection Ranges (+/-10%) - October 1st Enrollment

School Year	Best Fit Model			Best Fit + MFI			Best Fit + MFI High			135 HU Added Model			135 HU Added + MFI			135 HU Added + MFI High		
	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%	-10%	Proj.	+10%
2018-19*	223			223			223			223			223			223		
2019-20	219	243	267	224	249	274	229	254	279	221	246	271	229	254	279	231	257	283
2020-21	238	264	290	255	283	311	261	290	319	243	270	297	259	288	317	266	295	325
2021-22	245	272	299	262	291	320	268	298	328	249	277	305	266	295	325	273	303	333
2022-23	231	257	283	249	277	305	255	283	311	237	263	289	254	282	310	260	289	318
2023-24	222	247	272	240	267	294	245	272	299	226	251	276	242	269	296	249	277	305
2024-25	216	240	264	234	260	286	239	265	292	221	245	270	237	263	289	244	271	298
2025-26	220	244	268	238	264	290	244	271	298	227	252	277	243	270	297	249	277	305
2026-27	222	247	272	240	267	294	246	273	300	231	257	283	248	276	304	254	282	310
2027-28	222	247	272	240	267	294	246	273	300	234	260	286	251	279	307	257	286	315
2028-29	222	247	272	240	267	294	246	273	300	236	262	288	253	281	309	259	288	317

Enrollment Projection Ranges (+/-3%) - October 1st Enrollment

School Year	Best Fit Model			Best Fit + MFI			Best Fit + MFI High			135 HU Added Model			135 HU Added + MFI			135 HU Added + MFI High		
	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%	-3%	Proj.	+3%
2018-19*	223			223			223			223			223			223		
2019-20	236	243	250	242	249	256	246	254	262	239	246	253	246	254	262	249	257	265
2020-21	256	264	272	275	283	291	281	290	299	262	270	278	279	288	297	286	295	304
2021-22	264	272	280	282	291	300	289	298	307	269	277	285	286	295	304	294	303	312
2022-23	249	257	265	269	277	285	275	283	291	255	263	271	274	282	290	280	289	298
2023-24	240	247	254	259	267	275	264	272	280	243	251	259	261	269	277	269	277	285
2024-25	233	240	247	252	260	268	257	265	273	238	245	252	255	263	271	263	271	279
2025-26	237	244	251	256	264	272	263	271	279	244	252	260	262	270	278	269	277	285
2026-27	240	247	254	259	267	275	265	273	281	249	257	265	268	276	284	274	282	290
2027-28	240	247	254	259	267	275	265	273	281	252	260	268	271	279	287	277	286	295
2028-29	240	247	254	259	267	275	265	273	281	254	262	270	273	281	289	279	288	297

Notes: Enrollment data contains all resident students EXCEPT 100% homeschooled students and students attending privatized paid schools such as the Greater Portland Christian School, North Yarmouth Academy, and Waynflete.

2018-19 Enrollment Projections for Scarborough, Completed January 2019
 Data produced by Wandell Consulting

APPENDIX B

INFORMATION ON ENROLLMENT DATA & METHODOLOGIES USED FOR PROJECTION STUDIES

Enrollment Data and Methodologies Used for Projection Studies

Enrollment Data Used for the Projection Study:

- The enrollment data used for these projections is based on the October 1st resident enrollment count by school year. Historical enrollment data is obtained directly from the Maine Department of Education. If a study is completed in October to December of a school year the data may need to be obtained directly from the school district. Sometimes data supplied by the school district is different from what MDOE will show because of reporting differences, inconsistencies or errors adjusted over time. Although it does not happen often, it is important to understand it can happen and is often the source of differences in enrollment count between studies.
- It is also important to understand the resident enrollment and attending enrollment figures will not necessarily correlate with EPS funding counts of students. Specifics on what is included in the different types of enrollment counts, please visit the MDOE data center:
<http://www.maine.gov/education/datalist.htm>

Types of Enrollment Data:

1. **Total Resident Enrollment:** the count of all students living in the district's town(s) regardless of where they attend school. Excluded from this data are students attending privately paid for private schools and home schooled students. It does include students at publicly paid for schools such as Charter Schools, or other school districts within Maine.
2. **Attending Resident Enrollment:** the count of resident students attending a district's school(s).
3. **Enrollment of Resident Students Attending Out of District Schools:** the count of resident students attending other district schools either as tuition students, choice tuition students, superintendent agreements, or other such similar situations.
4. **Non-Resident Attending Enrollment:** is the count of students from other districts attending the resident district's schools.
5. **Private School Enrollment:** is the count of students attending private schools. Enrollment of students attending private schools is often excluded from the study because private schools do not always submit their enrollment counts, or MDOE did not always include the data in the resident enrollment count. For example, the enrollment for one year will show 10 students attending private school X, the following year there are zero students attending private school X, then in the next school year private school X suddenly has an enrollment of 15 students. These variations in enrollment count only serve to distort the migration trends used to make the projections.

However, private school student enrollment will remain if the district in question pays for students to attend the private school. An example of this is Saco students attending Thornton Academy. In these cases the private school enrollment count is consistently reported and there are no issues with consistency of historical data.

6. **Home Schooled Students:** is the count of students educated at home. Historical enrollment data of home schooled students is inconsistent. Some districts do a good job of tracking home schooled students by grade, others only have grade group data, some have the information for several schools years while others may only have information readily available on the most recent couple of school years. MDOE also has historical home schooled enrollment, but the counts are not as readily available. Therefore, home schooled enrollment is generally not projected unless a district can provide consistent data.

PAST Projections verse CURRENT Projections: When comparing past enrollment studies to future studies, it is important to understand the differences in enrollment data. With the older enrollment studies a detailed breakdown of enrollment was often not readily available. In other cases the data supplied by a district for the past study was adjusted by the district and/or MDOE following the completion of the projections. When comparing past studies to current studies, be sure to compare data that shows the same type of enrollment count. In some districts there is very little difference between resident attending enrollment and total resident enrollment, while in other districts there is a significant difference in the enrollment count.

Methodology Notes:

- **Resident Births:**

When making projections, the calendar year birth figures are not used to determine the number of resident births in a year. To project future entering first grade class sizes the "birth year" is based on when a student is eligible to enroll, or from October 15th of one year to October 14th of the next. Because the data supplied by the office of Data, Research, and Vital Statistics, Division of Public Health Systems, Maine Centers for Disease Control and Prevention at the Maine Department of Health and Human Services for October is based on October 1st to the 31st, the October births are split in half so that one half is put into one year and the other half is put into the following year's birth figures. This allows the cohort survival model to more accurately project entering first grade class sizes.

Birth data from calendar year 2017 is preliminary and provisional, but historically this data has been very accurate.

- **First Grade Class Sizes:**

The size of the first grade class is influenced by two factors: the number of births to residents of a community during the year that is six years prior to the enrollment year; and, net migration of preschool aged children (number of preschool aged children moving into the community minus the number of preschool aged children moving out of the community) during the first grade enrollment year and the year that was six years prior. The level of preschool migration can be measured by the ratio of enrollment for the entering first grade class to the number of births to residents in the year that was six years prior.

- **Net Migration Ratios:**

In making grade-to-grade projections, the historical average grade-to-grade survival ratios over the last three to ten years are analyzed. The average that displays the “strongest” statistical relationship to existing class sizes are used to project future enrollment.

When net migration ratios are discussed throughout the study, a ratio higher than 1.000 indicates a net in-migration of children occurred, and a ratio less than 1.000 indicates a net out-migration of children occurred.