NEEDHAM PUBLIC SCHOOLS

POPULATION AND ENROLLMENT FORECASTS, 2024-25 THROUGH 2033-34

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EXECUTIVE SUMMARY

1. The Needham Public Schools will experience slight population and enrollment growth over the next 15 years, primarily due to a growing population, an increase in housing stock, and a growing number of elderly households "turning over".

2. Total district enrollment is forecasted to increase by 40 students, or 0.7%, from Academic Year 2023-24 through AY 2028-29. Total enrollment is expected to further increase by 62 students, or 1.1%, from AY2028-29 through AY2033-34. Total district enrollment is forecasted to increase by 97 students, or 1.7%, from Academic Year 2033-34 through AY 2038-39

3. The **resident** total fertility rate for the Needham Public Schools over the life of the forecasts is below replacement level (1.72 vs. the replacement level of 2.1)**.**

4. The dominant in-migration flow to the district continues to occur in the 0-to-9 and 25-to-44-year-old age groups. These tend to be young families with school age or pre-school age children, which helps increase the size of the district's relatively small 0-4 age groups.

5. The largest out-migration flow occurs when the local 18-to-24-year-old population leaves the district, going to college or moving to other urbanized areas. This population group accounts for the largest segment of the district's out migration. The second largest migration outflow is in the 70+ age groups downsizing from their housing units.

6. The primary factors causing the Needham Public Schools enrollment to increase over the next 15 years is the increase in new households the district, the high number of elderly housing units turning over coupled with a steady rate of in-migration of young families.

7. Changes in year-to-year enrollment over the next ten years will primarily be due to large cohorts entering and moving through the school system in conjunction with smaller cohorts leaving the system.

8. The average size of the graduating 12th grade class in the Needham Public Schools district will be 404 students from AY2024 to AY2033. This compares to 416 over the last five years.

9. The total elementary enrollment will slowly increase over most of the next 15 school years.

10. The median age of the population in the Needham Public Schools district will decrease from 43.7 years in 2020 to 42.1 in 2040 confirming the continuation of the trend of elderly housing turn over.

11. The average household size in the Needham Public Schools district increased from 2.72 in 2010 to 2.78 in 2020. This trend is contrary to what was experienced in most of the states, regions, and country.

12. Even if the district continues to have some amount of annual new housing unit construction over the next 10 years, the rate, magnitude, and price of existing home sales will become the increasingly dominant factor affecting the amount of population and enrollment change.

INTRODUCTION

Needham Public Schools is an inner ring suburban school district in the western part of the Boston, Massachusetts metropolitan area. It has ready and convenient access to I-90 and I-95, allowing commuters easy access to jobs in the urban core areas. The district is also in close proximity to the economic development occurring along the MA-128 corridor. The district has experienced sustained population and enrollment growth over the last 13 years (the COVID period not withstanding). These increases have been fueled primarily by the in-migration of households from other parts of the greater Boston metropolitan area and an increase in available housing stock.

To gain a complete picture of the demographic dynamics of a school district and its individual attendance areas, a multitude of variables must be examined and considered. These variables include, but are not limited to, rates of in-migration and new housing starts, the age structure of the population, the rate and magnitude of existing home sales, the area's fertility rate and number of births, the proportion of owner-occupied home versus renters, mortality rates, the rates and ages of the out-migrating population, and trends in household structure. These variables that impact demographic changes can have both positive and negative impacts on population and enrollment trends.

Therefore, to develop the population forecast models, past migration patterns, current age specific fertility patterns, the magnitude and dynamics of the gross and net migration, the current age specific mortality trends, the distribution of the population by age and sex, the rate and type of existing housing unit sales, and future housing unit construction are considered primary variables.

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

To maximize the use of this study as a planning tool, the ultimate goal is not simply to project the past into the future, but rather to assess various factors' impact on the future. The future population and enrollment change of each school district is influenced by a variety of factors. Not all factors will influence the entire school district or its attendance areas at the same level. Some may affect different areas at dissimilar magnitudes and rates causing changes at varying points of time within the same district. The forecaster's judgment, based on a thorough and intimate study of the district, has been used to modify the demographic trends and factors to predict likely changes more accurately. Therefore, strictly speaking, this study is a forecast, not a projection; and the amount of modification of the demographic trends varies between different areas of the district as well as within the timeframe of the forecast.

To calculate population forecasts of any type, particularly for smaller populations such as a school district or its attendance areas, realistic suppositions must be made as to what the future will bring in terms of age specific fertility, mortality, and migration rates as well as the residents' demographic behavior at certain points of the life course. The demographic history of the Needham Public Schools district

and its interplay with the social and economic history of the greater Boston Metropolitan area is the starting point and basis of most of these suppositions, particularly on key factors such as the age structure of the area. The unique nature of each district's and attendance area's demographic composition and rate of change over time must be assessed and understood to be factors throughout the life of the forecast series. Moreover, no two populations, particularly at the school district and attendance area level, have identical demographic characteristics or undergo demographics changes at exactly the same rate.

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

Unless the district specifically requests the calculation of forecasts that reflect the effects of changes in these non-demographic factors, their influences are held constant for the life of the forecasts. Again, the main function of these forecasts is to determine what impact demographic changes will have on future enrollment. It is quite possible to calculate special "scenario" forecasts to measure the impact of school policy modifications, new state mandates as well as planned economic development and/or financial changes. However, in this case the results of these population and enrollment forecasts are meant to represent the most likely scenario for changes over the next 15 years in the district and its attendance areas.

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

DATA

The data used for the forecasts come from a variety of sources. The Needham Public Schools provided enrollments by grade and attendance center for the school years 2018-19 to 2023-24. Birth and death data for the years 2015 through 2022 were obtained from the Massachusetts Department of Health. The net migration values were calculated using Internal Revenue Service migration reports for the years 2015 through 2021. The data used for the calculation of migration models came from the United States Bureau of the Census, 2010 to 2020, and the models were designed using demographic and economic factors. The base age-sex population counts used are from the results of the 2020 Census.

Recently the Census Bureau began releasing annual estimates of demographic variables at the block group and tract level from the American Community Survey (ACS). There has been wide scale reporting of these results in the national, state, and local media. However, due to the methodological problems the Census

Bureau is experiencing with their estimates derived from ACS data, particularly in areas with a population of less than 60,000, the results of the ACS are not used in these forecasts. (None of the elementary attendance areas in the district has a population that exceeds 60,000.) For example, given the sampling framework used by the Census Bureau, each year only 350 of the over 11,300 current households in the district would have been included. For comparison 1,500 households in the district were included in the sample for the long form questionnaire in the 2000 Census. As a result of this small sample size, the ACS survey results from the last five years must be aggregated to produce the tract and block group estimates.

ASSUMPTIONS

For these forecasts, the mortality probabilities are held constant at the levels calculated for the year 2019 (pre COVID-19 levels). While the number of deaths in an area are impacted by and will change given the proportion of the local population over age 65, in the absence of an extraordinary event such as a natural disaster or a breakthrough in the treatment of heart disease, death rates rarely move rapidly in any direction, particularly at the school district or attendance area level. Thus, significant changes are not foreseen in district's mortality rates between now and fall 2033. (At this point in time, there is insufficient data at the geographic and age levels needed for these forecasts of the impacts of COVID-19 on mortality rates. We assume that most areas will return to their traditional mortality rate levels by 2024.) Any increases forecasted in the number of deaths will be due primarily to the general aging of the district's population and specifically to the increase in the number of residents aged 65 and older.

Similarly, fertility rates are assumed to stay fairly constant for the life of the forecasts. Like mortality rates, age specific fertility rates rarely change quickly or dramatically, particularly in small areas. Even with the recently reported drop in the fertility rates of the United States, overall fertility rates have stayed within a 15% range for most of the last 40 years. In fact, the vast majority of year-to-year change in an area's number of births is due to changes in the number of women in childbearing ages (particularly ages 20-29) rather than any fluctuation in an area's fertility rate. While there was a significant decline in the number of births in most regions of the United States in 2020 and 2021 due to the impact of COVID-19, as well as a small "bounce back" in 2022, we assume that after 2023 fertility rates will resume their pre-COVID trends.

The **resident** total fertility rate (TFR), the average number of births a woman will have while living in the school district during her lifetime, is estimated to be 1.72 for the total district for the ten years of the population forecasts. A TFR of 2.1 births per woman is considered the theoretical "replacement level" of fertility necessary for a population to remain constant in the absence of in-migration. Therefore, in the absence of migration, fertility alone would be slightly below the level needed to maintain the current level of population and enrollment within Needham Public Schools over the course of the forecast period. At the current TFR and given the number of women in prime childbearing age in the district (ages 20–34-year-old), the district will consistently see the number of total resident births be on average 70 less than the average enrollment in grade one.

A close examination of data for Needham Public Schools has shown the age specific pattern of net migration will be nearly constant throughout the life of the forecasts. (See Appendix C) While the number of in and out

migrants has changed in past years for Needham Public Schools (and will change again over the next 15 years), the basic age pattern of the migrants has stayed nearly the same over the last 30 years. Based on the analysis of data it is safe to assume this age specific migration trend will remain unchanged into the future. This pattern of migration shows most of the local out-migration occurring in the 18-to-24-year-old age group as young adults leave the area to go to college or move to other urbanized areas. The second group of out-migrants is those householders aged 70 and older who are downsizing their residences. Most of the non-college in-migration occurs in the 0-to-9 and 25-44 age groups (the bulk of which come from areas within 75 miles of Needham Public Schools) primarily consisting of younger adults and their children.

The primary issue regarding the impact of migration on an area's population (and subsequently the enrollment) is to measure the magnitude and demographic characteristics of both the in-migrants and the out-migrants. For example, a district that has a large number of young families moving in would experience an increase in population in the 0-9 and 25-44 age groups thus giving the impression of continuous growth. However, most districts that are seeing in-migration of young families are at the same time experiencing out-migration in the 18-23 and over 65 age groups as graduating high school seniors leave the district and elderly households downsize to other areas.

The size and magnitude of these migration flows can and do change over time given the number of people in the respective age groups. A district that has had a continuous inflow of young families will eventually see an increasing number of out-migrants in the 18-23 age group as larger grade cohorts leave high school, thus reducing the total net migration.

In Needham Public Schools, the change in household size relative to the age structure of the area was closely examined. There was a slight drop in the average household size in most other areas of the country during the last decade. The Needham Public Schools However experienced an increase in household size (the average household size in the district was 2.78 in 2020 compared to 2.72 in 2010). However, the rate of this increase has been forecasted to slow over the next 10 years, then reverse. (See Table 2) Areas the have a decrease in household size is primarily caused by the increase in "empty nest" households. For example, if a household has four people in 2010 (two parents and two late-elementary age children) by 2020 the children will have grown and moved out. Thus, even with the same householder, the size had declined from four to two. Areas (particularly one in suburban areas) that see an increase in household size usually have large numbers of existing elderly housing units "turning over". The increase in house hold size in Needham was especially fortuitus as it helped offset part of the district's low fertility rate.

As the Norfolk County area is not currently contemplating any major expansions or contractions, the forecasts also assume that the current economic, political, social, and environmental factors, as well as the transportation and public works infrastructure (with a few notable exceptions) of Needham Public Schools and its attendance areas will remain the same through the year 2038. Below is a list of assumptions and issues that are specific to Needham Public Schools. These issues have been used to modify the population forecast models to predict the impact of these factors more accurately on each area's population change.

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

a. The national, state, or regional economy does not go into deep recession at any time during the 15 years of the forecasts; (Deep recession is defined as four consecutive quarters where the GDP contracts greater than 1% per quarter)

b. Interest rates have risen from their historic lows and will not fluctuate more than two percentage points in the short term; the interest rate for a 30-year fixed home mortgage stays between 5.5% and 7.5% for the 15 years of the forecasts;

c. The rate of mortgage approval stays at 2023 levels and lenders do not return to "sub-prime" mortgage practices;

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

e. The rate of housing foreclosures does not exceed 125% of the 2015-2022 average of Norfolk County for any year in the forecasts;

f. All currently planned, platted, approved, and permitted housing developments are built out and completed by 2037. All new housing units constructed are occupied by 2038. Speculative new home construction plans are not included;

g. The average annual unemployment rates for the Norfolk County and the Boston Metropolitan Area will remain below 7.5% for the 15 years of the forecasts;

h. The intra-district student transfer policy remains unchanged over the next 15 years;

i. The rate of students transferring out of the Needham Public Schools will remain at the AY2018-19 to AY2022-23 average;

j. The inflation rate for gasoline will stay below 5% per year for the 15 years of the forecasts;

k. The state of Massachusetts does not change the current policy on open enrollment (unrestricted inter district transfers) or school vouchers anytime in the next 15 years;

l. There will be no building moratorium within the district;

m. Businesses within the district and the Needham Public Schools area will remain viable;

n. There are no new charter schools opened in the district anytime or expansion of existing charter schools over the next 15 years;

o. The number of existing home sales in the district that are a result of "distress sales" (homes worth less than the current mortgage value) will not exceed 20% of total homes sales in the district for any given year;

p. Housing turnover rates (sale of existing homes in the district) will remain at their current levels. The majority of existing homes sold are those of homeowners over the age of 60;

q. The district will have at least an average of 280 existing home sales per year until 2028, 300 annually until 2030 and 330 annually until 2038;

r. The district will have at least an average of 80 new single-family housing units constructed per year over the next 15 years;

s. Private school and home school attendance rates will remain constant at AY2023 levels;

t. The rate of foreclosures for commercial property remains at the 2015-2022 average for Norfolk County;

u. The number of students engaging in virtual learning (both within and outside of the district) remains at the AY2023 level.

If a major employer in the district or in the Norfolk County or the Greater Boston Metropolitan Area (particularly in western parts of the metropolitan area) closes, reduces or expands its operations, the population forecasts would need to be adjusted to reflect the changes brought about by the change in economic and employment conditions. The same holds true for any type of natural disaster, major change in the local infrastructure (e.g., highway construction, water and sewer expansion, changes in zoning regulations etc.), an economic downturn, any additional weakness in the housing market, another pandemic or any instance or situation that causes rapid and dramatic population changes that could not be foreseen at the time the forecasts were calculated.

The high proportion of high school graduates from Needham Public Schools that attend college or relocate outside of the district for employment is a significant demographic factor. The strong academic quality of the school district results in a high graduation rate that, in turn, leads to elevated college participation levels. The graduating seniors' departure from the area is a major reason for the extremely high out-migration in the 18 to 24 age group and was considered when calculating these forecasts. The out-migration of graduating high school seniors is expected to continue over the period of the forecasts and the rate of out-migration has been forecasted to remain the same over the life of the forecast series.

Finally, all demographic trends (i.e., births, deaths, and migration) are assumed to be linear in nature and annualized over the forecast period. For example, if 1,000 births are forecasted for a 5-year period, an equal number, or proportion of the births are assumed to occur every year, 200 per year. Actual year-to-year variations do and will occur, but overall year-to-year trends are expected to be constant.

METHODOLOGY

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

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

a. a base-year population (here, the 2010 Census population for the Needham Public Schools and its attendance areas);

b. a set of age-specific fertility rates for the district to be used over the forecast period and its attendance areas;

c. a set of age-specific survival (mortality) rates for the district and its attendance areas;

d. a set of age-specific migration rates for the district and its attendance areas; and;

e. the historical enrollment figures by grade.

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

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

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

The survivorship rates were modified or adjusted to reflect the average rate of forecasted in and out migration of 5-to-9, 10-to-14 and 15-to-17-year-old cohorts to each of the attendance centers in Needham Public Schools for the period 2020 to 2025. These survivorship rates then were adjusted to reflect the forecasted changes in age-specific migration the district should experience over the next five years. These modified survivorship rates were used to project the enrollment of grades 2 through 12 for the period 2025 to 2030. The survivorship rates were adjusted again for the period 2030 to 2035 to reflect the predicted changes in the amount of age-specific migration in the district for the period.

The forecasted enrollments for kindergarten and first grade are derived from the 5-to-9-year-old population of the age-sex population forecast at the elementary attendance center district level. This procedure allows the changes in the incoming grade sizes to

be factors of forecasted population change and not an extrapolation of previous class sizes. Given the potentially large amount of variation in kindergarten enrollment due to parental choice, changes in the state's minimum age requirement, and differing district policies on allowing children to start Kindergarten early, first grade enrollment is deemed to be a more accurate and reliable starting point for the forecasts. (McKibben, 1996) The level of accuracy for both the population and enrollment forecasts at the school district level is estimated to be no more than +/-2.0% for the life of the forecasts.

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Appendix A: Supplemental Tables

Table 1: Forecasted Elementary Area Population Change, 2020 to 2030

	2020	2025	*2020-2025 Change*	2030	*2025-2030 Change*	*2020-2030 Change*
Broadmeadow	6,091	6,270	*2.9%*	6,510	*3.8%*	*6.9%*
Eliot	5,904	6,200	*5.0%*	6,540	*5.5%*	*10.8%*
Williams	6,406	6,440	*0.5%*	6,560	*1.9%*	*2.4%*
Mitchell	4,870	5,010	*2.9%*	5,120	*2.2%*	*5.1%*
Newman	8,859	9,080	*2.5%*	9,220	*1.5%*	*4.1%*
District Total	**32,130**	**33,000**	***2.7%***	**33,950**	***2.9%***	***5.7%***

Table 2: Household Characteristics by Elementary Area, 2020 Census

	HH w/ Pop Under 18	% HH w/ Pop Under 18	Total Households	Household Population	Persons Per Household
Broadmeadow	945	46.7%	2,024	6,027	2.98
Eliot	743	31.5%	2,360	5,698	2.41
Williams	853	36.2%	2,358	6,065	2.57
Mitchell	746	49.1%	1,518	4,870	3.21
Newman	1,218	40.2%	3,033	8,694	2.87
District Total	**4,505**	**39.9%**	**11,293**	**31,354**	**2.78**

Table 3: Householder Characteristics by Elementary Area, 2020 Census

	Percentage of Householders aged 35-54	Percentage of Householders aged 65+	Percentage of Householders who own homes
Broadmeadow	45.9%	27.7%	89.7%
Eliot	34.6%	32.2%	57.6%
Williams	36.9%	37.9%	71.4%
Mitchell	44.6%	27.6%	96.1%
Newman	40.8%	31.5%	85.0%
District Total	**40.1%**	**31.8%**	**78.8%**

Table 4: Percentage of Households that are Single Person Households and Single Person Households that are over age 65 by Elementary Area, 2020 Census

	Percentage of Single Person Households	Percentage of Single Person Households and are 65+
Broadmeadow	14.8%	9.3%
Eliot	33.0%	16.7%
Williams	27.2%	19.7%
Mitchell	10.6%	7.0%
Newman	17.0%	11.7%
District Total	**21.2%**	**13.4%**

Table 5: Elementary Enrollment (K-5), 2023, 2028, 2033

	2023	2028	*2023-2028 Change*	2033	*2028-2033 Change*	*2023-2033 Change*
Broadmeadow	522	510	*-2.3%*	496	*-2.7%*	*-5.0%*
Eliot	402	384	*-4.5%*	390	*1.6%*	*-3.0%*
Williams	531	526	*-0.9%*	536	*1.9%*	*0.9%*
Mitchell	439	447	*1.8%*	459	*2.7%*	*4.6%*
Newman	618	654	*5.8%*	658	*0.6%*	*6.5%*
District Total	**2,512**	**2,521**	***0.4%***	**2,539**	***0.7%***	***1.1%***

Table 6: Age Under One to Age Ten Population Counts, by Year of Age, by Elementary Area: 2020 Census

	Under 1 year	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years
Broadmeadow	61	59	71	78	58	99	79	104	105	101	122
Eliot	46	56	75	59	91	74	99	75	77	62	80
Williams	47	55	56	63	86	83	96	91	102	104	89
Mitchell	57	60	61	74	64	58	91	80	78	104	88
Newman	80	73	96	113	103	124	127	106	154	135	160
District Total	291	303	358	387	402	437	493	454	516	505	539

Table 7: Comparison of District Resident Enrollment by Grade with 2020 Census Counts by Age, 2020-23

2020 Census	Under 1 year	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years	11 years	12 years	13 years
Needham Public Schools	**291**	**303**	**358**	**387**	**402**	**437**	**493**	**454**	**516**	**505**	**539**	**510**	**573**	**554**
2023 Enrollment			376 105.0%	443 114.5%	403 100.2%	425 97.3%	422 85.6%	443 97.6%	447 86.6%	437 86.5%	443 82.2%	373 73.1%	414 72.3%	417 75.3%
2022 Enrollment				418 108.0%	389 96.8%	433 99.1%	421 85.4%	434 95.6%	436 84.5%	446 88.3%	443 82.2%	375 73.5%	417 72.8%	428 77.3%
2021 Enrollment					369 91.8%	411 94.1%	415 84.2%	430 94.7%	439 85.1%	433 85.7%	450 83.5%	383 75.1%	445 77.7%	431 77.8%
2020 Enrollment						334 76.4%	401 81.3%	426 93.8%	438 84.9%	428 84.8%	443 82.2%	394 77.3%	462 80.6%	441 79.6%

Grade 1 in RED

Appendix B: Population Forecasts

Needham Public Schools Total Population

	2020	2025	2030	2035	2040
0-4	1,741	1,820	1,890	1,910	1,740
5-9	2,405	2,290	2,320	2,440	2,520
10-14	2,709	2,500	2,410	2,420	2,530
15-19	2,475	2,380	2,160	2,040	2,050
20-24	1,679	1,800	1,650	1,470	1,360
25-29	809	1,110	1,180	1,090	1,040
30-34	1,082	1,370	1,690	1,780	1,710
35-39	1,759	1,730	2,050	2,410	2,500
40-44	2,238	2,220	2,250	2,580	2,890
45-49	2,369	2,270	2,400	2,230	2,560
50-54	2,447	2,350	2,250	2,400	2,210
55-59	2,328	2,400	2,300	2,210	2,340
60-64	2,047	2,190	2,240	2,120	2,060
65-69	1,639	1,750	1,860	1,920	1,820
70-74	1,501	1,470	1,590	1,700	1,750
75-79	994	1,370	1,350	1,450	1,540
80-84	815	890	1,220	1,220	1,280
85+	1,093	1,090	1,140	1,330	1,460
Total	**32,130**	**33,000**	**33,950**	**34,720**	**35,360**
Median Age	43.1	43.4	43.6	43.5	43.9
Births	1,340	1,450	1,450	1,350	
Deaths	1,720	1,810	2,010	2,080	
Natural Increase	-380	-360	-560	-730	
Net Migration	1,250	1,290	1,350	1,370	
Change	*870*	*930*	*790*	*640*	

Differences between period Totals may not equal Change due to rounding.

Broadmeadow Elementary Total Population

	2020	2025	2030	2035	2040
0-4	327	310	350	360	330
5-9	487	440	430	470	490
10-14	585	510	470	460	500
15-19	529	500	420	370	360
20-24	311	370	340	250	200
25-29	105	150	210	220	190
30-34	182	200	260	320	340
35-39	349	340	370	430	490
40-44	403	500	500	540	540
45-49	516	450	550	490	530
50-54	490	510	450	550	490
55-59	467	480	500	440	530
60-64	366	440	450	460	410
65-69	306	300	360	370	390
70-74	247	250	250	310	310
75-79	159	220	230	230	280
80-84	113	140	200	210	200
85+	154	160	170	210	230
Total	**6,091**	**6,270**	**6,510**	**6,690**	**6,810**
Median Age	42.2	43.2	44.1	44.3	44.7
Births	210	240	250	220	
Deaths	280	310	350	370	
Natural Increase	-70	-70	-100	-150	
Net Migration	260	270	280	290	
Change	*190*	*200*	*180*	*140*	

Differences between period Totals may not equal Change due to rounding.

Eliot Elementary Total Population

	2020	2025	2030	2035	2040
0-4	326	290	320	330	330
5-9	386	370	340	340	380
10-14	383	430	410	380	390
15-19	332	300	340	320	290
20-24	279	250	200	250	220
25-29	242	360	330	300	340
30-34	281	370	490	470	440
35-39	352	450	540	680	660
40-44	433	430	540	660	780
45-49	363	430	430	530	650
50-54	451	360	430	430	520
55-59	400	440	350	420	420
60-64	384	380	410	330	390
65-69	297	340	340	370	290
70-74	296	270	310	310	340
75-79	190	270	250	290	280
80-84	201	170	240	230	260
85+	307	290	270	290	300
Total	**5,904**	**6,200**	**6,540**	**6,930**	**7,280**
Median Age	44.3	43.3	42.8	43.0	43.8
Births	250	280	290	290	
Deaths	380	370	400	400	
Natural Increase	-130	-90	-110	-110	
Net Migration	430	440	470	480	
Change	*300*	*350*	*360*	*370*	

Differences between period Totals may not equal Change due to rounding.

Williams Elementary Total Population

	2020	2025	2030	2035	2040
0-4	308	320	350	360	330
5-9	475	460	480	510	530
10-14	501	470	460	480	510
15-19	458	470	430	420	440
20-24	398	420	420	390	370
25-29	167	210	220	210	180
30-34	215	280	330	340	330
35-39	353	320	400	450	460
40-44	448	420	400	470	530
45-49	412	440	420	400	470
50-54	461	410	440	420	400
55-59	397	450	400	430	410
60-64	395	370	420	370	400
65-69	300	310	280	330	290
70-74	287	270	290	270	310
75-79	230	260	260	260	240
80-84	237	210	230	230	230
85+	365	350	330	320	320
Total	**6,406**	**6,440**	**6,560**	**6,660**	**6,750**
Median Age	43.7	43.2	42.4	41.8	42.1
Births	280	310	320	290	
Deaths	430	410	410	410	
Natural Increase	-150	-100	-90	-120	
Net Migration	190	200	210	210	
Change	*40*	*100*	*120*	*90*	

Differences between period Totals may not equal Change due to rounding.

Mitchell Elementary Total Population

	2020	2025	2030	2035	2040
0-4	316	290	330	350	310
5-9	411	360	380	410	430
10-14	480	420	380	390	420
15-19	444	450	400	350	370
20-24	218	300	290	240	230
25-29	103	170	220	190	160
30-34	128	180	240	290	250
35-39	242	200	240	310	350
40-44	357	280	230	280	330
45-49	410	360	270	230	280
50-54	376	400	350	270	230
55-59	368	370	400	340	270
60-64	317	350	350	360	320
65-69	243	280	310	310	320
70-74	224	230	260	280	280
75-79	100	210	200	230	260
80-84	68	90	180	180	200
85+	66	70	90	150	190
Total	**4,870**	**5,010**	**5,120**	**5,160**	**5,200**
Median Age	41.3	42.4	41.7	40.9	41.2
Births	190	230	240	230	
Deaths	190	220	280	300	
Natural Increase	0	10	-40	-70	
Net Migration	120	120	110	100	
Change	*120*	*130*	*70*	*30*	

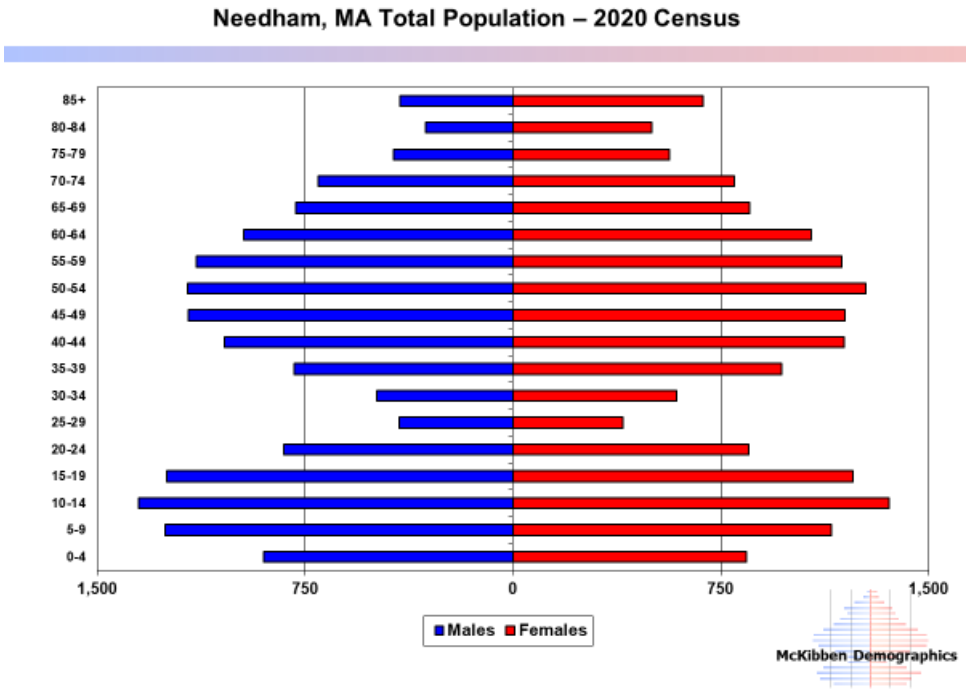
Differences between period Totals may not equal Change due to rounding.

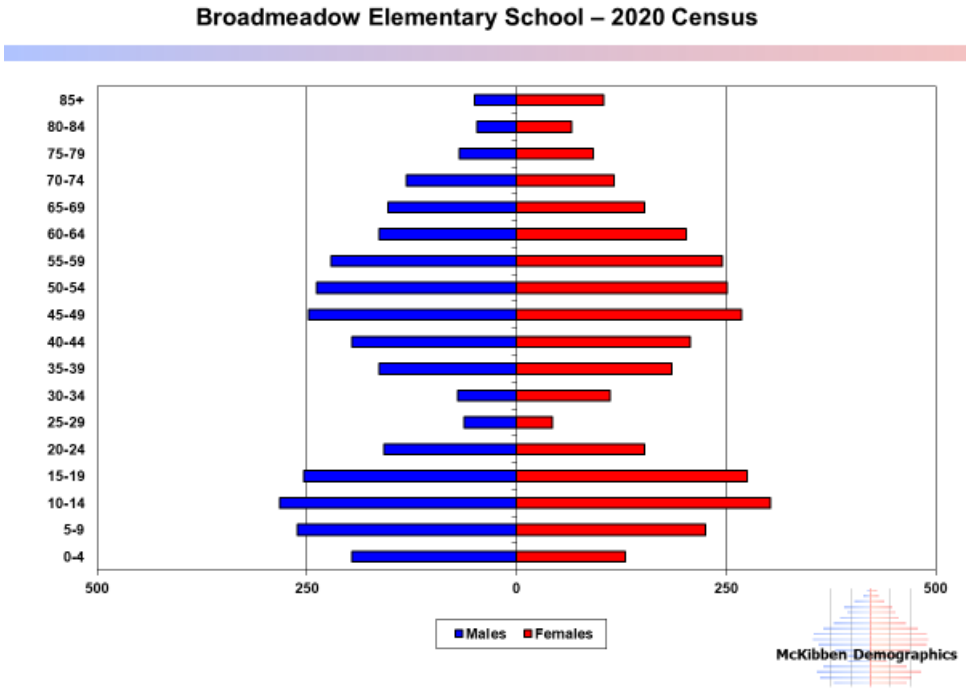
Newman Elementary Total Population

	2020	2025	2030	2035	2040
0-4	464	610	540	510	440
5-9	647	660	690	710	690
10-14	761	670	690	710	710
15-19	713	660	570	580	590
20-24	473	460	400	340	340
25-29	192	220	200	170	170
30-34	277	340	370	360	350
35-39	463	420	500	540	540
40-44	597	590	580	630	710
45-49	669	590	730	580	630
50-54	670	670	580	730	570
55-59	697	660	650	580	710
60-64	585	650	610	600	540
65-69	493	520	570	540	530
70-74	447	450	480	530	510
75-79	315	410	410	440	480
80-84	196	280	370	370	390
85+	201	220	280	360	420
Total	**8,859**	**9,080**	**9,220**	**9,280**	**9,320**
Median Age	43.7	44.2	45.5	45.8	46.0
Births	410	390	350	320	
Deaths	440	500	570	600	
Natural Increase	-30	-110	-220	-280	
Net Migration	250	260	280	290	
Change	*220*	*150*	*60*	*10*	

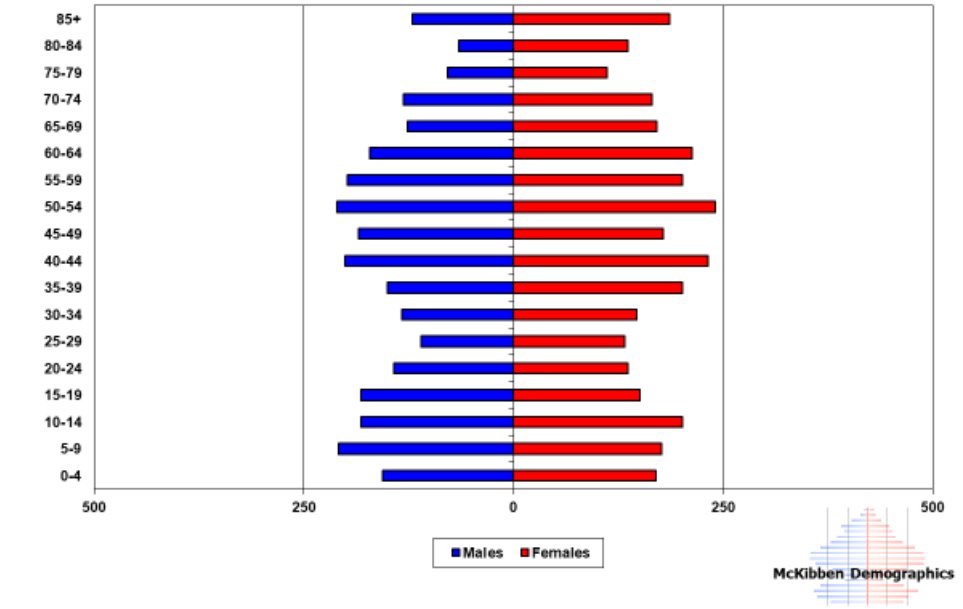
Differences between period Totals may not equal Change due to rounding.

Appendix C: Population Pyramids

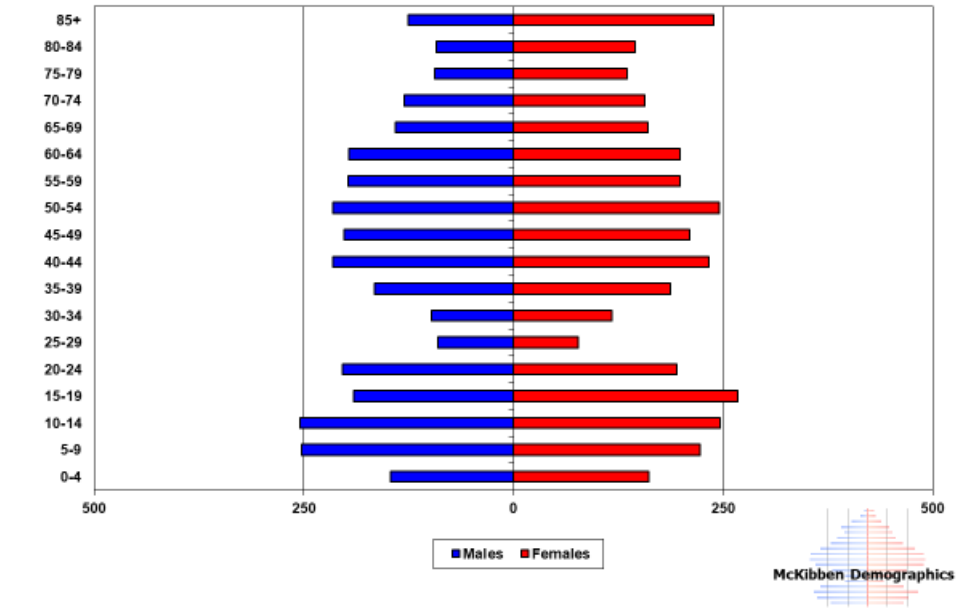




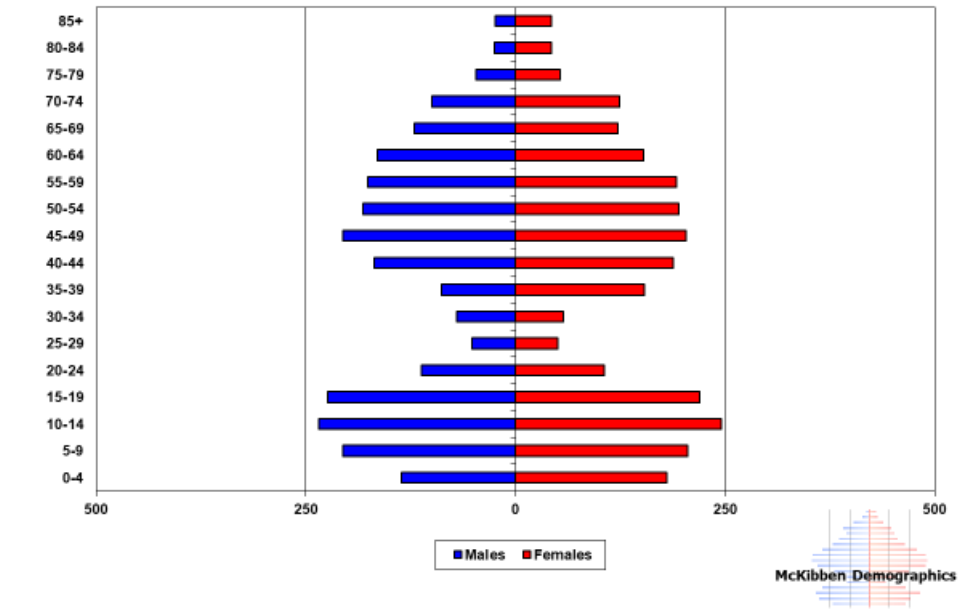
Eliot Elementary School – 2020 Census



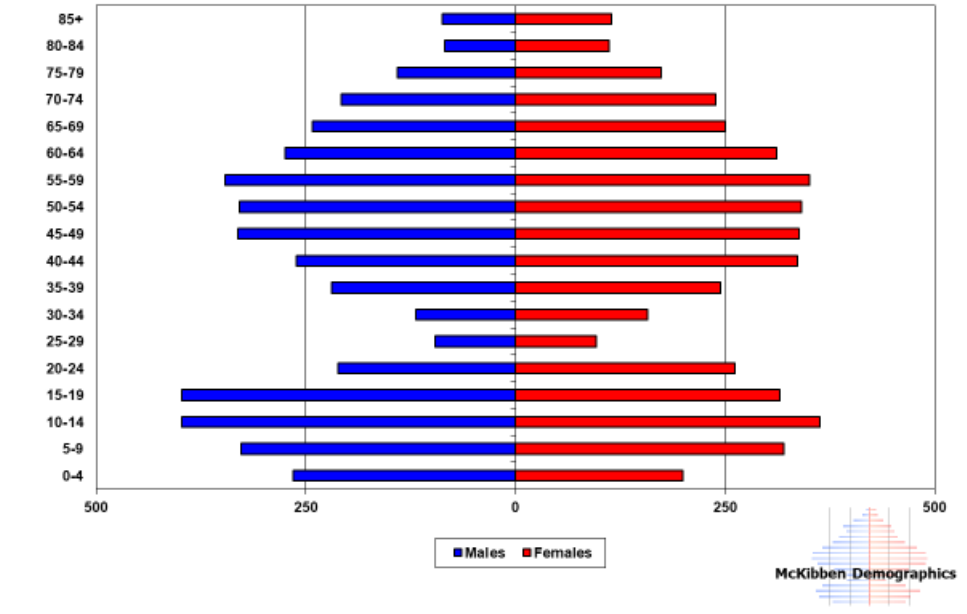
Williams Elementary School – 2020 Census



Mitchell Elementary School – 2020 Census



Newman Elementary School – 2020 Census



Appendix D: Enrollment Forecasts

Needham Public Schools: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
PK	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
K	376	392	395	400	396	391	394	396	400	403	407	409	413	414	416	410
1	443	405	407	410	414	410	405	408	410	414	416	420	424	428	429	431
2	403	455	415	417	420	424	419	414	417	419	424	426	428	432	437	438
3	425	411	462	422	425	428	433	428	422	426	428	433	436	437	441	446
4	422	433	417	469	429	432	435	438	433	427	432	436	442	445	446	450
5	443	429	438	422	474	436	437	440	443	438	432	439	444	449	452	453
Total K-5	**2512**	**2525**	**2534**	**2540**	**2558**	**2521**	**2523**	**2524**	**2525**	**2527**	**2539**	**2563**	**2587**	**2605**	**2621**	**2628**
6	**447**	**428**	**435**	**445**	**428**	**481**	**443**	**444**	**447**	**452**	**445**	**438**	**446**	**451**	**456**	**459**
7	437	440	422	428	438	422	476	439	440	443	447	441	434	442	446	451
8	443	428	431	414	415	429	414	466	430	431	434	438	432	425	433	437
Total: 7-8	**880**	**868**	**853**	**842**	**853**	**851**	**890**	**905**	**870**	**874**	**881**	**879**	**866**	**867**	**879**	**888**
9	373	439	424	427	410	411	425	410	461	426	427	430	431	426	417	427
10	414	371	435	420	423	406	407	421	406	456	422	425	428	429	424	415
11	417	410	367	431	416	419	402	403	417	402	451	418	421	424	425	420
12	418	415	406	363	427	412	415	398	399	413	398	446	414	417	420	423
SP	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Total: 9-12	**1628**	**1641**	**1638**	**1647**	**1682**	**1654**	**1655**	**1638**	**1689**	**1703**	**1704**	**1725**	**1700**	**1702**	**1692**	**1691**
Total: K-12	**5547**	**5542**	**5540**	**5554**	**5601**	**5587**	**5591**	**5591**	**5611**	**5636**	**5649**	**5685**	**5679**	**5705**	**5728**	**5746**
Total K-12	5547	5542	5540	5554	5601	5587	5591	5591	5611	5636	5649	5685	5679	5705	5728	5746
Change		*-5*	*-2*	*14*	*47*	*-14*	*4*	*0*	*20*	*25*	*13*	*36*	*-6*	*26*	*23*	*18*
%-Change		*-0.1%*	*0.0%*	*0.3%*	*0.8%*	*-0.2%*	*0.1%*	*0.0%*	*0.4%*	*0.4%*	*0.2%*	*0.6%*	*-0.1%*	*0.5%*	*0.4%*	*0.3%*
Total: K-5	2512	2525	2534	2540	2558	2521	2523	2524	2525	2527	2539	2563	2587	2605	2621	2628
Change		*13*	*9*	*6*	*18*	*-37*	*2*	*1*	*1*	*2*	*12*	*24*	*24*	*18*	*16*	*7*
%-Change		*0.5%*	*0.4%*	*0.2%*	*0.7%*	*-1.4%*	*0.1%*	*0.0%*	*0.0%*	*0.1%*	*0.5%*	*0.9%*	*0.9%*	*0.7%*	*0.6%*	*0.3%*
Total: 6	447	428	435	445	428	481	443	444	447	452	445	438	446	451	456	459
Change		*-19*	*7*	*10*	*-17*	*53*	*-38*	*1*	*3*	*5*	*-7*	*-7*	*8*	*5*	*5*	*3*
%-Change		*-4.3%*	*1.6%*	*2.3%*	*-3.8%*	*12.4%*	*-7.9%*	*0.2%*	*0.7%*	*1.1%*	*-1.5%*	*-1.6%*	*1.8%*	*1.1%*	*1.1%*	*0.7%*
Total: 7-8	880	868	853	842	853	851	890	905	870	874	881	879	866	867	879	888
Change		*-12*	*-15*	*-11*	*11*	*-2*	*39*	*15*	*-35*	*4*	*7*	*-2*	*-13*	*1*	*12*	*9*
%-Change		*-1.4%*	*-1.7%*	*-1.3%*	*1.3%*	*-0.2%*	*4.6%*	*1.7%*	*-3.9%*	*0.5%*	*0.8%*	*-0.2%*	*-1.5%*	*0.1%*	*1.4%*	*1.0%*
Total: 9-12	1628	1641	1638	1647	1682	1654	1655	1638	1689	1703	1704	1725	1700	1702	1692	1691
Change		*13*	*-3*	*9*	*35*	*-28*	*1*	*-17*	*51*	*14*	*1*	*21*	*-25*	*2*	*-10*	*-1*
%-Change		*0.8%*	*-0.2%*	*0.5%*	*2.1%*	*-1.7%*	*0.1%*	*-1.0%*	*3.1%*	*0.8%*	*0.1%*	*1.2%*	*-1.4%*	*0.1%*	*-0.6%*	*-0.1%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Broadmeadow Elementary: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
K	81	79	78	79	78	76	76	77	78	79	80	80	81	81	82	81
1	82	85	84	83	83	82	80	80	81	82	82	83	83	84	84	85
2	85	84	87	86	85	85	84	82	82	83	84	84	85	85	87	87
3	86	87	86	89	88	87	88	87	84	84	85	86	86	87	87	89
4	87	87	88	87	90	89	88	87	86	83	83	86	87	87	88	88
5	101	88	88	89	88	91	88	87	86	85	82	84	87	88	88	89
Total K-5	**522**	**510**	**511**	**513**	**512**	**510**	**504**	**500**	**497**	**496**	**496**	**503**	**509**	**512**	**516**	**519**
Total: K-5	522	510	511	513	512	510	504	500	497	496	496	503	509	512	516	519
Change		*-12*	*1*	*2*	*-1*	*-2*	*-6*	*-4*	*-3*	*-1*	*0*	*7*	*6*	*3*	*4*	*3*
%-Change		*-2.3%*	*0.2%*	*0.4%*	*-0.2%*	*-0.4%*	*-1.2%*	*-0.8%*	*-0.6%*	*-0.2%*	*0.0%*	*1.4%*	*1.2%*	*0.6%*	*0.8%*	*0.6%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Eliot Elementary: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
K	53	61	62	63	63	61	62	62	63	63	64	65	66	67	68	67
1	73	60	62	63	64	64	62	63	63	64	64	65	66	67	68	69
2	69	74	61	63	64	65	65	63	64	64	65	65	66	67	68	69
3	62	70	75	62	64	65	66	66	64	65	65	66	66	66	67	68
4	72	63	71	77	63	65	66	67	67	65	66	66	67	67	67	68
5	73	73	64	72	78	64	66	67	68	68	66	67	67	67	67	67
Total K-5	**402**	**401**	**395**	**400**	**396**	**384**	**387**	**388**	**389**	**389**	**390**	**394**	**398**	**401**	**405**	**408**
Total: K-5	402	401	395	400	396	384	387	388	389	389	390	394	398	401	405	408
Change		*-1*	*-6*	*5*	*-4*	*-12*	*3*	*1*	*1*	*0*	*1*	*4*	*4*	*3*	*4*	*3*
%-Change		*-0.2%*	*-1.5%*	*1.3%*	*-1.0%*	*-3.0%*	*0.8%*	*0.3%*	*0.3%*	*0.0%*	*0.3%*	*1.0%*	*1.0%*	*0.8%*	*1.0%*	*0.7%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Williams Elementary: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
K	78	81	82	83	84	82	83	83	84	84	85	85	86	87	87	86
1	90	82	83	84	85	86	84	85	85	86	86	87	87	88	89	89
2	87	93	85	86	87	88	89	87	88	88	89	89	90	90	91	92
3	102	90	95	87	88	89	90	91	89	90	90	91	92	93	93	94
4	88	105	92	97	89	90	91	92	93	91	93	93	95	96	97	97
5	86	90	106	93	98	91	92	93	94	95	93	95	96	98	99	100
Total K-5	**531**	**541**	**543**	**530**	**531**	**526**	**529**	**531**	**533**	**534**	**536**	**540**	**546**	**552**	**556**	**558**
Total: K-5	531	541	543	530	531	526	529	531	533	534	536	540	546	552	556	558
Change	*2*	*10*	*2*	*-13*	*1*	*-5*	*3*	*2*	*2*	*1*	*2*	*4*	*6*	*6*	*4*	*2*
%-Change	*0.4%*	*1.9%*	*0.4%*	*-2.4%*	*0.2%*	*-0.9%*	*0.6%*	*0.4%*	*0.4%*	*0.2%*	*0.4%*	*0.7%*	*1.1%*	*1.1%*	*0.7%*	*0.4%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Mitchell Elementary: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
K	66	70	71	72	70	70	71	71	72	73	74	74	75	75	76	74
1	87	71	73	74	75	73	73	74	74	75	76	77	79	80	80	81
2	62	90	72	74	75	77	74	74	75	75	77	78	78	80	81	81
3	76	63	91	73	75	76	78	75	75	77	77	79	80	80	82	83
4	72	78	64	92	74	76	77	79	76	76	78	78	80	81	81	83
5	76	73	79	65	93	75	77	78	80	77	77	79	79	81	82	82
Total K-5	**439**	**445**	**450**	**450**	**462**	**447**	**450**	**451**	**452**	**453**	**459**	**465**	**471**	**477**	**482**	**484**
Total: K-5	439	445	450	450	462	447	450	451	452	453	459	465	471	477	482	484
Change		*6*	*5*	*0*	*12*	*-15*	*3*	*1*	*1*	*1*	*6*	*6*	*6*	*6*	*5*	*2*
%-Change		*1.4%*	*1.1%*	*0.0%*	*2.7%*	*-3.2%*	*0.7%*	*0.2%*	*0.2%*	*0.2%*	*1.3%*	*1.3%*	*1.3%*	*1.3%*	*1.0%*	*0.4%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Newman Elementary: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
K	98	101	102	103	101	102	102	103	103	104	104	105	105	104	103	102
1	111	107	105	106	107	105	106	106	107	107	108	108	109	109	108	107
2	100	114	110	108	109	109	107	108	108	109	109	110	109	110	110	109
3	99	101	115	111	110	111	111	109	110	110	111	111	112	111	112	112
4	103	100	102	116	113	112	113	113	111	112	112	113	113	114	113	114
5	107	105	101	103	117	115	114	115	115	113	114	114	115	115	116	115
Total K-5	**618**	**628**	**635**	**647**	**657**	**654**	**653**	**654**	**654**	**655**	**658**	**661**	**663**	**663**	**662**	**659**
Total: K-5	618	628	635	647	657	654	653	654	654	655	658	661	663	663	662	659
Change		*10*	*7*	*12*	*10*	*-3*	*-1*	*1*	*0*	*1*	*3*	*3*	*2*	*0*	*-1*	*-3*
%-Change		*1.6%*	*1.1%*	*1.9%*	*1.5%*	*-0.5%*	*-0.2%*	*0.2%*	*0.0%*	*0.2%*	*0.5%*	*0.5%*	*0.3%*	*0.0%*	*-0.2%*	*-0.5%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

High Rock: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
6	447	428	435	445	428	481	443	444	447	452	445	438	446	451	456	459
Total: 6	447	428	435	445	428	481	443	444	447	452	445	438	446	451	456	459
Change		*-19*	*7*	*17*	*-7*	*53*	*-38*	*1*	*3*	*5*	*-7*	*-7*	*8*	*5*	*5*	*3*
%-Change		*-4.9%*	*-13%*	*4.0%*	*-1.6%*	*12.4%*	*-7.9%*	*0.2%*	*0.7%*	*1.1%*	*-1.5%*	*-1.6%*	*1.8%*	*1.1%*	*1.1%*	*0.7%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Pollard Middle School: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
7	437	440	422	428	438	422	476	439	440	443	447	441	434	442	446	451
8	443	428	431	414	415	429	414	466	430	431	434	438	432	425	433	437
Total: 7-8	**880**	**868**	**853**	**842**	**853**	**851**	**890**	**905**	**870**	**874**	**881**	**879**	**866**	**867**	**879**	**888**
Total: 7-8	880	868	853	842	853	851	890	905	870	874	881	879	866	867	879	888
Change		*-12*	*-15*	*-11*	*11*	*-2*	*39*	*15*	*-35*	*4*	*7*	*-2*	*-13*	*1*	*12*	*9*
%-Change		*-1.4%*	*-1.7%*	*-1.3%*	*1.3%*	*-0.2%*	*4.6%*	*1.7%*	*-3.9%*	*0.5%*	*0.8%*	*-0.2%*	*-1.5%*	*0.1%*	*1.4%*	*1.0%*

Red numbers are current enrollment; Orange cells are forecasted enrollment.

Needham High School: Total Enrollment

	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39
9	373	439	424	427	410	411	425	410	461	426	427	430	431	426	417	427
10	414	371	435	420	423	406	407	421	406	456	422	425	428	429	424	415
11	417	410	367	431	416	419	402	403	417	402	451	418	421	424	425	420
12	418	415	406	363	427	412	415	398	399	413	398	446	414	417	420	423
Total: 9-12	1622	1635	1632	1641	1676	1648	1649	1632	1683	1697	1698	1719	1694	1696	1686	1685
Total: 9-12	1622	1635	1632	1641	1676	1648	1649	1632	1683	1697	1698	1719	1694	1696	1686	1685
Change		13	-3	9	35	-28	1	-17	51	14	1	21	-25	2	-10	-1
%-Change		0.8%	-0.2%	0.6%	2.1%	-1.7%	0.1%	-1.0%	3.1%	0.8%	0.1%	1.2%	-1.5%	0.1%	-0.6%	-0.1%

Red numbers are current enrollment; Orange cells are forecasted enrollment.