# PUBLIC SCHOOLS of BROOKLINE

# Public Schools of Brookline, MA

# Demographic Study Report 2019

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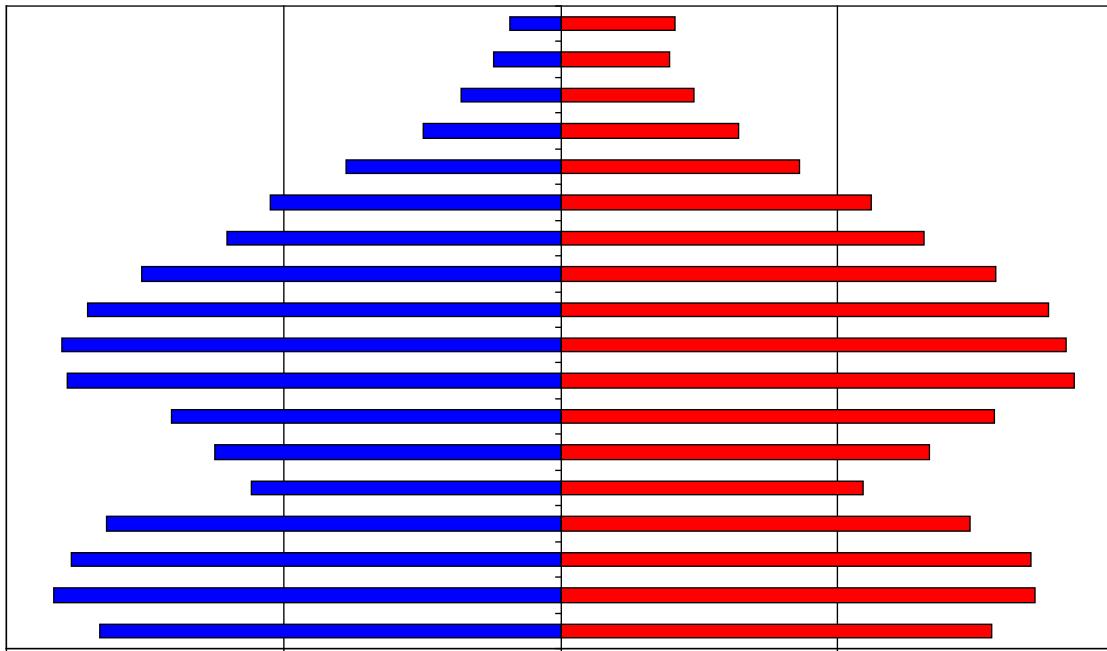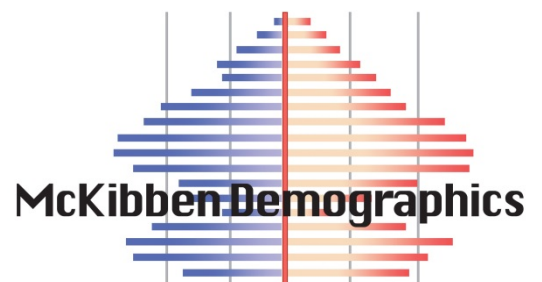
McKibben Demographics

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## Executive Summary

1. The resident total fertility rate for the Brookline Public Schools over the life of the forecasts is below replacement level. (1.47 vs. the replacement level of 2.1)

2. Most in-migration to the district continues to occur in the 20-to-34-year-old age groups.

3. The 35-to-49-year-olds and their 0-to-14-year-old children continue to move to the outer suburbs. These population groups accounts for the largest segment of the district's out-migration flow and will increase steadily over the next 10 years. The second largest migration outflow is in the 70+ age groups.

4. The primary factors causing the district's enrollment to increase over the next 10 years are the increase in empty nest households turning over, and a sustained rate of in-migration of young households.

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

6. The elementary enrollment (K-5) will steadily increase over the next five years school years and then stabilize

7. The median age of the district's population will decrease from 34.1 in 2010 to 33.6 in 2030.

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

9. Total district enrollment is forecasted to increase by 266 students, or 3.5%, between 2019-20 and 2024-25. Total enrollment will decrease by 35 students, or-0.4%, from 2024-25 to 2029-30.

## INTRODUCTION

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

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

To calculate population forecasts of any type, particularly for smaller populations such as a school district, realistic suppositions must be made as to what the future will bring in terms of age specific fertility rates and residents' demographic behavior at certain points of the life course. The demographic history of the school district and its interplay with the social and economic history of the area is the starting point and basis of most of these suppositions particularly on key factors such as the age structure of the area. The unique nature of each district's and attendance area's demographic composition and rate of change over time must be assessed and understood to be factors throughout the life of the forecast series. Moreover, no two populations, particularly at the school district and attendance area level, have exactly the same characteristics.

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

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

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

## DATA

The data used for the forecasts come from a variety of sources. The Public Schools of Brookline provided enrollments by grade and attendance center for the school years 2016-2017 to 2019-2020. Birth and death data for the years 2000 through 2017 were obtained from the Massachusetts Department of Health. The net migration values were calculated using Internal Revenue Service migration reports for the years 2000 through 2017. The data used for the calculation of migration models came from the United States Bureau of the Census, 2005 to 2010, and the models were designed using demographic and economic factors. The base age-sex population counts used are from the results of the 2010 Census.

Recently the Census Bureau began releasing annual estimates of demographic variables at the block group and tract level from the American Community Survey (ACS). There has been wide scale reporting of these results in the national, state and local media. However, due to the methodological problems the Census Bureau is experiencing with their estimates derived from ACS data, particularly in areas with a population of less than 60,000, the results of the ACS are not used in these forecasts. For example, given the sampling framework used by the Census Bureau, each year only 800 of the over 26,000 current households in the district would have been included. For comparison 3,800 households in the district were included in the sample for the long form questionnaire in the 2000 Census. As a result of this small sample size, the ACS survey result from the last 5 years must be aggregated to produce the tract and block group estimates.

To develop the population forecast models, past migration patterns, current age specific fertility patterns, the magnitude and dynamics of the gross migration, the age specific mortality trends, the distribution of the population by age and sex, the rate and type of existing housing unit sales, and future housing unit construction are considered to be primary variables. In addition, the change in household size

relative to the age structure of the forecast area was addressed. While there was a slight drop in the average household size in the Public Schools of Brookline as well as most other areas of the state during the previous 20 years, the rate of this decline in the district has been forecasted to decrease slightly over the next ten years.

## ASSUMPTIONS

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

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

The resident total fertility rate (TFR), the average number of births a woman will have while living in the school district during her lifetime, is estimated to be 1.47 for the total district for the ten years of the population forecasts. A TFR of 2.1 births per woman is considered to be the theoretical "replacement level" of fertility necessary for a population to remain constant in the absence of in-migration. Therefore, in the absence of migration, fertility alone would be insufficient to maintain the current level of population and enrollment within the Public Schools of Brookline over the course of the forecast period.

A close examination of data for the Public Schools of Brookline has shown the age specific pattern of net migration will be nearly constant throughout the life of the forecasts. While the number of in-and-out-migrants has changed in past years for the Public Schools of Brookline (and will change again over the next 10 years), the basic age pattern of the migrants has stayed nearly the same over the last 30 years. Based on the analysis of data it is safe to assume this age specific migration trend will remain unchanged into the future. This pattern of migration shows most of the local out-migration occurring in the 35-49 and 0-9-year-old age groups as adults leave the area to outlying suburban areas. The second group of out-migrants is those householders aged 70 and older who are downsizing their residences. Most of the local in-migration occurs in the 20-to-34-year-old age groups (the bulk of the which come from areas within 50 miles of the Public Schools of Brookline) primarily consisting of younger adults.

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 the Public Schools of Brookline and its attendance areas will remain the same through the year 2029. Below is a list of assumptions and issues that are specific to the Public Schools of Brookline. These issues have been used to modify the population forecast models to more accurately predict the impact of these factors on each area's population change. Specifically, the forecasts for the Public Schools of Brookline assume that throughout the study period:

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

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

c. The rate of mortgage approval stays at 2015-2019 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 2015-2019 average of Norfolk County for any year in the forecasts;

f. The district has at least 110 existing single-family home sales annually between 2019 and 2029;

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

h. The intra district student transfer policy between "Buffer Zones" remains unchanged over the next 10 years;

i. The district has a transfer in of 200 Material Fee and 300 METCO students each year for the next 10 years;

j. The rate of students transferring out of The Public Schools of Brookline will remain at the 2015-16 to 2019-20 average;

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

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

m. The State of Massachusetts does not change any of its current laws regarding inter-district transfers, school vouchers or charter schools;

n. No new charter schools open in the district or

surrounding area in the next 10 years;

o. Businesses within the district and The Public Schools of Brookline area will remain viable;

p. 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;

q. Housing turnover rates (sale of existing homes in the district) will remain at their current levels. The majority of existing home sales are made by home owners over the age of 60;

r. Private school and home school attendance rates will remain constant;

s. The rate of foreclosures for commercial property remains at the 2014-2018 average for Norfolk County;

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

u. In regards to the aforementioned assumption, the following building projects are included in the assumptions: The 420 Harvard/49 Coolidge project, 25 units completed by June 2020. The 384 Harvard (JCHE) project. 62 units, completed by August 2020. The 455 Harvard project. 17 units, completed by June 2020. The 136 Babcock project. 45 units completed by June 2021. The Residence of South Brookline-Hancock Village. 175 units completed by January of 2022.

If a major employer in the district or in the Greater Boston 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.), a further economic downturn, any additional weakness in the housing market or any instance or situation that causes rapid and dramatic population changes that could not be foreseen at the time the forecasts were calculated.

The high proportion of high school graduates from the Public Schools of Brookline that attend college or move to urban areas outside of the district for employment is a significant demographic factor. Their departure is a major reason for the extremely high out-migration in the 18-to-24-year-old age group, and was taken into account when calculating these forecasts. The out-migration of graduating high school seniors is expected to continue over the period of the forecasts and the rate of out-migration has been forecasted to remain the same over the life of the forecast series.

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

per year. Actual year-to-year variations do and will occur, but overall year to year trends are expected to be constant.

**METHODOLOGY**

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

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

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

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

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

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

5. the historical enrollment figures by grade.

The most significant and difficult aspect of producing enrollment forecasts is the generation of the population forecasts in which the school age population (and enrollment) is embedded. In turn, the most challenging aspect of generating the population forecasts is found in deriving the rates of change in fertility, mortality, and migration. From the standpoint of demographic analysis, the Public Schools of Brookline 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 the Public Schools of Brookline 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 Public Schools of Brookline.

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 the Public Schools of Brookline for the period 2010 to 2015. These survivorship rates then were adjusted to reflect the forecasted changes in age-specific migration the district should experience over the next five years. These modified survivorship rates were used to project the enrollment of grades 2 through 12 for the period 2015 to 2020. The survivorship rates were adjusted again for the period 2020 to 2025 to reflect the predicted changes in the amount of age-specific migration in the district for the period.

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

**RESULTS AND ANALYSIS OF THE POPULATION FORECASTS**

A number of general demographic factors will influence the growth rate of the Public Schools of Brookline during this period, and include the following:

a. The households that in-migrated in the last decade and have stayed in the district, will have mostly passed through prime childbearing ages by 2019, thereby reducing the overall proportion of the population at risk of having children;

b. The remaining population in childbearing ages (women ages 15-45) will have fewer children;

c. The locally born 18-to-24-year-old population, in prime childbearing ages, will continue to leave the area to go to college or to other urban areas, with the

magnitude of this out-migration flow slowly increasing; and,

d. The district will experience an increase in housing stock, with 350 new units being built between 2020 and 2024, and;

e. The district will continue to have a large proportion of their housing units (particularly in the rental units) that are occupied by childless households in their 20s and 30s.

The Public Schools or Brookline will continue to experience significant in-migration (movement of new young families into the district) over the next 10 years. However, the size and age structure of the pool of potential in-migrants will change and the effects of the in-migration of families on population growth will be greatly offset by the continued steady growing out-migration of young adults as graduating seniors (both high school and college) continue to leave the district.

From 2020 to 2025, the district's total population is forecasted to increase by 880 or 1.5% to 61,450. From 2025 to 2030, the population is forecasted to continue to increase by an additional 640 persons or 1.0%. During the 10 years of this forecasts series, seven of the eight elementary attendance areas are forecasted to increase in population with the growth rates ranging from 0.3% in the Baker areas to 5.8% in the Coolidge Corner area (See Table 1 for population forecast results of each elementary attendance area for the period 2010 to 2020) The Lincoln area will see a slight decline over the decade, losing 100 people or -1.7%.

While all elementary areas will see some amount of gross in-migration, (primarily in the 24-to-39 age group,) all areas also will continue to see gross out-migration. This out-migration primarily will be young adults, 18-to-22 years old, as graduating high school seniors continue to leave the district to go to college or seek employment in other urban areas. Consequently, most of the attendance areas will experience a modest reduction in their average household size.

As stated in the ASSUMPTIONS and emphasized above, the impact of the high proportion of high school graduates that leave the district to continue on to college or to seek employment in large urban areas is significant to the size and structure of the future population of the district. Up to 70% of all births occur to non-college women between the ages of 20 and 34. As the graduating seniors continue leave the district, the number of women at risk of childbirth during the next decade declines. Consequently, along with the district's fertility rate being far below the replacement level, the relatively small number of non-college women in the district ages 20-29 will keep the number of births declining at a modest rate despite the district having a stable population (see the population pyramids in the Appendix C of this report for a graphic representation of the age distributions of the district and all of the attendance areas).

As a general rule of thumb, for every two high school seniors that leave the district, one new household must move into the district to replace the young adults that have left and

to replace their lost potential fertility. Over the course of the 10 year forecast period, the average number of graduating seniors will be approximately 540 per year and at least 75% of them will move out of the district within three years of graduation. Using the general rule, approximately 200 new families will be required to move into the district every year or 2,000 new families over the next 10 years to replace the graduating seniors and their lost fertility. It is forecasted that the impact of the increasing out-migration of young adults will continue to be mostly (but not completely) offset by new young family in-migration and that the total number of births will continue to decline slightly throughout the forecast period.

Another factor that needs to be considered is the birth dynamics of the last twenty years. An examination of national birth trends shows there was a large "Baby Boomlet" born between 1980 and 2000. This Boomlet was nearly as large as the Baby Boom of the 1950s and 1960s. However, unlike the Baby Boom, the Boomlet was a regional and not a national phenomenon (McKibben, et. al. 1999). Because Massachusetts did not have a Baby Boomlet, most of the expected enrollment growth will have to result from in-migration and not from an increase in the grade cohort size.

Clearly, the dominant factor that has affected the population growth rates of the Public Schools of Brookline over the last 20 years has been the number, pace and cost of new housing unit construction. However, the dynamics of this in migration flow are more complex than many realize. There is a common misconception that any changes in the economy, housing market or transportation system will have an immediate impact on the size of an area's population and the total impact of that change will be experienced immediately.

A second factor is the construction of rental units in the district. While it is true that the households moving into these new housing units bring many school age (particularly elementary) children into the district, they also bring many preschool age children as well. Consequently, the full impact of the growth in existing home sales and new home construction is not seen immediately in elementary enrollment as it takes three to seven years for all of the children to age into the schools. This "delayed demographic reaction" is a key issue when attempting to ascertain the impact and duration of enrollment change brought about by the new construction. This is a key issue since the number of births in the Public Schools or Brookline is insufficient to maintain current enrollment levels.

Of additional concern are the issues of the district's aging population and the growing number of "empty nest" households, particularly in the Heath attendance area. For example, after the last school age child leaves high school, the household becomes an "empty nest" and most likely will not send any more children to the school system. In most cases, it takes 20 to 30 years before all original (or first time) occupants of a housing area move out and are replaced by new, young families with children. This principle also applies to children leaving elementary school and moving on the middle school. Households can still have school age children in the district's

school, but also in effect be "empty nest" of elementary age children.

Note as well the stability in the median age of the population in the Public Schools of Brookline and all of its attendance areas (see population forecasts in the appendix for the median age for each forecast year for the district and each elementary attendance area). The district as a whole will see the median age of its population in a range of from 34.1 in 2010 to 33.6 in 2030. Unlike the vast majority of school districts in the United States that will experience a significant increase (anywhere from 2.5 to 4.5 years) in their median ages over the next 10 year, the Public Schools of Brookline will not. The factors that are causing this stabilization in the median age are the presence of a college and young professional population (ages 20-34) that tend to move into the district in their early 20s and leave by their mid-30s, and the construction of new rental housing units that will primarily attract households in their 20s and 30s.

However, even while the district as a whole continues to attract some new young families, many areas of the district that have concentration of single family, owner occupied housing units will experience "empty nesting". It should be noted that many of these "childless" households are single persons and/or elderly (See Table 4). Consequently, if many of these housing units "turnover" and attract households of similar characteristics, they will add little to the number of school age children in the district. Furthermore, many of the empty nest households will "down size" to smaller households within the district or the immediate area (this trend is tied directly to the number of "elder housing units" built in the district or adjacent towns). In these cases, new housing units may be built in an areas (age restricted), yet there is no corresponding increase in school enrollment.

There are several additional factors that are responsible for the difference between growth in population and growth in housing stock and existing home sales. Included among these factors are people buying new "move up" or retirement homes in the same area or district, (an important point since the children in move up homes tend to be of middle or high school age); children moving out of their parents homes and establishing residence in the same area; the increase in single-individual households; and divorce, with both parents remaining in the same area.

One final and important issue, although the district's population will stay fairly stable over the next 10 years, the distribution of the population (and that of the school age population) will change significantly. With the combination of the new rental housing being built in the Baker area and the prevalence of existing housing units "turning over" (particularly in the Heath area) the distribution of the district's population and school age students will shift south over the next 10 years.

## RESULTS AND ANALYSIS OF ENROLLMENT FORECASTS

### Elementary Enrollment (K-8)

The total K-8 elementary enrollment of the district is forecasted to increase from 5,442 in 2019-20 to 5,463 in 2024-25, a rise of 21 students or 0.4%. From 2024-25 to 2029-30, elementary enrollment is expected to grow by 47 students to 5,510. This will represent a 0.9% increase over the five-year period. Five of the eight elementary attendance areas will experience a net decrease in enrollment over the next ten years (see Appendix A, Table 5).

The reason for this increasing, if choppy, pattern in the elementary enrollment over the next ten years is the convergence of the effects of three factors, all reaching their peak influence roughly by 2026. The building of new housing units, (mostly rental) that will attract young households that have or will have children, the year to year variations of cohort sizes in the elementary grades, and the turnover of households that currently empty nest. Each of these factors will contribute in part to the growth in elementary enrollment until 2027.

The building of at least 350 new rental housing units over the next five years will have a significant impact on the enrollment patterns of the district. In fact, it is one of the major reasons that the Baker, Coolidge Corner and Heath attendance areas show a net enrollment increase over the next 10 years. However, it is important to note that there is a disconnect between the population increase that is a result of these new building and the impact on enrollment change. While these new units will have many children living in them (Children per households) the K-8 student yield (school age children per household) is much smaller. Appendix E, Table 2 shows the student yield per household for selected apartment complexes in the district. Note that in all four examples, the average student yield per unit is .62 or less. The number of children per household in each of these examples would undoubtable be greater than 1.

Secondly, over the last several years, one of the main reasons growth rate in the elementary enrollment was increasing was due to the fact that the number of children entering kindergarten and 1st grade was slightly increasing and the number of students leaving elementary school after completing 5th grade was smaller. This trend will continue over most of the next eight years. From 2015-16 to 2019-20 the incoming 1st grade cohorts will average 626 students in size whereas the outgoing 8th grade cohorts have averaged on 537. Over the last 3 years in the incoming 1st grade class averaged 598 while the outgoing 8th grade averaged only 558. As long as this imbalance continues (and it is forecasted to do so for most of the next eight years) there will be increase in the elementary grades. After 2019-20, this trend continues. Over the next eight years the first grade cohorts will average about 632 students and the outgoing 8th grade cohorts will average 572 students. For the next 5 years, the aforementioned number of in-migrating young families will be at a level that is sufficient to keep the total elementary enrollment growing,

although this trend alone will not be enough to keep the elementary enrollment increasing. A key point in regards to the impact of cohort size in the district is the fact that the "breakeven point" for the 8th grade cohorts is approximately 575. Years where the district has more that 575 8th grade students moving on the high school, there will be a decline in elementary enrollment the next year.

The third factor is the rise of the number of empty nest households in the district. In 2010 the district had 32.5% of their households headed by people ages 35-54 (The ages the majority of people have school aged children). The district's proportion of households in these age groups has dropped over the last ten years as people aged and the households became empty nest. This trend will continue for at least the next 10 years as empty nest households will become the dominate household type in the district. Fortunately, the large bubble of empty nest households that were in the district over the last 10 years will reach their 70s during the life of these forecasts. Post 70 year old households are the stage of life when are most likely to downsize, allowing new young families with children to move in. Consequently, areas that have a large number of owner occupied single family homes will see a rise in the number homes "turning over" and begin to see school age children from these homes. Attendance areas such as Baker and Heath will be the primary (but not exclusive) beneficiaries of this trend.

The demographic factors that will become the most influential over the next 10 years are the growth rate of empty nest households in the attendance areas, the number and rate of existing homes sales, the rate and magnitude of existing housing unit "turn over", the size and type of new rental housing units, the number of new home sales, the relative size of the elementary and pre-school age cohorts and each area's fertility rate. Each of these factors will vary in the scale of their influence and timing of impact on the enrollment trends of any particular elementary area.

As the area becomes more dependent upon existing home sales to attract new families (and no prospect of new housing units being built), the overall elementary enrollment trend of the district will decline. Areas such as Lincoln will see their elementary enrollments slowly decline. Thus, the best primary short- and long-term indicator for enrollment change in most of the attendance areas will be the year-to-year rate of housing turnover. If the total fertility rates of all the attendance areas remain at their current low levels (and they are forecasted to do so) they will ensure that enrollments will continue to see slowing growth (stabilization) even if the levels of net out-migration are greatly reduced.

Additionally, sub-areas that are characterized by the relatively high percentage of rental housing units and large concentrations of young adults tend to have more stable population distribution and enrollment trends. In Brookline, the Lawrence area is a good example of this trend. In these cases, young adults or the newly married, move to these areas and establish households. Because the population is in prime child bearing ages, these areas also have both a high absolute number of births and a higher than the district average birth

rate.  Later, as family size increases, these families often move to single family homes--usually to (relatively) moderately priced single family homes in other parts of the school district or the surrounding area.  However, in the case of Lawrence, unlike areas like this in other districts, the key intervening variable is what proportion of the rental housing units are occupied by college students.  If the number of housing units in the area occupied by college students increases or decreases, then there would be an inverse effect on enrollment.

*High School Enrollment (9-12)*

Enrollment at the high school level is forecasted to grow from 2,064 in 2019-20 to 2,309 in 2024-25, an increase of 245 students or 11.9%.  After 2024-25, the high school enrollment trend will begin to stabilize.  The net result for the five-year period 2024-25 to 2029-30 will be a decrease of 82 students to 2,227 and a rate of decrease of -3.6%.

The aforementioned effects of changes in cohort size on elementary enrollment are also affecting the growth patterns of the high school population.  The difference is that the current "wave" of larger cohort sizes (presently in the elementary grades) will begin to reach 9th grade in every year until the 2024-25 school year.  Over the next five years, the larger sized grade cohorts that are in the middle school and elementary grades will enter high school.  Until these larger sized cohorts of students pass through the high school grades, there will be growth in the enrollment at the district's high school, most likely ending in 2024.  After that point, high school enrollment will begin to stabilize.  It should be noted that the large drop in high school enrollment that will occur in the 2025-26 and 2027-28 school years are a result of the large 12th grade graduating classes that left the year before (these are the district's current 7th and 5th grade classes), not do to any major demographic changes.

It is important to remember that the vast majority of this future high school enrollment growth will be a result of students aging into those grades.  Specifically, students who already live in the district (and not in-migration of students ages 14 to 18) will be the primary cause of the forecasted increase in high school enrollment.  Additionally, as was mentioned earlier, these forecasts represent the demographic changes that will affect high school enrollment.  Any changes in the district's student transfer policy and/or changes in special high school level programs will need to be added or subtracted from the forecast result

 High school enrollment is the most difficult of all the grade levels to project.  The reason for this is the varying and constantly changing dropout rates, particularly in grades 10 and 11.  For these forecasts, the dropout rates at the high school grades were calculated for each grade level over the last five years.  These five-year averages were then held constant for the life of the forecast.  The effects of any policy changes dealing with any school's dropout rates, program placement or reassignment of former students to new grade levels will need to be added or subtracted from the forecast results.  The rate of the Public Schools of Brookline 8th grade students that choose

to attend high school in private or out of district public school schools is also held constant the average rate of the last five years.

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## Table 1: Forecasted District Total Population Change, 2010 to 2020

|  | 2010 | 2015 | 2010-2015 Change | 2020 | 2015-2020 Change | 2010-2020 Change |
|---|---|---|---|---|---|---|
| BAKER | 6,120 | 6,210 | 1.5% | 6,230 | 0.3% | 1.8% |
| COOLIDGE CORNER | 10,993 | 11,320 | 3.0% | 11,600 | 2.5% | 5.5% |
| DRISCOLL | 5,977 | 6,160 | 3.1% | 6,270 | 1.8% | 4.9% |
| HEATH | 4,531 | 4,540 | 0.2% | 4,620 | 1.8% | 2.0% |
| LAWRENCE | 8,977 | 9,130 | 1.7% | 9,270 | 1.5% | 3.3% |
| LINCOLN | 6,001 | 6,040 | 0.6% | 6,030 | -0.2% | 0.5% |
| PIERCE | 9,370 | 9,460 | 1.0% | 9,550 | 1.0% | 1.9% |
| RUNKLE | 6,761 | 6,830 | 1.0% | 7,000 | 2.5% | 3.5% |
| DISTRICT TOTAL | 58,730 | 59,690 | 1.6% | 60,570 | 1.5% | 3.1% |

The two key variables in the Table 2 are the percent of households with under 18 population (both preschool and school age) and the mean household size. The table also shows how much each attendance area deviates from the district average. In the case of percent with under 18 population, while the district overall has 24.2% of the households with children (the US average is 34.6%), the attendance areas range from a high of 40.2% in Baker to a low of 17.8% in Lawrence. For mean household size, the district is at 2.27 (The US average is 2.58) with the attendance areas ranging from a high of 2.76 in Heath to a low of 2.05 in Lawrence.

## Table 2: Household Characteristics by Elementary Area, 2010 Census

|  | HH w/ Pop Under 18 | % HH w/ Pop Under 18 | Total Households | Household Population | Persons Per Household |
|---|---|---|---|---|---|
| BAKER | 927 | 42.0% | 2,206 | 6,008 | 2.72 |
| COOLIDGE CORNER | 998 | 20.5% | 4,860 | 10,865 | 2.24 |
| DRISCOLL | 537 | 19.3% | 2,778 | 5,941 | 2.14 |
| HEATH | 491 | 36.1% | 1,359 | 3,746 | 2.76 |
| LAWRENCE | 748 | 17.8% | 4,205 | 8,638 | 2.05 |
| LINCOLN | 703 | 25.4% | 2,762 | 5,987 | 2.17 |
| PIERCE | 968 | 23.3% | 4,149 | 9,097 | 2.19 |
| RUNKLE | 699 | 25.2% | 2,772 | 6,570 | 2.37 |
| DISTRICT TOTAL | 6,070 | 24.2% | 25,091 | 56,852 | 2.27 |

Table 3 shows the number of households aged 35-54 (the ages where most people have school age children), the number of householders over the age of 65, and housing tenure (home owners versus renters). For the 35-54 household group the district average is 32.5% (the US average 43.7%) with a range of 44.0% in Baker to 28.2% in Lawrence. Households over the age of 65, which in most case are empty nest households that have no school age children in them, are the ones most likely to "turnover" in the next ten years with the new occupants that do have children. The district has 20.1% of the households over 65 (the US average is 17.5%) with the attendance areas ranging from 30.0% in Heath to 17.8% in Runkle. Home ownership tends to be strongly correlated with age structure and the number of school age children. The district has 48.8% of their households in owner occupied housing units (the US average is 68.9%). The attendance areas range from a high of 80.2% in Heath to a low of 38.0% in Coolidge Corner.

## Table 3: Householder Characteristics by Elementary Area, 2010 Census

|  | Percentage of Householders aged 35-54 | Percentage of Householders aged 65+ | Percentage of Householders Who Own Homes |
|---|---|---|---|
| BAKER | 44.0% | 22.6% | 68.7% |
| COOLIDGE CORNER | 28.5% | 19.7% | 38.0% |
| DRISCOLL | 29.2% | 16.7% | 40.5% |
| HEATH | 38.5% | 30.0% | 80.2% |
| LAWRENCE | 28.2% | 18.0% | 41.7% |
| LINCOLN | 35.7% | 23.0% | 49.7% |
| PIERCE | 33.6% | 20.3% | 43.7% |
| RUNKLE | 32.1% | 17.8% | 62.4% |
| DISTRICT TOTAL | **32.5%** | **20.1%** | **48.8%** |

Table 4 shows the distribution of single person households in the district. This variable tends to be strongly correlated with housing tenure as most single people live in rental units. The district has 33.4% of its households that are single person (the US average is 16.2%) the attendance areas range from a high of 40.2% in Lawrence to a low of 19.4% in Baker.

## Table 4: : Percentage of Households that are Single Person Households and Single Person Households that are over age 65 by Elementary Area, 2010 Census

|  | Percentage of Single Person Households | Percentage of Single Person Households and are 65+ |
|---|---|---|
| BAKER | 19.4% | 8.4% |
| COOLIDGE CORNER | 34.1% | 12.0% |
| DRISCOLL | 37.7% | 8.8% |
| HEATH | 20.0% | 11.1% |
| LAWRENCE | 40.2% | 9.8% |
| LINCOLN | 37.8% | 13.1% |
| PIERCE | 35.3% | 12.0% |
| RUNKLE | 28.2% | 6.7% |
| DISTRICT TOTAL | **33.4%** | **10.4%** |

## Table 5: Elementary Enrollment (2019) Compared to Forecasted Enrollment of Elementary Areas (2024, 2029)

| | 2019 | 2024 | 2019-2024 Change | 2029 | 2024-2029 Change | 2019-2029 Change |
|---|---|---|---|---|---|---|
| BAKER | 750 | 824 | 9.9% | 881 | 6.9% | 17.5% |
| COOLIDGE CORNER | 888 | 979 | 10.2% | 1,042 | 6.4% | 17.3% |
| DRISCOLL | 601 | 546 | -9.2% | 530 | -2.9% | -11.8% |
| HEATH | 524 | 562 | 7.3% | 611 | 8.7% | 16.6% |
| LAWRENCE | 679 | 662 | -2.5% | 651 | -1.7% | -4.1% |
| LINCOLN | 576 | 543 | -5.7% | 519 | -4.4% | -9.9% |
| PIERCE | 842 | 794 | -5.7% | 739 | -6.9% | -12.2% |
| RUNKLE | 582 | 553 | -5.0% | 537 | -2.9% | -7.7% |
| DISTRICT TOTAL | 5,442 | 5,463 | 0.4% | 5,510 | 0.9% | 1.2% |

## Table 6: Age Under One to Age Ten Population Counts, by Year of Age, by Elementary Area: 2010 Census

| | Under 1 year | 1 year | 2 years | 3 years | 4 years | 5 years | 6 years | 7 years | 8 years | 9 years | 10 years |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BAKER | 71 | 74 | 72 | 77 | 102 | 78 | 116 | 120 | 120 | 104 | 91 |
| COOLIDGE CORNER | 120 | 121 | 118 | 133 | 106 | 93 | 108 | 96 | 98 | 96 | 78 |
| DRISCOLL | 73 | 55 | 63 | 54 | 56 | 59 | 56 | 49 | 46 | 44 | 42 |
| HEATH | 35 | 34 | 43 | 52 | 61 | 54 | 53 | 62 | 61 | 50 | 63 |
| LAWRENCE | 101 | 94 | 82 | 92 | 75 | 75 | 66 | 59 | 73 | 63 | 58 |
| LINCOLN | 71 | 63 | 65 | 71 | 67 | 63 | 70 | 64 | 61 | 61 | 65 |
| PIERCE | 134 | 107 | 123 | 107 | 88 | 95 | 93 | 72 | 85 | 93 | 78 |
| RUNKLE | 78 | 69 | 83 | 68 | 54 | 81 | 82 | 76 | 65 | 70 | 75 |
| DISTRICT TOTAL | 682 | 617 | 648 | 653 | 609 | 598 | 644 | 599 | 609 | 581 | 548 |

Table 7 is a calculation of the district proportion of children enrolled in each grade compared to the number of children counted in each age category in the 2010 Census. The calculation for the 2010 enrollment is used as a base. The percentages in 2010 by age group are all less than 100% as no school district has all of the children living in the district enrolled in public schools (the other are in private schools, charters, home schooled, etc.).

For example, the 6-year-olds in 2010 are in first grade. The 618 students enrolled represents 96% of the 644 6-year-olds counted in the census. The next rows up are the enrollment for the year 2011. These 6-year-olds are now 7 years old and in second grade. The 658 second grade students in 2011 represents 102.2 % of the 644, total population in that age cohort. That means the district experienced a 6.2 percentage point increase (in-migration) of children born in 2004. The top row compares the 2019 enrollment by grade. The 6-year-old cohort in 2010 is now in 10th grade. The 557 students enrolled is 86.5% of the cohort total from 2010.

Note that consistently the district tends to attach students in grades kindergarten through four in all age groups over the decade. This reparents the in-migration of young households with school age children. Conversely, note that in most years and age cohorts, the district number of students (and proportions) declines after grade four. This represents the out-migration of households from the district.

## Table 7: Comparison of District Resident Enrollment by Grade with 2010 Census Counts by Age, 2010-2019

| 2010 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Public Schools of Brookline Total** | **682** | **617** | **648** | **653** | **609** | **598** | **644** | **599** | **609** | **581** | **548** | **528** | **520** | **509** |
| **2019 Grade** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | | | | | |
| 2019 Enrollment | 624 | 657 | 582 | 618 | 561 | 521 | 557 | 512 | 474 | | | | | |
| % of Census Counts by Age | 91.5% | 106.5% | 89.8% | 94.6% | 92.1% | 87.1% | 86.5% | 85.5% | 77.8% | | | | | |
| **2018 Grade** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | | | | |
| 2018 Enrollment | 645 | 680 | 605 | 665 | 571 | 545 | 554 | 542 | 489 | 499 | | | | |
| % of Census Counts by Age | 94.6% | 110.2% | 93.4% | 101.8% | 93.8% | 91.1% | 86.0% | 90.5% | 80.3% | 85.9% | | | | |
| **2017 Grade** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | | | |
| 2017 Enrollment | 631 | 691 | 621 | 660 | 585 | 550 | 568 | 531 | 510 | 497 | 506 | | | |
| % of Census Counts by Age | 92.5% | 112.0% | 95.8% | 101.1% | 96.1% | 92.0% | 88.2% | 88.6% | 83.7% | 85.5% | 92.3% | | | |
| **2016 Grade** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | | |
| 2016 Enrollment | 627 | 678 | 633 | 677 | 584 | 549 | 576 | 531 | 500 | 509 | 492 | 479 | | |
| % of Census Counts by Age | 91.9% | 109.9% | 97.7% | 103.7% | 95.9% | 91.8% | 89.4% | 88.6% | 82.1% | 87.6% | 89.8% | 90.7% | | |
| **2015 Grade** | **K** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | |
| 2015 Enrollment | 633 | 696 | 621 | 704 | 598 | 553 | 610 | 543 | 507 | 500 | 507 | 480 | 446 | |
| % of Census Counts by Age | 92.8% | 112.8% | 95.8% | 107.8% | 98.2% | 92.5% | 94.7% | 90.7% | 83.3% | 86.1% | 92.5% | 90.9% | 85.8% | |
| **2014 Grade** | | **K** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
| 2014 Enrollment | | 685 | 645 | 685 | 620 | 530 | 634 | 541 | 506 | 507 | 494 | 478 | 431 | 473 |
| % of Census Counts by Age | | 111.0% | 99.5% | 104.9% | 101.8% | 88.6% | 98.4% | 90.3% | 83.1% | 87.3% | 90.1% | 90.5% | 82.9% | 92.9% |
| **2013 Grade** | | | **K** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 2013 Enrollment | | | 631 | 676 | 618 | 539 | 656 | 562 | 519 | 533 | 493 | 466 | 445 | 475 |
| % of Census Counts by Age | | | 97.4% | 103.5% | 101.5% | 90.1% | 101.9% | 93.8% | 85.2% | 91.7% | 90.0% | 88.3% | 85.6% | 93.3% |
| **2012 Grade** | | | | **K** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| 2012 Enrollment | | | | 666 | 633 | 539 | 651 | 574 | 517 | 549 | 492 | 446 | 436 | 479 |
| % of Census Counts by Age | | | | 102.0% | 103.9% | 90.1% | 101.1% | 95.8% | 84.9% | 94.5% | 89.8% | 84.5% | 83.8% | 94.1% |
| **2011 Grade** | | | | | **K** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| 2011 Enrollment | | | | | 602 | 550 | 658 | 567 | 532 | 538 | 516 | 437 | 425 | 458 |
| % of Census Counts by Age | | | | | 98.9% | 92.0% | 102.2% | 94.7% | 87.4% | 92.6% | 94.2% | 82.8% | 81.7% | 90.0% |
| **2010 Grade** | | | | | | **K** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| 2010 Enrollment | | | | | | 545 | 618 | 572 | 532 | 527 | 532 | 445 | 424 | 448 |
| % of Census Counts by Age | | | | | | 91.1% | 96.0% | 95.5% | 87.4% | 90.7% | 97.1% | 84.3% | 81.5% | 88.0% |

## Appendix B: Population Forecasts

### Brookline Public Schools

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 3,209 | 3,140 | 3,080 | 3,190 | 3,130 |
| 5-9 | 3,031 | 3,450 | 3,310 | 3,480 | 3,490 |
| 10-14 | 2,606 | 2,870 | 3,290 | 3,120 | 3,320 |
| 15-19 | 2,817 | 2,760 | 3,020 | 3,360 | 3,340 |
| 20-24 | 6,618 | 6,280 | 6,300 | 6,740 | 6,640 |
| 25-29 | 6,949 | 7,030 | 6,740 | 6,890 | 7,230 |
| 30-34 | 5,079 | 5,220 | 5,200 | 5,110 | 5,380 |
| 35-39 | 4,201 | 4,000 | 4,080 | 4,030 | 4,080 |
| 40-44 | 3,495 | 3,530 | 3,380 | 3,350 | 3,360 |
| 45-49 | 3,325 | 3,210 | 3,310 | 2,920 | 2,930 |
| 50-54 | 3,218 | 3,250 | 3,160 | 3,230 | 2,870 |
| 55-59 | 3,366 | 3,130 | 3,170 | 3,080 | 3,160 |
| 60-64 | 3,322 | 3,110 | 2,900 | 2,880 | 2,820 |
| 65-69 | 2,259 | 3,020 | 2,810 | 2,540 | 2,540 |
| 70-74 | 1,587 | 1,950 | 2,660 | 2,430 | 2,190 |
| 75-79 | 1,239 | 1,330 | 1,650 | 2,270 | 2,070 |
| 80-84 | 1,087 | 1,010 | 1,090 | 1,340 | 1,850 |
| 85+ | 1,322 | 1,400 | 1,420 | 1,490 | 1,690 |
| Total | 58,730 | 59,690 | 60,570 | 61,450 | 62,090 |
| Median Age | 34.1 | 34.1 | 34.4 | 33.9 | 33.6 |

| | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|
| Births | 3,020 | 2,970 | 2,890 | 2,920 |
| Deaths | 2,120 | 2,210 | 2,360 | 2,540 |
| Natural Increase | 900 | 760 | 530 | 380 |
| Net Migration | 120 | 150 | 300 | 240 |
| Change | 1,020 | 910 | 830 | 620 |

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

### Baker Elementary Zone

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 396 | 360 | 350 | 420 | 360 |
| 5-9 | 538 | 480 | 460 | 540 | 560 |
| 10-14 | 463 | 530 | 460 | 430 | 520 |
| 15-19 | 410 | 420 | 480 | 340 | 360 |
| 20-24 | 232 | 250 | 240 | 310 | 220 |
| 25-29 | 247 | 240 | 270 | 320 | 360 |
| 30-34 | 296 | 260 | 250 | 340 | 360 |
| 35-39 | 435 | 310 | 270 | 270 | 360 |
| 40-44 | 496 | 440 | 310 | 290 | 290 |
| 45-49 | 479 | 500 | 450 | 310 | 290 |
| 50-54 | 454 | 480 | 510 | 440 | 310 |
| 55-59 | 488 | 440 | 470 | 500 | 440 |
| 60-64 | 409 | 470 | 430 | 410 | 440 |
| 65-69 | 247 | 390 | 450 | 360 | 350 |
| 70-74 | 176 | 230 | 360 | 370 | 300 |
| 75-79 | 159 | 160 | 200 | 300 | 300 |
| 80-84 | 107 | 130 | 130 | 160 | 240 |
| 85+ | 89 | 120 | 140 | 150 | 190 |
| Total | 6,120 | 6,210 | 6,230 | 6,260 | 6,250 |
| Median Age | 40.4 | 42.9 | 45.3 | 42.8 | 40.4 |

| | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|
| Births | 250 | 220 | 200 | 210 |
| Deaths | 220 | 250 | 290 | 320 |
| Natural Increase | 30 | -30 | -90 | -110 |
| Net Migration | 50 | 60 | 120 | 90 |
| Change | 80 | 30 | 30 | -20 |

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

## Coolidge Corner Elementary Zone

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 598 | 600 | 570 | 630 | 630 |
| 5-9 | 491 | 580 | 580 | 670 | 710 |
| 10-14 | 386 | 480 | 560 | 560 | 650 |
| 15-19 | 429 | 400 | 490 | 580 | 580 |
| 20-24 | 2,039 | 1,870 | 1,840 | 2,090 | 2,030 |
| 25-29 | 1,480 | 1,580 | 1,410 | 1,450 | 1,720 |
| 30-34 | 963 | 930 | 1,030 | 920 | 1,010 |
| 35-39 | 813 | 780 | 750 | 810 | 720 |
| 40-44 | 530 | 720 | 680 | 530 | 610 |
| 45-49 | 538 | 520 | 710 | 460 | 320 |
| 50-54 | 466 | 530 | 520 | 700 | 460 |
| 55-59 | 503 | 460 | 520 | 510 | 690 |
| 60-64 | 488 | 480 | 440 | 500 | 490 |
| 65-69 | 334 | 450 | 440 | 380 | 450 |
| 70-74 | 243 | 300 | 390 | 390 | 330 |
| 75-79 | 216 | 190 | 240 | 330 | 330 |
| 80-84 | 191 | 170 | 160 | 190 | 270 |
| 85+ | 285 | 280 | 270 | 260 | 270 |
| Total | 10,993 | 11,320 | 11,600 | 11,960 | 12,270 |
| Median Age | 30.4 | 30.8 | 31.7 | 30.0 | 29.5 |

| | | | | | |
|---|---|---|---|---|---|
| Births | | 620 | 600 | 590 | 610 |
| Deaths | | 380 | 380 | 390 | 410 |
| Natural Increase | | 240 | 220 | 200 | 200 |
| Net Migration | | 90 | 90 | 110 | 100 |
| Change | | 330 | 310 | 310 | 300 |

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

## Driscoll Elementary Zone

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 300 | 320 | 330 | 330 | 350 |
| 5-9 | 254 | 350 | 330 | 340 | 330 |
| 10-14 | 201 | 240 | 330 | 310 | 330 |
| 15-19 | 182 | 180 | 210 | 310 | 290 |
| 20-24 | 735 | 710 | 830 | 860 | 830 |
| 25-29 | 1,029 | 930 | 940 | 1,080 | 1,060 |
| 30-34 | 653 | 710 | 530 | 540 | 760 |
| 35-39 | 418 | 410 | 400 | 230 | 300 |
| 40-44 | 342 | 320 | 330 | 320 | 160 |
| 45-49 | 314 | 340 | 320 | 330 | 320 |
| 50-54 | 295 | 310 | 330 | 310 | 320 |
| 55-59 | 301 | 290 | 300 | 330 | 300 |
| 60-64 | 291 | 280 | 250 | 270 | 300 |
| 65-69 | 197 | 260 | 240 | 230 | 240 |
| 70-74 | 117 | 170 | 230 | 210 | 200 |
| 75-79 | 120 | 110 | 150 | 200 | 190 |
| 80-84 | 108 | 100 | 90 | 120 | 170 |
| 85+ | 118 | 130 | 130 | 140 | 150 |
| Total | 5,977 | 6,160 | 6,270 | 6,460 | 6,600 |
| Median Age | 32.2 | 32.5 | 31.6 | 30.0 | 30.7 |

| | | | | | |
|---|---|---|---|---|---|
| Births | | 320 | 320 | 320 | 340 |
| Deaths | | 190 | 200 | 210 | 230 |
| Natural Increase | | 130 | 120 | 110 | 110 |
| Net Migration | | 40 | 50 | 50 | 40 |
| Change | | 170 | 170 | 160 | 150 |

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

## Heath Elementary Zone

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 226 | 210 | 240 | 270 | 280 |
| 5-9 | 281 | 340 | 330 | 360 | 380 |
| 10-14 | 296 | 250 | 320 | 290 | 320 |
| 15-19 | 467 | 440 | 400 | 440 | 500 |
| 20-24 | 414 | 420 | 380 | 350 | 360 |
| 25-29 | 240 | 320 | 340 | 330 | 310 |
| 30-34 | 153 | 210 | 270 | 380 | 300 |
| 35-39 | 216 | 190 | 240 | 310 | 420 |
| 40-44 | 267 | 210 | 200 | 240 | 310 |
| 45-49 | 288 | 270 | 210 | 200 | 230 |
| 50-54 | 337 | 280 | 260 | 210 | 200 |
| 55-59 | 307 | 330 | 280 | 260 | 200 |
| 60-64 | 284 | 270 | 290 | 230 | 210 |
| 65-69 | 216 | 250 | 240 | 240 | 180 |
| 70-74 | 150 | 170 | 210 | 180 | 190 |
| 75-79 | 112 | 130 | 150 | 180 | 160 |
| 80-84 | 102 | 90 | 110 | 120 | 140 |
| 85+ | 175 | 160 | 150 | 150 | 160 |
| Total | 4,531 | 4,540 | 4,620 | 4,740 | 4,850 |
| Median Age | 39.4 | 37.1 | 35.6 | 34.3 | 34.6 |

| | | | | | |
|---|---|---|---|---|---|
| Births | | 180 | 210 | 230 | 250 |
| Deaths | | 210 | 210 | 220 | 220 |
| Natural Increase | | -30 | 0 | 10 | 30 |
| Net Migration | | 60 | 60 | 100 | 90 |
| Change | | 30 | 60 | 110 | 120 |

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

## Lawrence Elementary Zone

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 444 | 430 | 420 | 400 | 410 |
| 5-9 | 335 | 460 | 430 | 430 | 410 |
| 10-14 | 284 | 320 | 440 | 410 | 410 |
| 15-19 | 354 | 330 | 360 | 500 | 460 |
| 20-24 | 1,141 | 1,100 | 1,080 | 1,260 | 1,250 |
| 25-29 | 1,356 | 1,340 | 1,300 | 1,320 | 1,460 |
| 30-34 | 987 | 960 | 940 | 810 | 910 |
| 35-39 | 639 | 640 | 600 | 510 | 460 |
| 40-44 | 506 | 530 | 530 | 470 | 400 |
| 45-49 | 446 | 440 | 480 | 470 | 420 |
| 50-54 | 404 | 440 | 440 | 470 | 450 |
| 55-59 | 471 | 390 | 430 | 420 | 460 |
| 60-64 | 518 | 430 | 370 | 390 | 400 |
| 65-69 | 364 | 470 | 390 | 320 | 350 |
| 70-74 | 250 | 320 | 420 | 340 | 280 |
| 75-79 | 159 | 220 | 280 | 370 | 300 |
| 80-84 | 164 | 130 | 180 | 230 | 300 |
| 85+ | 154 | 180 | 180 | 210 | 260 |
| Total | 8,977 | 9,130 | 9,270 | 9,330 | 9,390 |
| Median Age | 32.9 | 33.0 | 33.2 | 32.1 | 31.6 |

| | | | | | |
|---|---|---|---|---|---|
| Births | | 410 | 400 | 370 | 390 |
| Deaths | | 300 | 320 | 350 | 390 |
| Natural Increase | | 110 | 80 | 20 | 0 |
| Net Migration | | 50 | 50 | 60 | 50 |
| Change | | 160 | 130 | 80 | 50 |

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

# Lincoln Elementary Zone

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 336 | 330 | 310 | 300 | 280 |
| 5-9 | 319 | 350 | 330 | 320 | 300 |
| 10-14 | 294 | 290 | 330 | 310 | 310 |
| 15-19 | 304 | 310 | 310 | 330 | 320 |
| 20-24 | 459 | 420 | 410 | 410 | 410 |
| 25-29 | 582 | 580 | 520 | 500 | 490 |
| 30-34 | 509 | 520 | 520 | 470 | 460 |
| 35-39 | 482 | 450 | 470 | 480 | 420 |
| 40-44 | 428 | 410 | 400 | 410 | 420 |
| 45-49 | 350 | 370 | 370 | 340 | 370 |
| 50-54 | 361 | 350 | 360 | 360 | 340 |
| 55-59 | 358 | 350 | 330 | 350 | 350 |
| 60-64 | 379 | 320 | 320 | 310 | 320 |
| 65-69 | 265 | 340 | 280 | 280 | 270 |
| 70-74 | 191 | 220 | 300 | 250 | 250 |
| 75-79 | 126 | 170 | 190 | 260 | 210 |
| 80-84 | 109 | 110 | 130 | 160 | 210 |
| 85+ | 151 | 150 | 150 | 170 | 200 |
| Total | 6,001 | 6,040 | 6,030 | 6,010 | 5,930 |
| Median Age | 37.0 | 37.4 | 38.0 | 38.8 | 39.7 |

| | | | | |
|---|---|---|---|---|
| Births | 320 | 300 | 290 | 270 |
| Deaths | 230 | 240 | 260 | 280 |
| Natural Increase | 90 | 60 | 30 | -10 |
| Net Migration | -60 | -50 | -50 | -40 |
| Change | 30 | 10 | -20 | -50 |

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

# Pierce Elementary Zone

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 558 | 530 | 510 | 490 | 490 |
| 5-9 | 439 | 540 | 510 | 490 | 470 |
| 10-14 | 374 | 410 | 520 | 490 | 470 |
| 15-19 | 302 | 360 | 400 | 510 | 490 |
| 20-24 | 880 | 840 | 900 | 850 | 950 |
| 25-29 | 1,147 | 1,180 | 1,140 | 1,150 | 1,100 |
| 30-34 | 971 | 960 | 1,000 | 990 | 1,000 |
| 35-39 | 771 | 780 | 780 | 840 | 830 |
| 40-44 | 550 | 530 | 540 | 570 | 630 |
| 45-49 | 518 | 430 | 400 | 430 | 470 |
| 50-54 | 509 | 490 | 400 | 370 | 410 |
| 55-59 | 490 | 490 | 480 | 380 | 370 |
| 60-64 | 509 | 450 | 450 | 440 | 360 |
| 65-69 | 358 | 460 | 400 | 410 | 400 |
| 70-74 | 293 | 310 | 400 | 360 | 360 |
| 75-79 | 230 | 230 | 250 | 340 | 300 |
| 80-84 | 197 | 190 | 190 | 200 | 280 |
| 85+ | 274 | 280 | 280 | 280 | 290 |
| Total | 9,370 | 9,460 | 9,550 | 9,590 | 9,670 |
| Median Age | 35.1 | 34.5 | 34.0 | 34.1 | 34.3 |

| | | | | |
|---|---|---|---|---|
| Births | 540 | 520 | 500 | 490 |
| Deaths | 380 | 380 | 390 | 400 |
| Natural Increase | 160 | 140 | 110 | 90 |
| Net Migration | -60 | -60 | -50 | -50 |
| Change | 100 | 80 | 60 | 40 |

Differences between period Totals may not equal Change due to rounding.
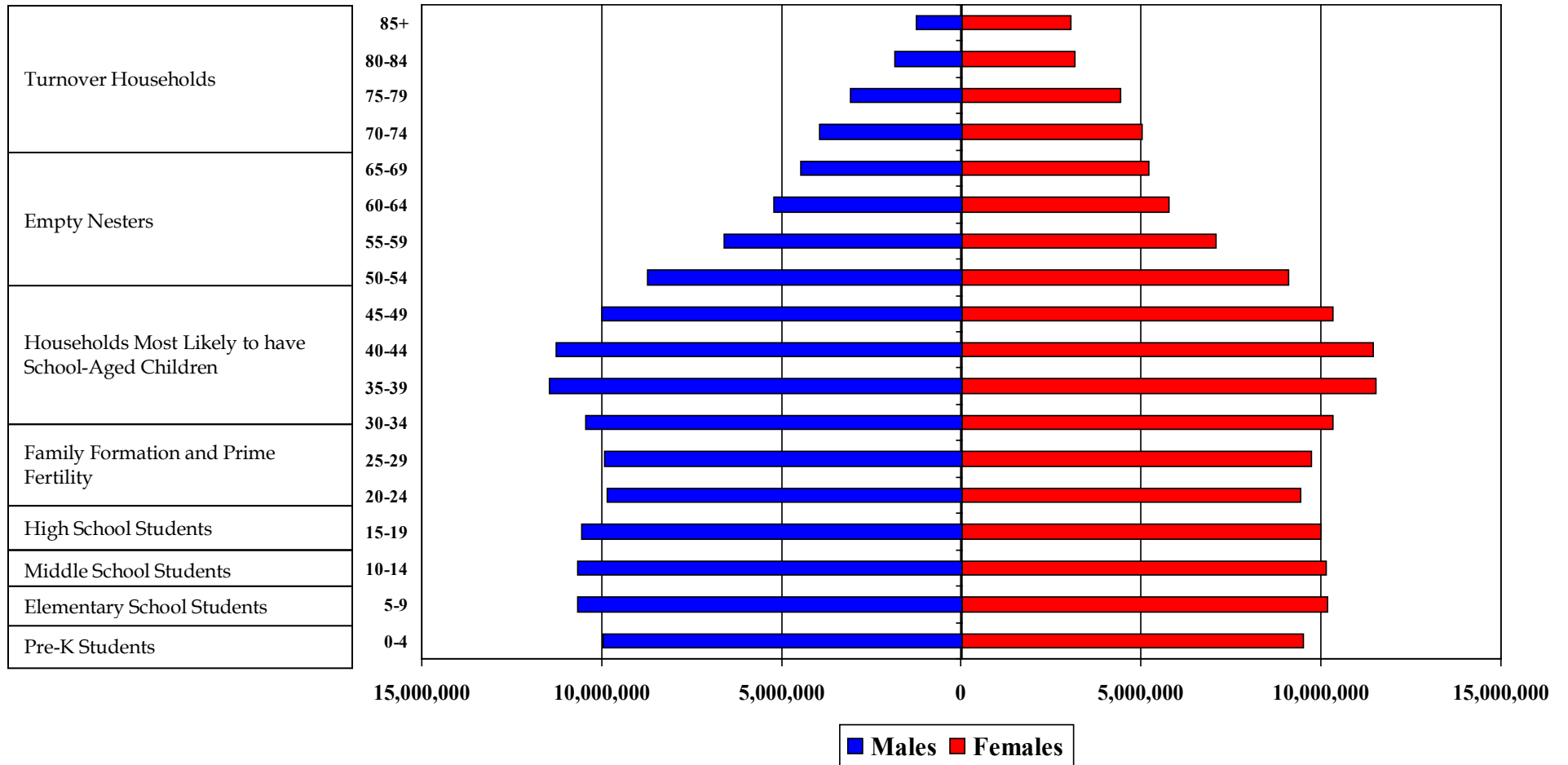
**Runkle Elementary Zone**

| Total | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| 0-4 | 351 | 360 | 350 | 350 | 330 |
| 5-9 | 374 | 350 | 340 | 330 | 330 |
| 10-14 | 307 | 350 | 330 | 320 | 310 |
| 15-19 | 369 | 320 | 370 | 350 | 340 |
| 20-24 | 719 | 670 | 620 | 610 | 590 |
| 25-29 | 869 | 860 | 820 | 740 | 730 |
| 30-34 | 546 | 670 | 660 | 660 | 580 |
| 35-39 | 427 | 440 | 570 | 580 | 570 |
| 40-44 | 375 | 370 | 390 | 520 | 540 |
| 45-49 | 393 | 340 | 370 | 380 | 510 |
| 50-54 | 392 | 370 | 340 | 370 | 380 |
| 55-59 | 448 | 380 | 360 | 330 | 350 |
| 60-64 | 443 | 410 | 350 | 330 | 300 |
| 65-69 | 278 | 400 | 370 | 320 | 300 |
| 70-74 | 168 | 230 | 350 | 330 | 280 |
| 75-79 | 117 | 120 | 190 | 290 | 280 |
| 80-84 | 109 | 90 | 100 | 160 | 240 |
| 85+ | 76 | 100 | 120 | 130 | 170 |
| Total | 6,761 | 6,830 | 7,000 | 7,100 | 7,130 |
| Median Age | 33.6 | 33.8 | 35.1 | 36.6 | 38.1 |

| | | | | |
|---|---|---|---|---|
| Births | 380 | 400 | 390 | 360 |
| Deaths | 210 | 230 | 250 | 290 |
| Natural Increase | 170 | 170 | 140 | 70 |
| Net Migration | -50 | -50 | -40 | -40 |
| Change | 120 | 120 | 100 | 30 |

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

## Appendix C: Population Pyramids

Population pyramids are graphic representations showing age-sex distribution of a geographic area. They are essentially a demographic fingerprint. They can be placed into broad typologies, but no two areas have the same exact characteristics.
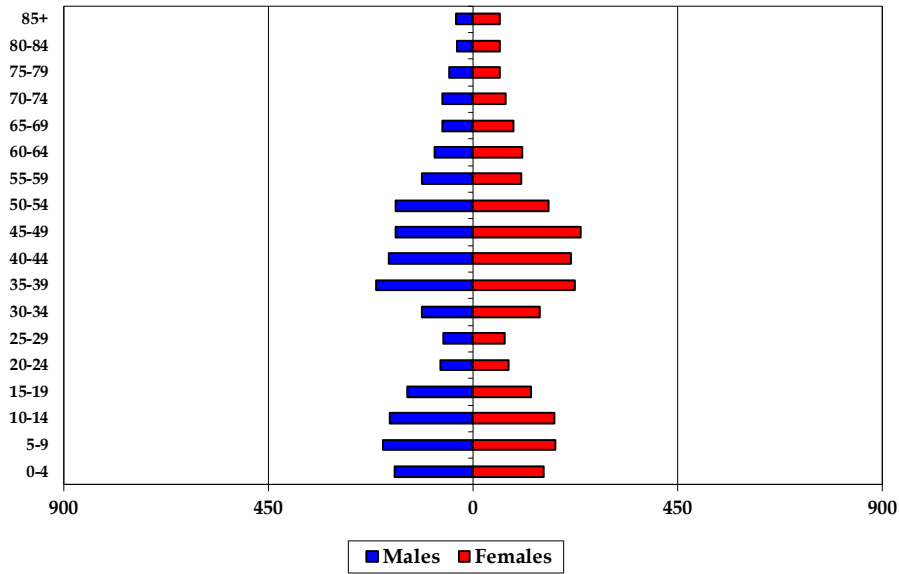
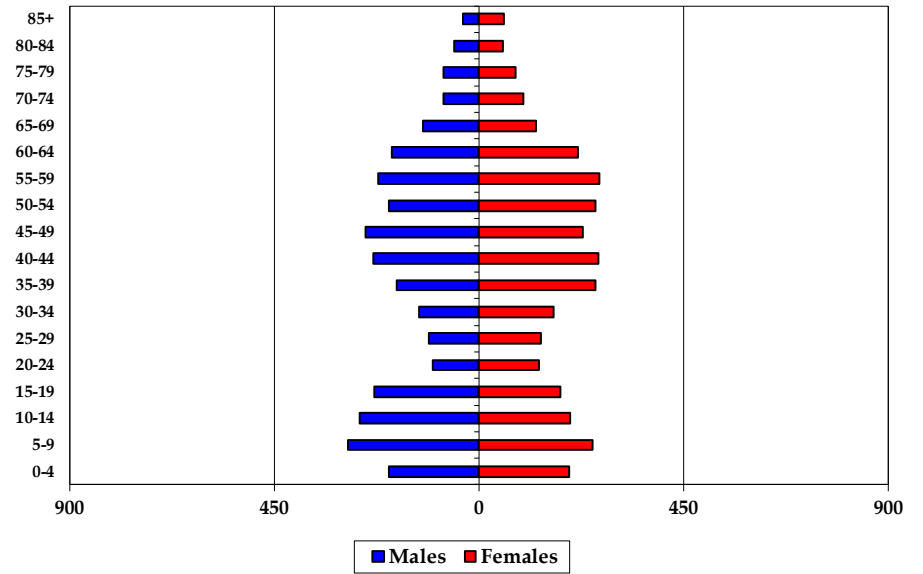### Brookline, Massachusetts Total Population – 2000 Census



Males ■ Females ■
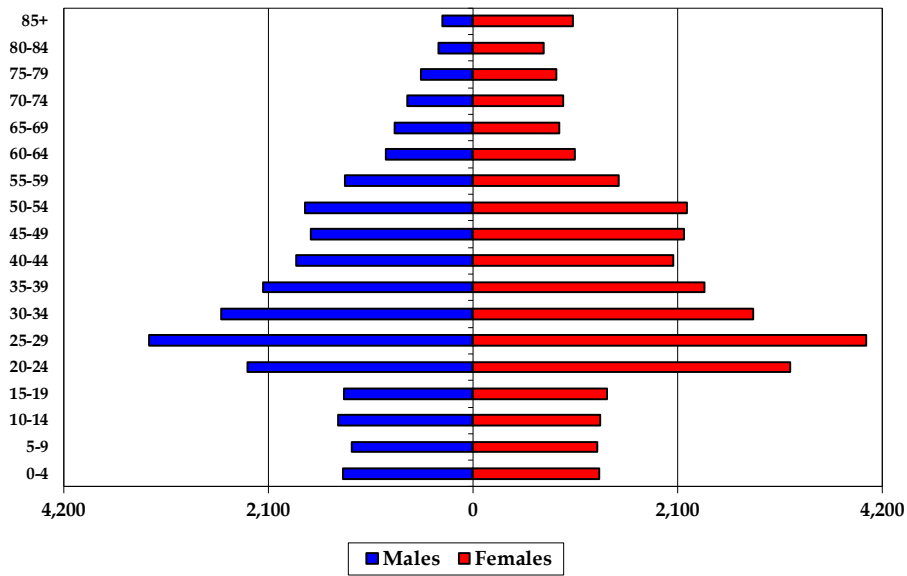
### Brookline, Massachusetts Total Population – 2010 Census
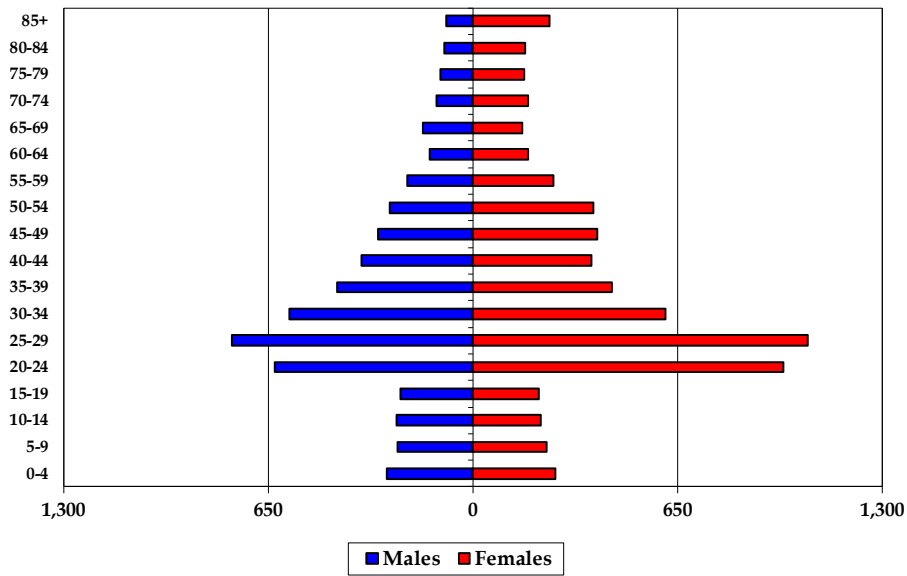


Males ■ Females ■
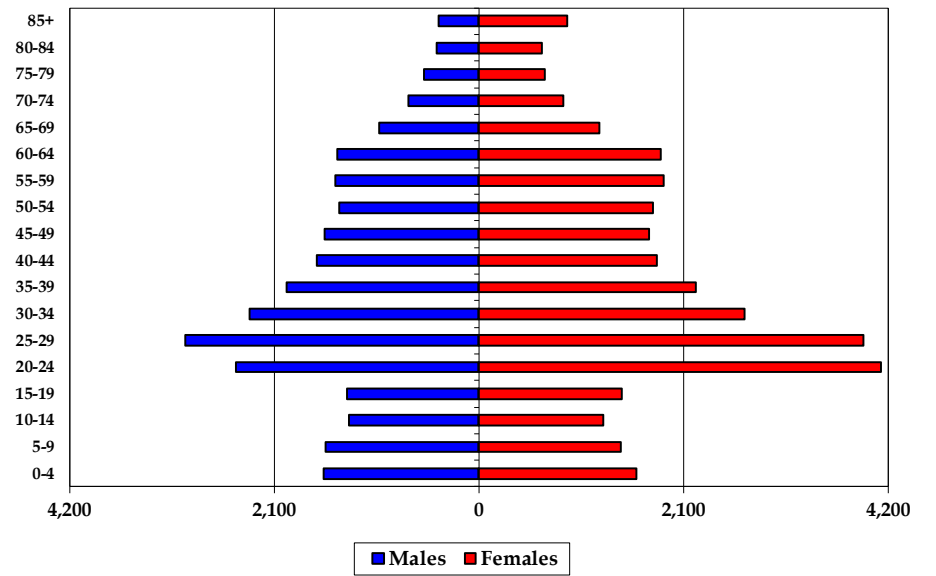
## Baker Elementary Zone Population – 2000 Census



## Baker Elementary Zone Population – 2010 Census

**Coolidge Corner Elementary Zone Population – 2000 Census**

**Coolidge Corner Elementary Zone Population – 2010 Census**

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McKibben Demographics
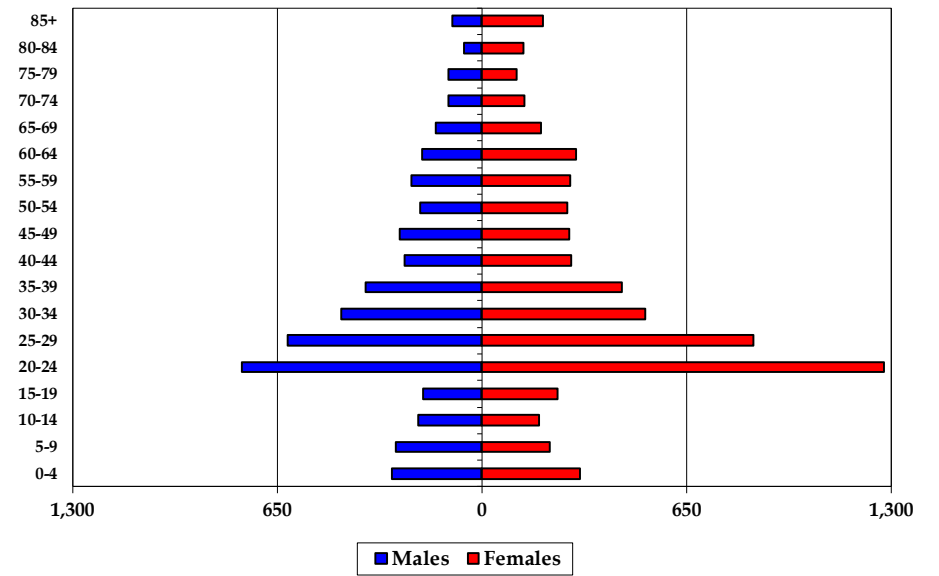
**Driscoll Elementary Zone Population 2000 Census**
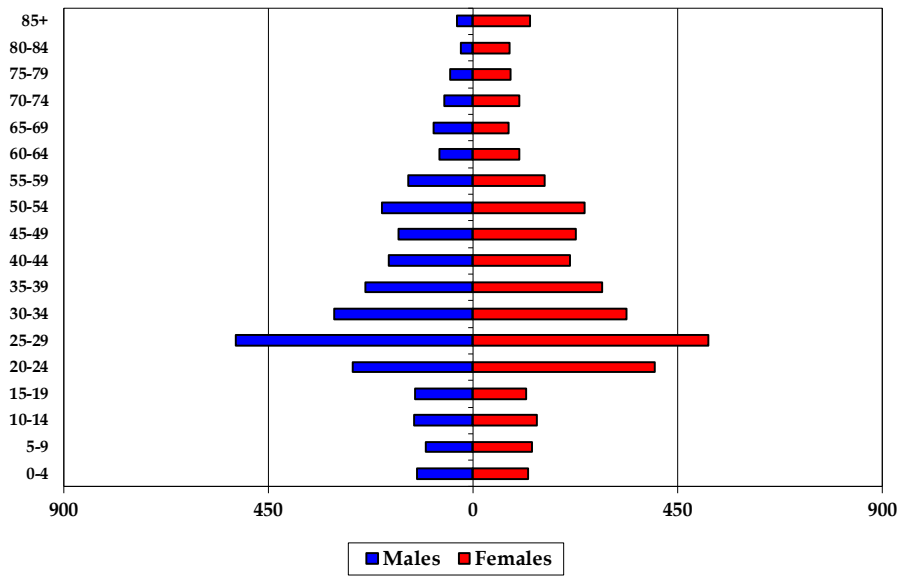


**Driscoll Elementary Zone Population – 2010 Census**
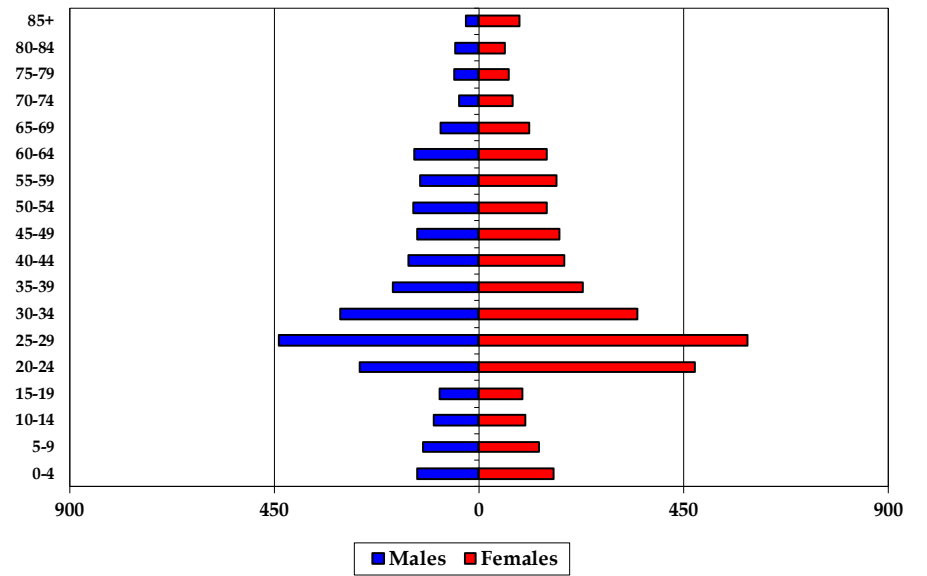
**Heath Elementary Zone Population – 2000 Census**



**Heath Elementary Zone Population – 2010 Census**

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McKibben Demographics

## Lawrence Elementary Zone Population – 2000 Census



## Lawrence Elementary Zone Population – 2010 Census

CropperGIS

McKibben Demographics

**Lincoln Elementary Zone Population – 2000 Census**



**Lincoln Elementary Zone Population – 2010 Census**

**Pierce Elementary Zone Population – 2000 Census**

**Pierce Elementary Zone Population – 2010 Census**



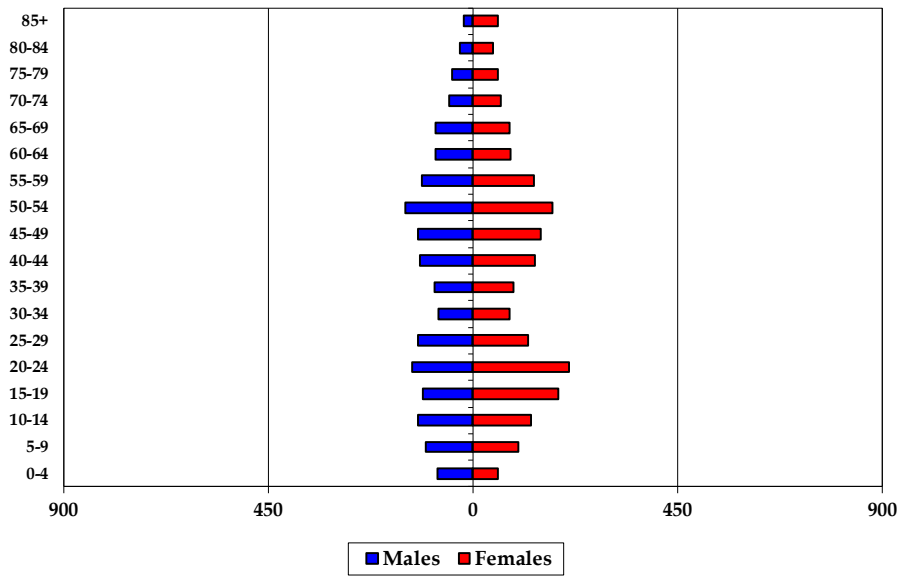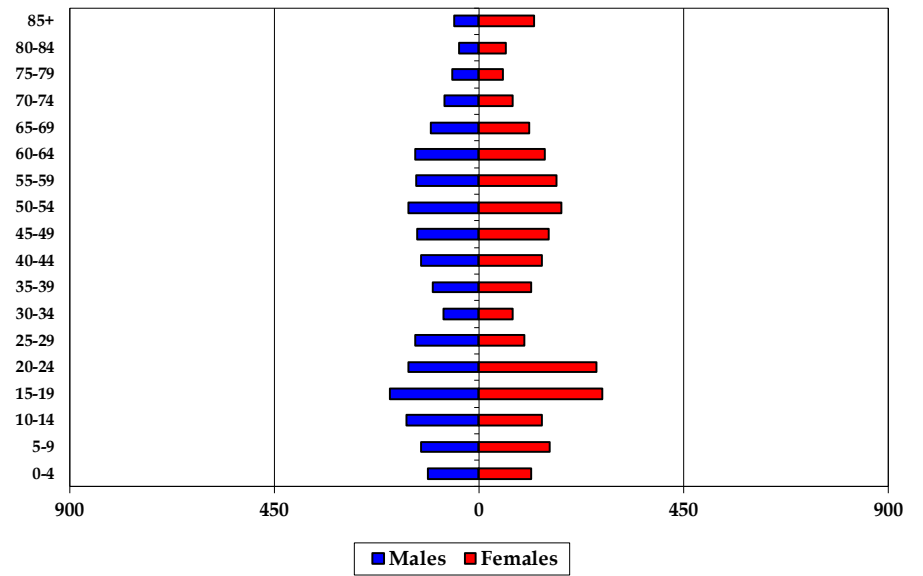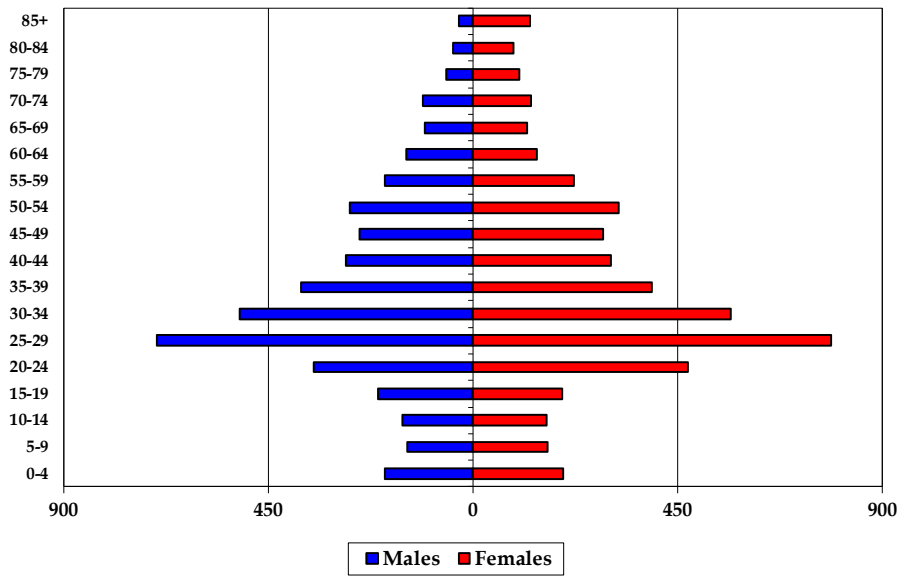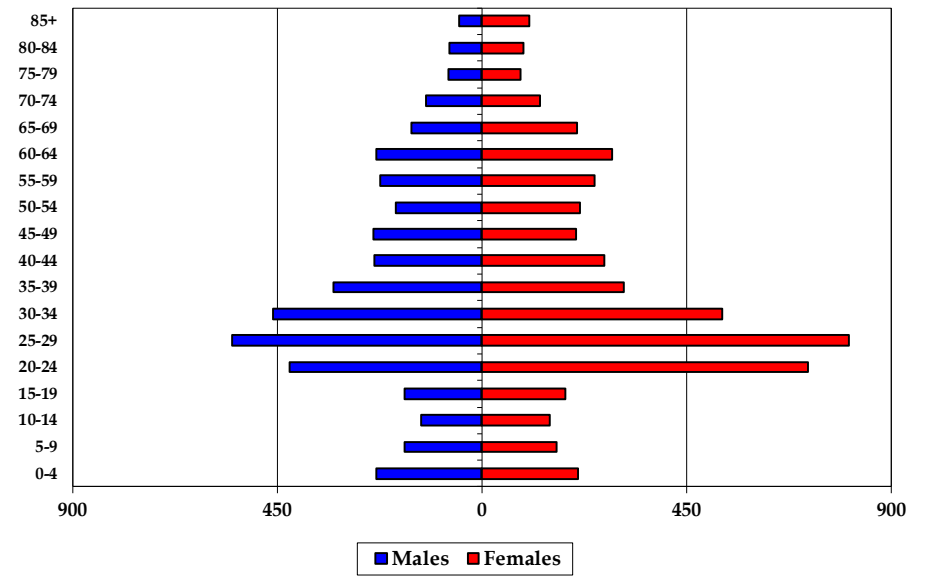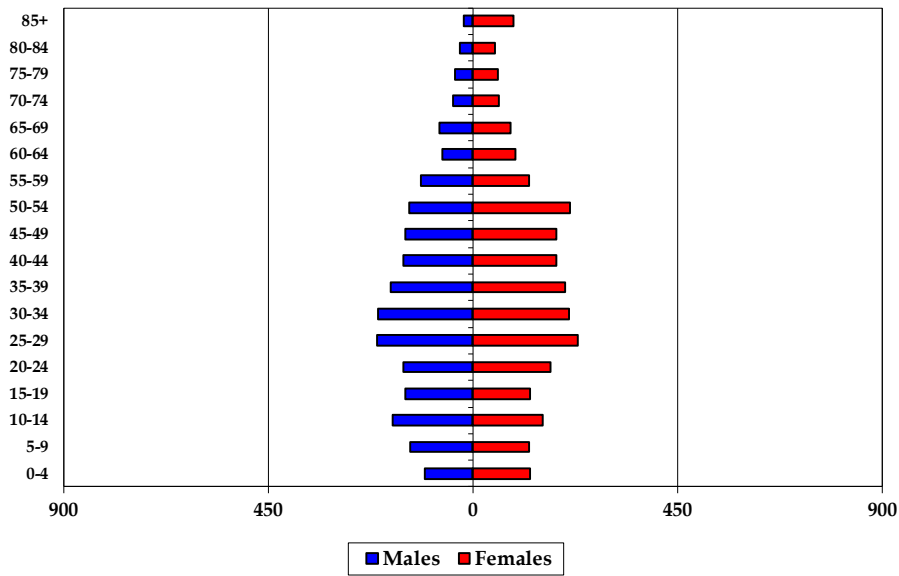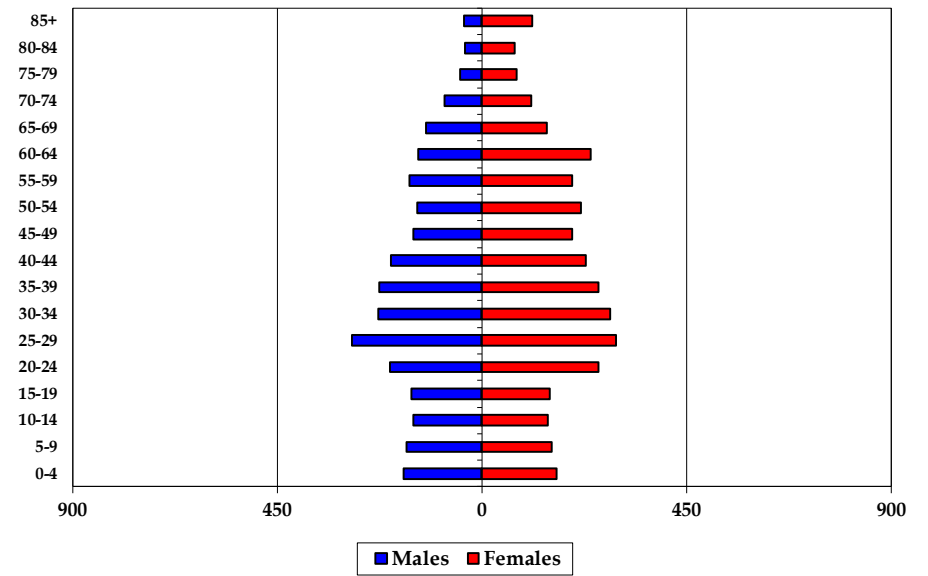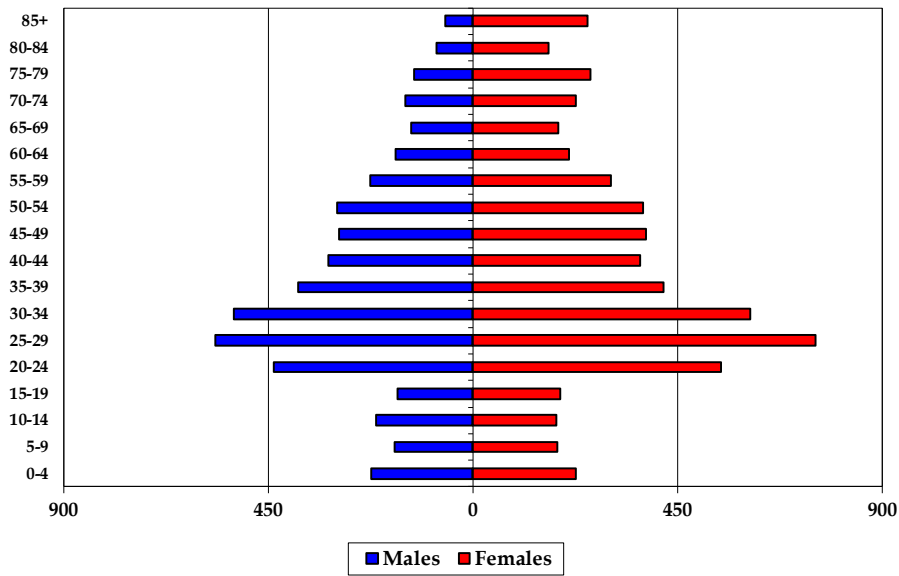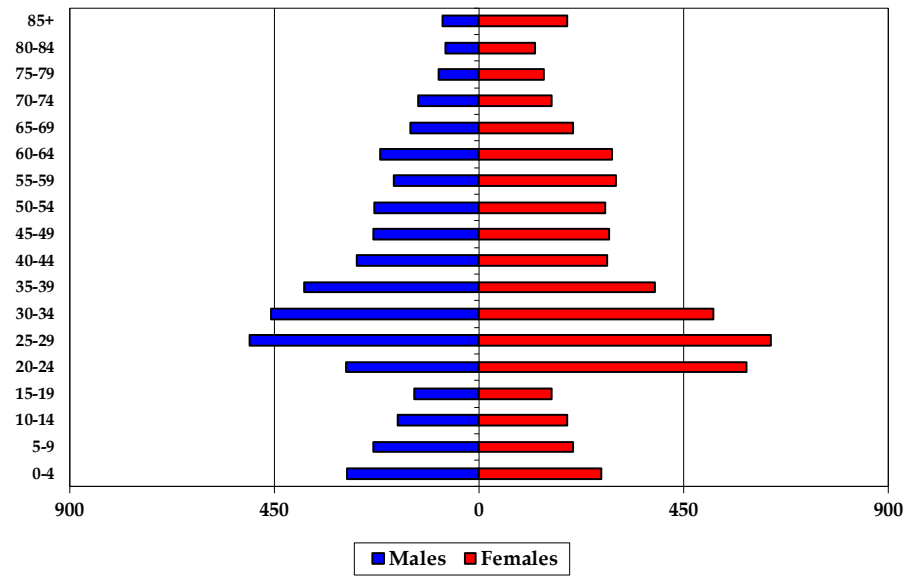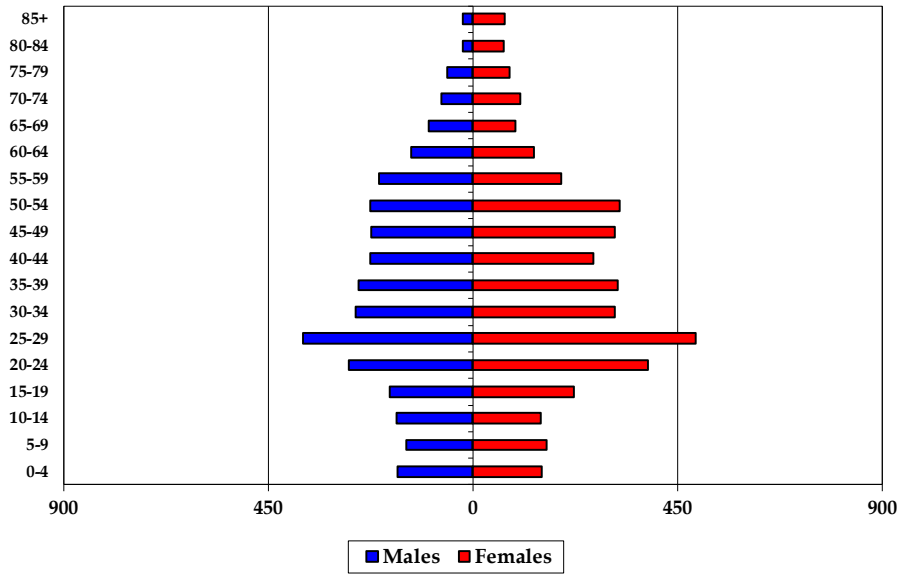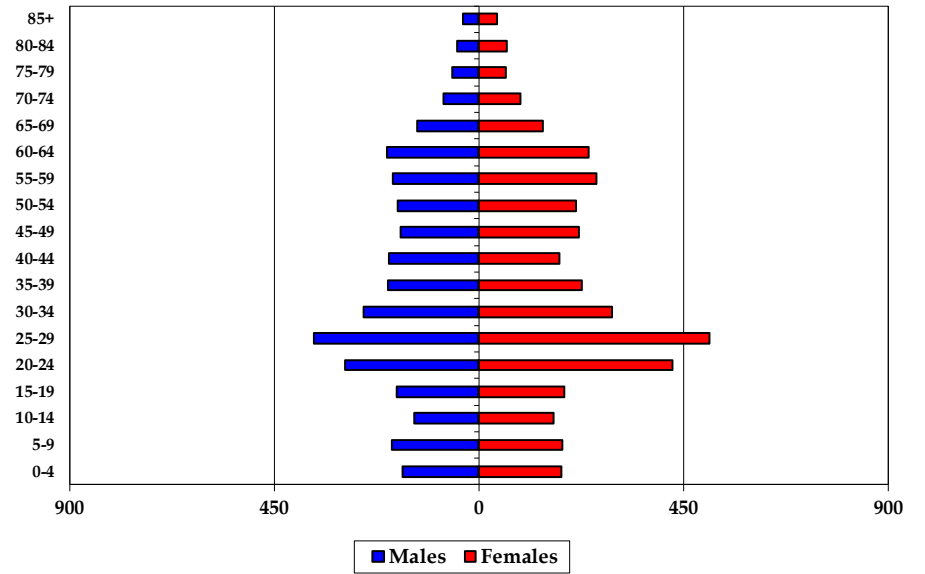■ Males ■ Females

Cropper*GIS*

McKibben Demographics

**Runkle Elementary Zone Population – 2000 Census**



**Runkle Elementary Zone Population – 2010 Census**

**Appendix D: Enrollment Forecasts**

## Public Schools of Brookline: Total Enrollment

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | 257 | 262 | 257 | 251 | 252 | 252 | 252 | 252 | 252 | 252 | 252 | 252 | 252 | 252 | 252 |
| | | | | | | | | | | | | | | | |
| K | 633 | 582 | 609 | 603 | 600 | 626 | 625 | 630 | 628 | 633 | 628 | 629 | 625 | 622 | 623 |
| 1 | 696 | 627 | 566 | 615 | 614 | 623 | 631 | 630 | 635 | 633 | 638 | 634 | 633 | 629 | 627 |
| 2 | 621 | 678 | 631 | 574 | 613 | 616 | 624 | 631 | 630 | 635 | 633 | 636 | 633 | 632 | 628 |
| 3 | 704 | 633 | 691 | 645 | 573 | 617 | 620 | 628 | 635 | 634 | 639 | 632 | 635 | 632 | 631 |
| 4 | 598 | 677 | 621 | 680 | 624 | 565 | 610 | 611 | 621 | 628 | 627 | 626 | 619 | 622 | 619 |
| 5 | 553 | 584 | 660 | 605 | 657 | 613 | 555 | 598 | 600 | 612 | 619 | 616 | 615 | 608 | 611 |
| 6 | 610 | 549 | 585 | 665 | 582 | 651 | 607 | 550 | 591 | 594 | 605 | 612 | 609 | 608 | 602 |
| 7 | 543 | 576 | 550 | 571 | 618 | 563 | 628 | 586 | 531 | 570 | 574 | 586 | 593 | 590 | 589 |
| 8 | 507 | 531 | 568 | 545 | 561 | 612 | 556 | 620 | 579 | 524 | 563 | 563 | 576 | 583 | 580 |
| Total: K-8 | 5,465 | 5,437 | 5,481 | 5,503 | 5,442 | 5,486 | 5,456 | 5,484 | 5,450 | 5,463 | 5,526 | 5,534 | 5,538 | 5,526 | 5,510 |
| | | | | | | | | | | | | | | | |
| 9 | 500 | 500 | 531 | 554 | 521 | 550 | 600 | 545 | 608 | 567 | 514 | 552 | 552 | 564 | 571 |
| 10 | 507 | 509 | 510 | 542 | 557 | 529 | 558 | 609 | 553 | 617 | 576 | 522 | 560 | 560 | 572 |
| 11 | 480 | 492 | 497 | 489 | 512 | 540 | 513 | 541 | 591 | 536 | 598 | 559 | 506 | 543 | 543 |
| 12 | 446 | 479 | 506 | 499 | 474 | 510 | 538 | 511 | 539 | 589 | 534 | 596 | 557 | 504 | 541 |
| Total: 9-12 | 1,933 | 1,980 | 2,044 | 2,084 | 2,064 | 2,129 | 2,209 | 2,206 | 2,291 | 2,309 | 2,222 | 2,229 | 2,175 | 2,171 | 2,227 |
| Total: K-12 | 7,398 | 7,417 | 7,525 | 7,587 | 7,506 | 7,615 | 7,665 | 7,690 | 7,741 | 7,772 | 7,748 | 7,763 | 7,713 | 7,697 | 7,737 |
| | | | | | | | | | | | | | | | |
| SP | 13 | 16 | 19 | 17 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| | | | | | | | | | | | | | | | |
| Total: K-12 | 7,398 | 7,417 | 7,525 | 7,587 | 7,506 | 7,615 | 7,665 | 7,690 | 7,741 | 7,772 | 7,748 | 7,763 | 7,713 | 7,697 | 7,737 |
| Change | | 19 | 108 | 62 | -81 | 109 | 50 | 25 | 51 | 31 | -24 | 15 | -50 | -16 | 40 |
| Percent Change | | 0.3% | 1.5% | 0.8% | -1.1% | 1.5% | 0.7% | 0.3% | 0.7% | 0.4% | -0.3% | 0.2% | -0.6% | -0.2% | 0.5% |
| | | | | | | | | | | | | | | | |
| Total: K-8 | 5,465 | 5,437 | 5,481 | 5,503 | 5,442 | 5,486 | 5,456 | 5,484 | 5,450 | 5,463 | 5,526 | 5,534 | 5,538 | 5,526 | 5,510 |
| Change | | -28 | 44 | 22 | -61 | 44 | -30 | 28 | -34 | 13 | 63 | 8 | 4 | -12 | -16 |
| Percent Change | | -0.51% | 0.81% | 0.40% | -1.11% | 0.81% | -0.55% | 0.51% | -0.62% | 0.24% | 1.15% | 0.14% | 0.07% | -0.22% | -0.29% |
| | | | | | | | | | | | | | | | |
| Total: 9-12 | 1,933 | 1,980 | 2,044 | 2,084 | 2,064 | 2,129 | 2,209 | 2,206 | 2,291 | 2,309 | 2,222 | 2,229 | 2,175 | 2,171 | 2,227 |
| Change | | 47 | 64 | 40 | -20 | 65 | 80 | -3 | 85 | 18 | -87 | 7 | -54 | -4 | 56 |
| Percent Change | | 2.43% | 3.23% | 1.96% | -0.96% | 3.15% | 3.76% | -0.14% | 3.85% | 0.79% | -3.77% | 0.32% | -2.42% | -0.18% | 2.58% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years

## Public Schools of Brookline: K-12th Total Enrollment
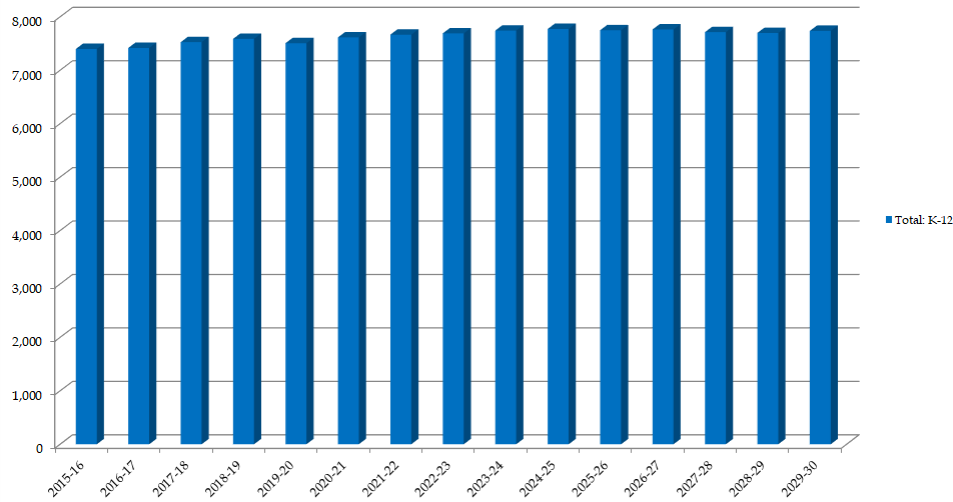


## Public Schools of Brookline: K-8th Total Enrollment
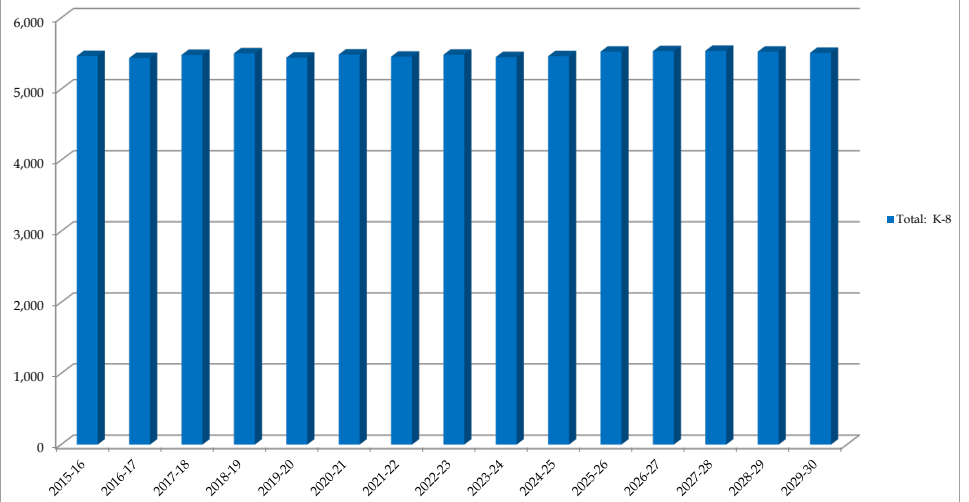


## Public Schools of Brookline: 9-12th Total Enrollment

# Amos A. Lawrence Elementary Zone

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | |
| K | 92 | 80 | 88 | 87 | 80 | 81 | 81 | 82 | 82 | 83 | 82 | 81 | 80 | 80 | 81 |
| 1 | 93 | 89 | 76 | 90 | 85 | 78 | 79 | 79 | 80 | 80 | 81 | 80 | 80 | 79 | 79 |
| 2 | 82 | 88 | 91 | 78 | 81 | 83 | 76 | 77 | 77 | 78 | 78 | 79 | 78 | 78 | 77 |
| 3 | 91 | 85 | 86 | 86 | 71 | 79 | 81 | 74 | 75 | 75 | 76 | 75 | 76 | 75 | 75 |
| 4 | 72 | 88 | 83 | 79 | 84 | 69 | 77 | 79 | 72 | 73 | 73 | 73 | 72 | 73 | 72 |
| 5 | 58 | 79 | 84 | 76 | 72 | 82 | 68 | 75 | 77 | 71 | 72 | 71 | 71 | 70 | 71 |
| 6 | 85 | 62 | 75 | 77 | 62 | 68 | 78 | 65 | 71 | 73 | 67 | 68 | 67 | 67 | 67 |
| 7 | 61 | 79 | 60 | 73 | 72 | 60 | 65 | 75 | 62 | 68 | 70 | 65 | 66 | 65 | 65 |
| 8 | 50 | 61 | 79 | 59 | 72 | 71 | 59 | 64 | 74 | 61 | 67 | 69 | 64 | 65 | 64 |
| Total: K-8 | 684 | 711 | 722 | 705 | 679 | 671 | 664 | 670 | 670 | 662 | 666 | 661 | 654 | 652 | 651 |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total: K-8 | 684 | 711 | 722 | 705 | 679 | 671 | 664 | 670 | 670 | 662 | 666 | 661 | 654 | 652 | 651 |
| Change | | 27 | 11 | -17 | -26 | -8 | -7 | 6 | 0 | -8 | 4 | -5 | -7 | -2 | -1 |
| Percent Change | | 3.95% | 1.55% | -2.35% | -3.69% | -1.18% | -1.04% | 0.90% | 0.00% | -1.19% | 0.60% | -0.75% | -1.06% | -0.31% | -0.15% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data
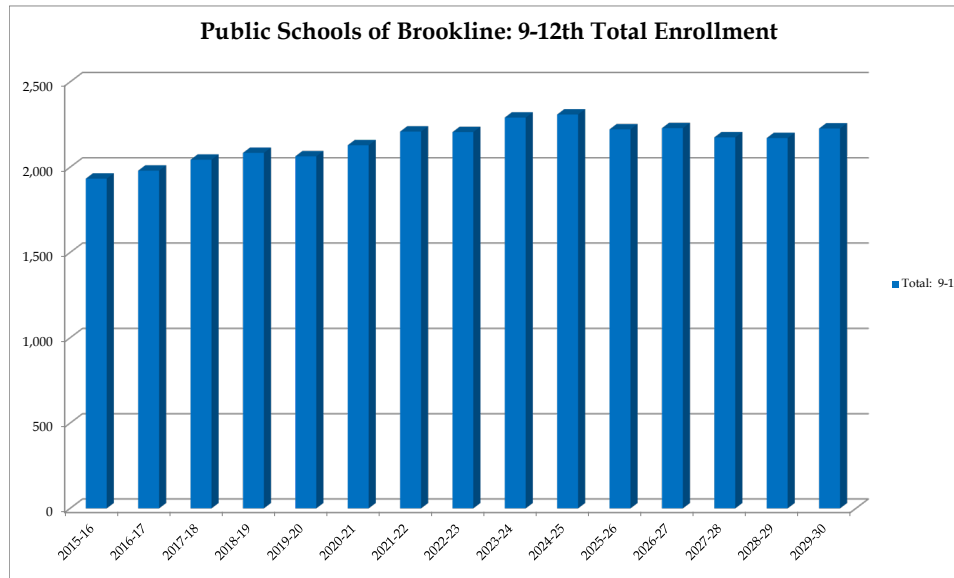
Blue Cells (2020-21 and later) are forecasted years

**Amos A. Lawrence Elementary Zone: K-8th Total Enrollment**
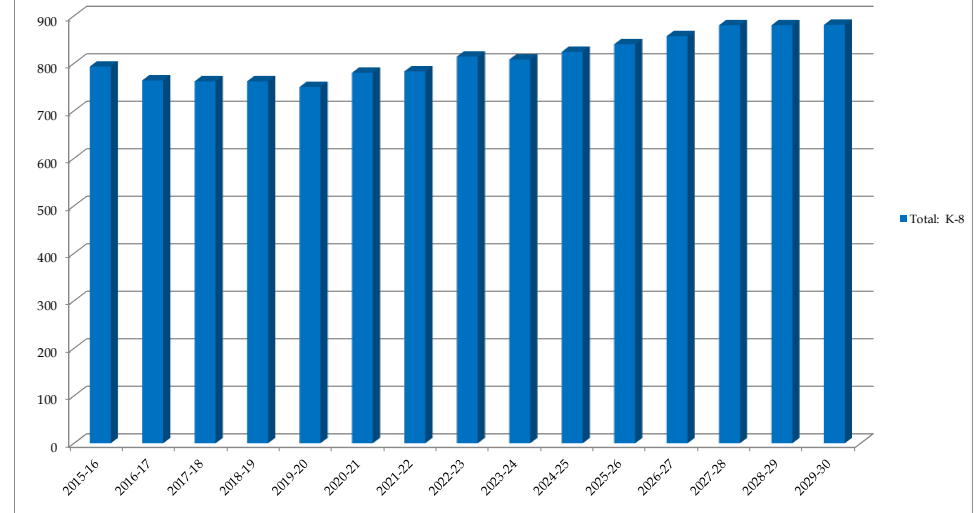
Cropper GIS

McKibben Demographics

# Edith C. Baker Elementary Zone

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | |
| K | 74 | 83 | 78 | 73 | 83 | 93 | 92 | 91 | 89 | 88 | 89 | 91 | 92 | 93 | 92 |
| 1 | 111 | 76 | 85 | 86 | 78 | 99 | 98 | 97 | 96 | 94 | 93 | 94 | 95 | 96 | 97 |
| 2 | 79 | 103 | 76 | 83 | 86 | 80 | 101 | 99 | 98 | 97 | 95 | 95 | 96 | 97 | 98 |
| 3 | 112 | 72 | 111 | 88 | 81 | 88 | 82 | 103 | 101 | 100 | 99 | 97 | 97 | 98 | 99 |
| 4 | 79 | 106 | 68 | 115 | 82 | 82 | 89 | 81 | 104 | 102 | 101 | 100 | 98 | 98 | 99 |
| 5 | 77 | 80 | 101 | 62 | 104 | 80 | 80 | 86 | 79 | 103 | 101 | 102 | 101 | 99 | 99 |
| 6 | 97 | 74 | 85 | 102 | 64 | 105 | 81 | 81 | 87 | 80 | 104 | 102 | 103 | 102 | 100 |
| 7 | 85 | 91 | 75 | 79 | 95 | 61 | 101 | 78 | 78 | 84 | 77 | 101 | 99 | 100 | 99 |
| 8 | 79 | 79 | 83 | 74 | 77 | 92 | 59 | 98 | 76 | 76 | 81 | 75 | 99 | 97 | 98 |
| Total: K-8 | 793 | 764 | 762 | 762 | 750 | 780 | 783 | 814 | 808 | 824 | 840 | 857 | 880 | 880 | 881 |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total: K-8 | 793 | 764 | 762 | 762 | 750 | 780 | 783 | 814 | 808 | 824 | 840 | 857 | 880 | 880 | 881 |
| Change | | -29 | -2 | 0 | -12 | 30 | 3 | 31 | -6 | 16 | 16 | 17 | 23 | 0 | 1 |
| Percent Change | | -3.66% | -0.26% | 0.00% | -1.57% | 4.00% | 0.38% | 3.96% | -0.74% | 1.98% | 1.94% | 2.02% | 2.68% | 0.00% | 0.11% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years



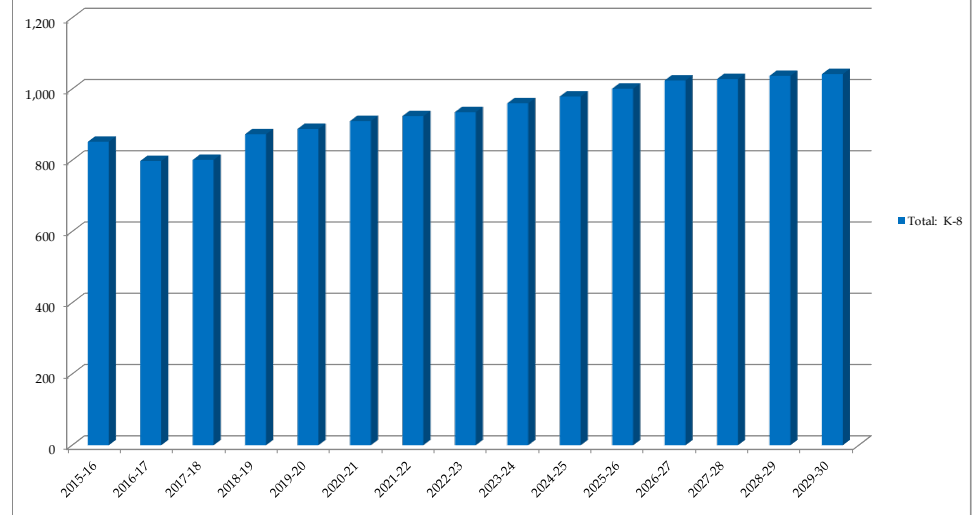Edith C. Baker Elementary Zone: K-8th Total Enrollment

# Coolidge Corner Elementary Zone

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | - | - | - | 29 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |
| | | | | | | | | | | | | | | | |
| K | 105 | 91 | 92 | 109 | 105 | 110 | 112 | 115 | 117 | 120 | 121 | 123 | 124 | 125 | 123 |
| 1 | 110 | 101 | 85 | 93 | 115 | 112 | 115 | 117 | 120 | 122 | 125 | 126 | 127 | 128 | 129 |
| 2 | 101 | 93 | 96 | 93 | 93 | 113 | 110 | 113 | 115 | 118 | 120 | 121 | 122 | 123 | 124 |
| 3 | 111 | 97 | 92 | 109 | 103 | 94 | 114 | 111 | 114 | 116 | 119 | 119 | 120 | 121 | 122 |
| 4 | 96 | 100 | 96 | 93 | 102 | 100 | 91 | 111 | 108 | 111 | 113 | 114 | 114 | 115 | 116 |
| 5 | 88 | 92 | 93 | 107 | 92 | 101 | 99 | 90 | 110 | 107 | 110 | 111 | 112 | 112 | 113 |
| 6 | 77 | 77 | 94 | 97 | 102 | 90 | 99 | 97 | 88 | 108 | 105 | 107 | 108 | 109 | 109 |
| 7 | 85 | 72 | 78 | 90 | 93 | 99 | 87 | 96 | 94 | 85 | 105 | 101 | 103 | 104 | 105 |
| 8 | 79 | 75 | 75 | 82 | 83 | 91 | 97 | 85 | 94 | 92 | 83 | 102 | 98 | 100 | 101 |
| Total: K-8 | 852 | 798 | 801 | 873 | 888 | 910 | 924 | 935 | 960 | 979 | 1,001 | 1,024 | 1,028 | 1,037 | 1,042 |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total: K-8 | 852 | 798 | 801 | 873 | 888 | 910 | 924 | 935 | 960 | 979 | 1,001 | 1,024 | 1,028 | 1,037 | 1,042 |
| Change | | -54 | 3 | 72 | 15 | 22 | 14 | 11 | 25 | 19 | 22 | 23 | 4 | 9 | 5 |
| Percent Change | | -6.34% | 0.38% | 8.99% | 1.72% | 2.48% | 1.54% | 1.19% | 2.67% | 1.98% | 2.25% | 2.30% | 0.39% | 0.88% | 0.48% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years



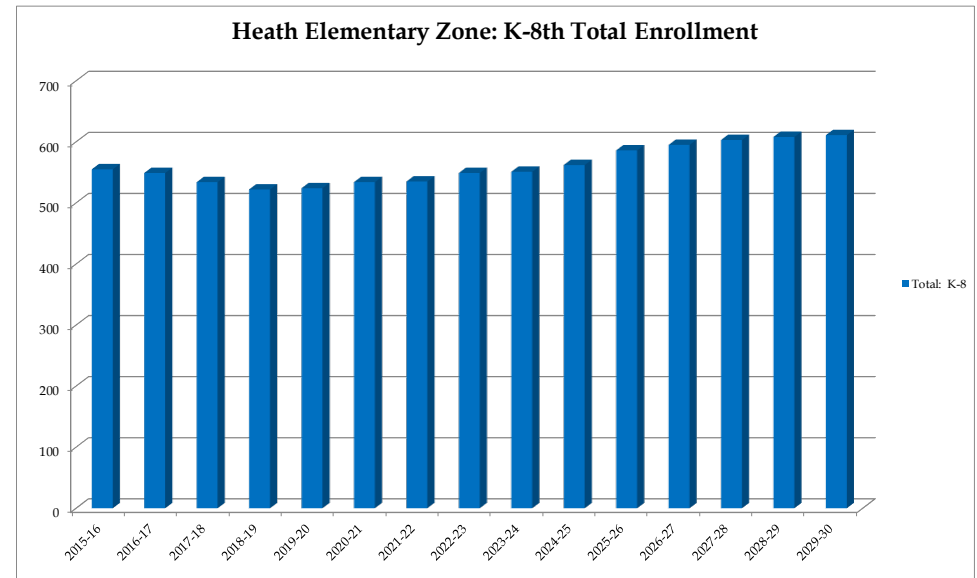Coolidge Corner Elementary Zone: K-8th Total Enrollment

# Heath Elementary Zone

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | 31 | 29 | 31 | 29 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| | | | | | | | | | | | | | | | |
| K | 67 | 47 | 55 | 49 | 58 | 61 | 62 | 63 | 64 | 65 | 65 | 67 | 67 | 68 | 69 |
| 1 | 71 | 66 | 45 | 58 | 60 | 63 | 64 | 65 | 66 | 67 | 68 | 68 | 69 | 69 | 70 |
| 2 | 66 | 71 | 61 | 45 | 61 | 61 | 64 | 65 | 66 | 67 | 68 | 69 | 69 | 70 | 70 |
| 3 | 74 | 67 | 72 | 60 | 46 | 63 | 63 | 66 | 67 | 68 | 69 | 69 | 70 | 70 | 71 |
| 4 | 56 | 71 | 62 | 71 | 61 | 46 | 64 | 64 | 67 | 68 | 69 | 68 | 68 | 69 | 69 |
| 5 | 68 | 53 | 68 | 58 | 69 | 60 | 45 | 63 | 63 | 66 | 67 | 67 | 66 | 66 | 67 |
| 6 | 62 | 65 | 55 | 68 | 54 | 68 | 59 | 45 | 62 | 62 | 65 | 68 | 68 | 67 | 67 |
| 7 | 54 | 52 | 63 | 55 | 62 | 51 | 64 | 55 | 42 | 58 | 58 | 62 | 65 | 65 | 64 |
| 8 | 37 | 57 | 53 | 58 | 53 | 61 | 50 | 63 | 54 | 41 | 57 | 57 | 61 | 64 | 64 |
| **Total: K-8** | **555** | **549** | **534** | **522** | **524** | **534** | **535** | **549** | **551** | **562** | **586** | **595** | **603** | **608** | **611** |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total: K-8** | 555 | 549 | 534 | 522 | 524 | 534 | 535 | 549 | 551 | 562 | 586 | 595 | 603 | 608 | 611 |
| **Change** | | -6 | -15 | -12 | 2 | 10 | 1 | 14 | 2 | 11 | 24 | 9 | 8 | 5 | 3 |
| **Percent Change** | | -1.08% | -2.73% | -2.25% | 0.38% | 1.91% | 0.19% | 2.62% | 0.36% | 2.00% | 4.27% | 1.54% | 1.34% | 0.83% | 0.49% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years



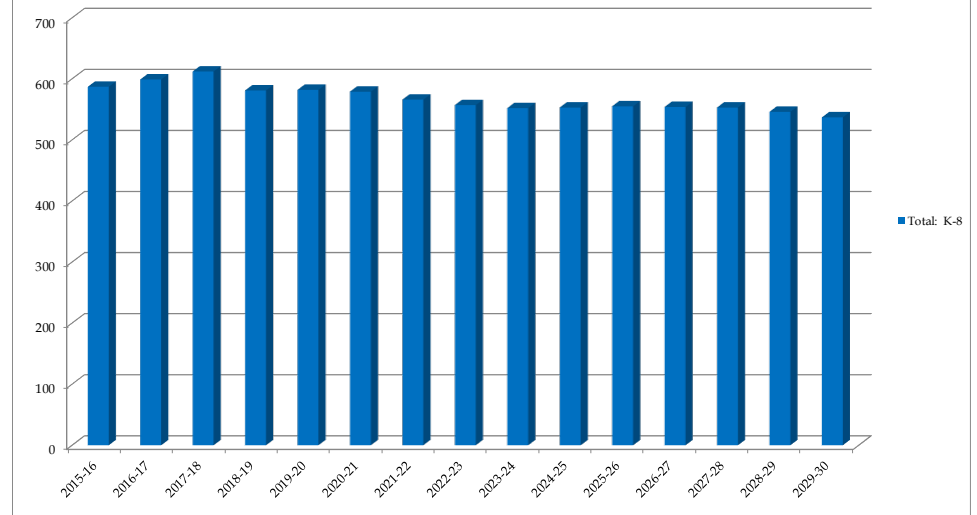**Heath Elementary Zone: K-8th Total Enrollment**

# John D. Runkle Elementary Zone

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | 16 | 14 | 15 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | | | | | | | | | | | | | | | |
| K | 63 | 58 | 62 | 54 | 63 | 63 | 62 | 62 | 61 | 61 | 60 | 60 | 59 | 58 | 56 |
| 1 | 66 | 66 | 61 | 60 | 61 | 66 | 66 | 65 | 65 | 64 | 64 | 63 | 62 | 61 | 60 |
| 2 | 71 | 70 | 66 | 61 | 63 | 62 | 67 | 67 | 66 | 66 | 65 | 65 | 64 | 63 | 62 |
| 3 | 69 | 74 | 71 | 63 | 61 | 62 | 61 | 66 | 66 | 65 | 65 | 64 | 64 | 63 | 62 |
| 4 | 69 | 69 | 78 | 70 | 62 | 60 | 61 | 60 | 65 | 65 | 64 | 64 | 63 | 63 | 62 |
| 5 | 53 | 66 | 71 | 71 | 66 | 60 | 58 | 59 | 58 | 63 | 63 | 61 | 61 | 60 | 60 |
| 6 | 69 | 66 | 65 | 73 | 70 | 65 | 59 | 57 | 58 | 57 | 62 | 62 | 60 | 60 | 59 |
| 7 | 62 | 70 | 68 | 64 | 73 | 69 | 64 | 58 | 56 | 57 | 56 | 61 | 61 | 59 | 59 |
| 8 | 65 | 60 | 70 | 65 | 63 | 72 | 68 | 63 | 57 | 55 | 56 | 54 | 59 | 59 | 57 |
| **Total: K-8** | **587** | **599** | **612** | **581** | **582** | **579** | **566** | **557** | **552** | **553** | **555** | **554** | **553** | **546** | **537** |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total: K-8** | **587** | **599** | **612** | **581** | **582** | **579** | **566** | **557** | **552** | **553** | **555** | **554** | **553** | **546** | **537** |
| **Change** | | 12 | 13 | -31 | 1 | -3 | -13 | -9 | -5 | 1 | 2 | -1 | -1 | -7 | -9 |
| **Percent Change** | | 2.04% | 2.17% | -5.07% | 0.17% | -0.52% | -2.25% | -1.59% | -0.90% | 0.18% | 0.36% | -0.18% | -0.18% | -1.27% | -1.65% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years
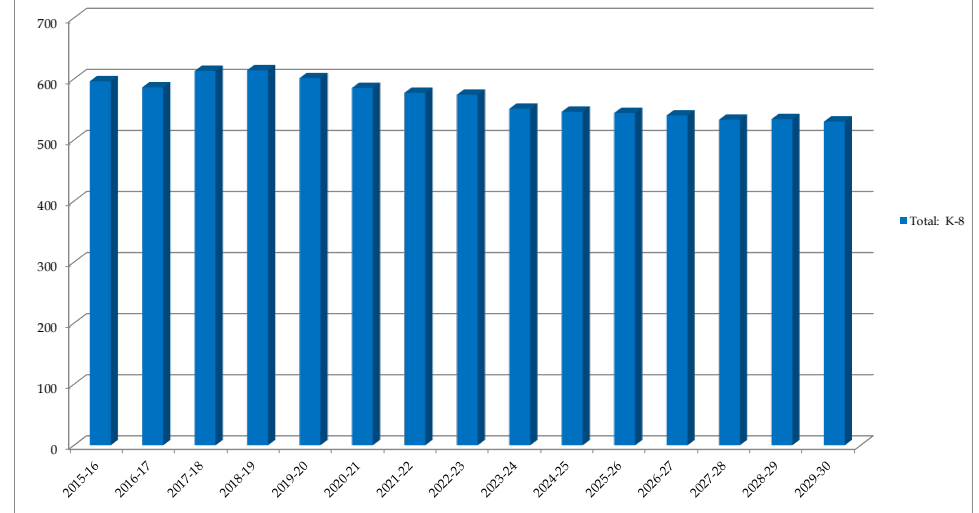


John D. Runkle Elementary Zone: K-8th Total Enrollment

# Michael Driscoll Elementary Zone

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | 15 | 14 | 16 | 17 | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | |
| K | 61 | 61 | 61 | 70 | 56 | 61 | 61 | 62 | 62 | 63 | 62 | 61 | 60 | 58 | 57 |
| 1 | 70 | 58 | 62 | 60 | 63 | 55 | 59 | 59 | 60 | 60 | 61 | 60 | 59 | 58 | 56 |
| 2 | 57 | 76 | 68 | 68 | 63 | 66 | 57 | 61 | 61 | 62 | 62 | 63 | 62 | 61 | 60 |
| 3 | 73 | 63 | 81 | 66 | 63 | 62 | 65 | 56 | 60 | 60 | 61 | 61 | 62 | 61 | 60 |
| 4 | 72 | 70 | 61 | 77 | 66 | 62 | 61 | 64 | 55 | 59 | 59 | 60 | 60 | 61 | 60 |
| 5 | 72 | 68 | 73 | 58 | 82 | 65 | 61 | 60 | 63 | 54 | 58 | 58 | 59 | 59 | 60 |
| 6 | 69 | 66 | 75 | 73 | 64 | 85 | 68 | 63 | 62 | 66 | 56 | 60 | 60 | 61 | 61 |
| 7 | 57 | 66 | 68 | 74 | 66 | 62 | 82 | 66 | 61 | 60 | 64 | 54 | 58 | 58 | 59 |
| 8 | 65 | 58 | 64 | 68 | 78 | 67 | 63 | 83 | 67 | 62 | 61 | 63 | 53 | 57 | 57 |
| Total: K-8 | 596 | 586 | 613 | 614 | 601 | 585 | 577 | 574 | 551 | 546 | 544 | 540 | 533 | 534 | 530 |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total: K-8 | 596 | 586 | 613 | 614 | 601 | 585 | 577 | 574 | 551 | 546 | 544 | 540 | 533 | 534 | 530 |
| Change | | -10 | 27 | 1 | -13 | -16 | -8 | -3 | -23 | -5 | -2 | -4 | -7 | 1 | -4 |
| Percent Change | | -1.68% | 4.61% | 0.16% | -2.12% | -2.66% | -1.37% | -0.52% | -4.01% | -0.91% | -0.37% | -0.74% | -1.30% | 0.19% | -0.75% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years



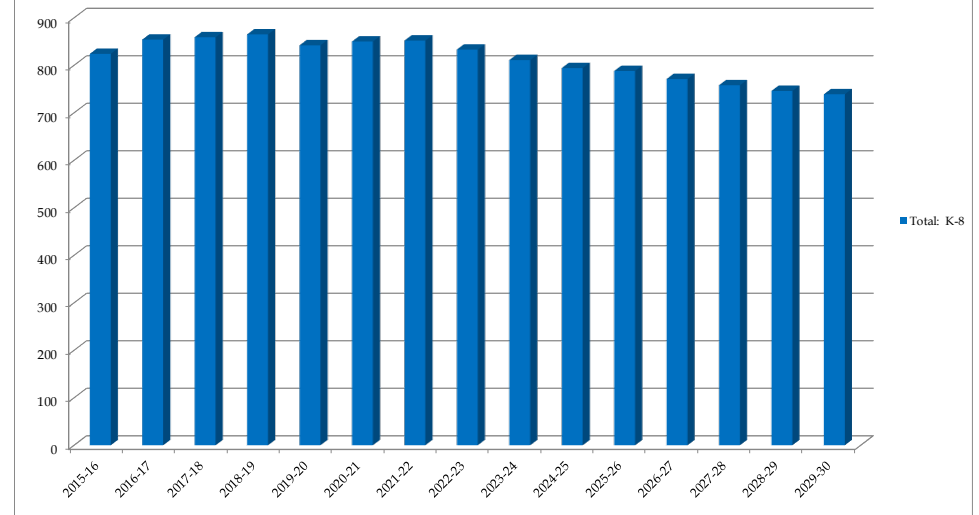Michael Driscoll Elementary Zone: K-8th Total Enrollment

## Pierce Elementary Zone

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | |
| K | 106 | 96 | 108 | 99 | 93 | 95 | 94 | 94 | 93 | 93 | 90 | 89 | 87 | 85 | 88 |
| 1 | 108 | 113 | 91 | 103 | 95 | 91 | 91 | 90 | 90 | 89 | 89 | 87 | 86 | 84 | 83 |
| 2 | 107 | 106 | 111 | 87 | 96 | 92 | 88 | 88 | 87 | 87 | 86 | 85 | 84 | 83 | 81 |
| 3 | 90 | 111 | 108 | 109 | 91 | 98 | 94 | 90 | 90 | 89 | 89 | 87 | 86 | 85 | 84 |
| 4 | 87 | 91 | 114 | 106 | 104 | 90 | 97 | 93 | 89 | 89 | 88 | 87 | 85 | 84 | 83 |
| 5 | 85 | 83 | 84 | 110 | 106 | 101 | 87 | 94 | 90 | 86 | 86 | 85 | 84 | 82 | 81 |
| 6 | 85 | 88 | 76 | 90 | 103 | 105 | 100 | 86 | 93 | 89 | 85 | 84 | 83 | 82 | 80 |
| 7 | 81 | 86 | 84 | 80 | 79 | 101 | 103 | 98 | 84 | 91 | 87 | 83 | 82 | 81 | 80 |
| 8 | 75 | 80 | 83 | 81 | 75 | 77 | 98 | 100 | 95 | 81 | 88 | 84 | 81 | 80 | 79 |
| Total: K-8 | 824 | 854 | 859 | 865 | 842 | 850 | 852 | 833 | 811 | 794 | 788 | 771 | 758 | 746 | 739 |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total: K-8 | 824 | 854 | 859 | 865 | 842 | 850 | 852 | 833 | 811 | 794 | 788 | 771 | 758 | 746 | 739 |
| Change | | 30 | 5 | 6 | -23 | 8 | 2 | -19 | -22 | -17 | -6 | -17 | -13 | -12 | -7 |
| Percent Change | | 3.64% | 0.59% | 0.70% | -2.66% | 0.95% | 0.24% | -2.23% | -2.64% | -2.10% | -0.76% | -2.16% | -1.69% | -1.58% | -0.94% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years



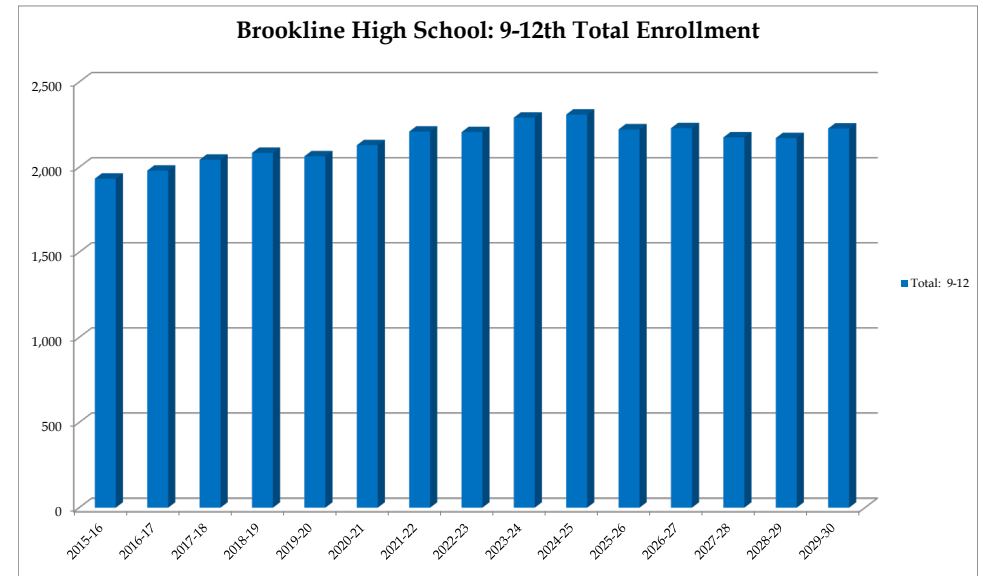Pierce Elementary Zone: K-8th Total Enrollment

Cropper GIS

McKibben Demographics

Revised: 02/04/2020

# William H. Lincoln Elementary Zone

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PK | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | |
| K | 65 | 66 | 65 | 62 | 62 | 62 | 61 | 61 | 60 | 60 | 59 | 57 | 56 | 55 | 57 |
| 1 | 67 | 58 | 61 | 65 | 57 | 59 | 59 | 58 | 58 | 57 | 57 | 56 | 55 | 54 | 53 |
| 2 | 58 | 71 | 62 | 59 | 70 | 59 | 61 | 61 | 60 | 60 | 59 | 59 | 58 | 57 | 56 |
| 3 | 84 | 64 | 70 | 64 | 57 | 71 | 60 | 62 | 62 | 61 | 61 | 60 | 60 | 59 | 58 |
| 4 | 67 | 82 | 59 | 69 | 63 | 56 | 70 | 59 | 61 | 61 | 60 | 60 | 59 | 59 | 58 |
| 5 | 52 | 63 | 86 | 63 | 66 | 64 | 57 | 71 | 60 | 62 | 62 | 61 | 61 | 60 | 60 |
| 6 | 66 | 51 | 60 | 85 | 63 | 65 | 63 | 56 | 70 | 59 | 61 | 61 | 60 | 60 | 59 |
| 7 | 58 | 60 | 54 | 56 | 78 | 60 | 62 | 60 | 54 | 67 | 57 | 59 | 59 | 58 | 58 |
| 8 | 57 | 61 | 61 | 58 | 60 | 81 | 62 | 64 | 62 | 56 | 70 | 59 | 61 | 61 | 60 |
| Total: K-8 | 574 | 576 | 578 | 581 | 576 | 577 | 555 | 552 | 547 | 543 | 546 | 532 | 529 | 523 | 519 |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total: K-8 | 574 | 576 | 578 | 581 | 576 | 577 | 555 | 552 | 547 | 543 | 546 | 532 | 529 | 523 | 519 |
| Change | | 2 | 2 | 3 | -5 | 1 | -22 | -3 | -5 | -4 | 3 | -14 | -3 | -6 | -4 |
| Percent Change | | 0.35% | 0.35% | 0.52% | -0.86% | 0.17% | -3.81% | -0.54% | -0.91% | -0.73% | 0.55% | -2.56% | -0.56% | -1.13% | -0.76% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years

### William H. Lincoln Elementary Zone: K-8th Total Enrollment
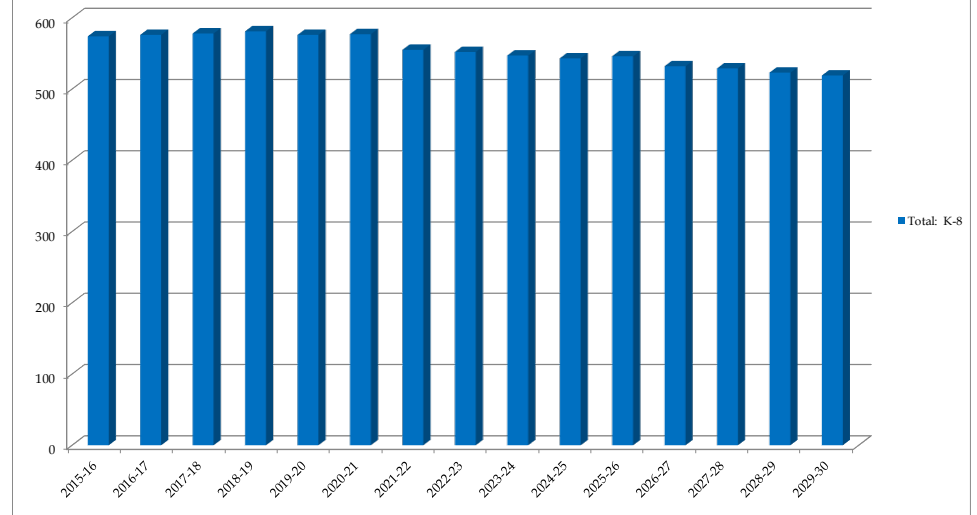
# Brookline High School

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 500 | 500 | 531 | 554 | 521 | 550 | 600 | 545 | 608 | 567 | 514 | 552 | 552 | 564 | 571 |
| 10 | 507 | 509 | 510 | 542 | 557 | 529 | 558 | 609 | 553 | 617 | 576 | 522 | 560 | 560 | 572 |
| 11 | 480 | 492 | 497 | 489 | 512 | 540 | 513 | 541 | 591 | 536 | 598 | 559 | 506 | 543 | 543 |
| 12 | 446 | 479 | 506 | 499 | 474 | 510 | 538 | 511 | 539 | 589 | 534 | 596 | 557 | 504 | 541 |
| Total: 9-12 | 1,933 | 1,980 | 2,044 | 2,084 | 2,064 | 2,129 | 2,209 | 2,206 | 2,291 | 2,309 | 2,222 | 2,229 | 2,175 | 2,171 | 2,227 |

| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 | 2029-30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total: 9-12 | 1,933 | 1,980 | 2,044 | 2,084 | 2,064 | 2,129 | 2,209 | 2,206 | 2,291 | 2,309 | 2,222 | 2,229 | 2,175 | 2,171 | 2,227 |
| Change | | 47 | 64 | 40 | -20 | 65 | 80 | -3 | 85 | 18 | -87 | 7 | -54 | -4 | 56 |
| Percent Change | | 2.43% | 3.23% | 1.96% | -0.96% | 3.15% | 3.76% | -0.14% | 3.85% | 0.79% | -3.77% | 0.32% | -2.42% | -0.18% | 2.58% |

Forecasts Developed December 2019

Green Cells (2019-20 and earlier) are historical data

Blue Cells (2020-21 and later) are forecasted years



Brookline High School: 9-12th Total Enrollment

**Appendix E: Housing Development Estimated Timeline**

## TOWN OF BROOKLINE—DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
### Potential Residential/Mixed-use Development Projects in various stages of Permitting Processes—November 21, 2019

| PROJECT | TOTAL UNITS | STUDIO | 1-BR | 2-BR | 3-BR | 4-BR | AGE-RESTRICTED | NOTES | ESTIMATED EARLIEST CONSTRUCTION COMPLETION * |
|---|---|---|---|---|---|---|---|---|---|
| 40 Centre | 40 | 16 | 14 | 5 | 5 | 0 | - | In litigation. | On hold/ unknown |
| 420 Harvard/49 Coolidge | 25 | 3 | 6 | 11 | 5 | 0 | - | Under construction | June 2020 |
| 384 Harvard (JCHE) | 62 | 0 | 52 | 10 | 0 | 0 | YES | Under construction | August 2020 |
| 1299 Beacon | 55 | 0 | 13 | 42 | 0 | 0 | YES (55+) | Comprehensive Permit (CP) issued. Next step: apply for Building Permit. | Nov. 2022 |
| 1180 Boylston | 50 | 0 | 15 | 33 | 2 | 0 | YES (55+) | CP issued. Next step: apply for Building Permit | Nov. 2022 |
| Waldo/Durgin (10 Pleasant & 5 Waldo) | 143 | 0 | 85 | 58 | 0 | 0 | - | Secured Zoning Amendment. Next step: Special Permit Process. Estimate based on developer's estimate of earliest date. | March 2024 |
| 455 Harvard | 17 | 0 | 10 | 5 | 2 | 0 | - | Under construction | June 2020 |
| 136 Babcock | 45 | 20 | 13 | 7 | 5 | 0 | - | Issued Building Permit | June 2021 |
| 21 Crowninshield | 8 | 0 | 0 | 0 | 8 | 0 | - | Nearing end of construction | June 2020 |
| Residences of South Brookline—Hancock Village | 175 | 3 | 79 | 43 | 50 | 0 | - | Building Permit application anticipated early 2020 | Jan. 2022 |
| Puddingstone—Hancock Village | 230 | 0 | 54 | 140 | 24 | 12 | - | CP filed Oct. 29, 2018. Developer has not indicated construction plans or timetable, and has three other large projects in process. | On hold/ unknown |
| 118 Gerry/121 Independence Drive | 36 | 0 | 16 | 20 | 0 | 0 | - | Special Permit Issued. Next step: Building Permit. | Sept. 2021 |
| 1223 Beacon (Hampton Court) | 123 | 8 | 38 | 52 | 25 | 0 | - | CP hearing on hold. Developer has not indicated construction plans or timetable, and has three other large projects in process. | On hold/ unknown |
| 445 Harvard | 25 | 0 | 12 | 10 | 3 | 0 | - | CP anticipated end of 2019. Developer notes he won't likely start construction for three years. | January 2025 |
| 500 Harvard | 30 | 3 | 17 | 7 | 3 | 0 | - | CP hearing to open Dec. 2019. | June 2023 |
| 217 Kent | 90 | 32 | 43 | 6 | 9 | 0 | - | In pre-CP process. Assuming CP hearing opens January 2020. | June 2023 |
| 209 Harvard | 44 | 36 | 0 | 3 | 5 | 0 | - | In pre-CP process. Assuming CP hearing opens February 2020. | August 2023 |

*Estimates are based on the following assumptions:
1. Everything goes smoothly (from developer's perspective) & the market stays strong.
2. Comprehensive Permit public hearing process takes 12 months.
3. Preparation of Construction Documents for Building Permit takes 12 months.
4. Construction takes 1 ½ to 2 years from date of Building Permit.

5. Building projects used in the forecast are highlighted.

## Student Yield per Household for Selected Appartment Complexes

|  | Coolidge Corner | Runkle | Heath | Baker |
|---|---|---|---|---|
| **K-8 Students** | 46 | 42 | 47 | 250 |
| **Total Housing Units** | 120 | 68 | 181 | 563 |
| **YIELDS** | 0.38 | 0.62 | 0.26 | 0.44 |

## Appendix F: Live-Attend Analysis

*Live Attend Matrix*

The table below gives details on the schools that students attend and the school boundaries where they live. The schools of attendance are listed on the left while the boundaries where students live are listed on the top line. This student data is from October 1st, 2019 Public Schools of Brookline 2019-20 student database.

The first column of numbers to the right of the schools of attendance represents the number of students enrolled at that school. The first row of numbers below the boundaries where students live represents the total number of students living inside of that boundary. The green-colored numbers represent the number of students who live in the boundary and attend their boundary school. All other numbers represent students who attend school outside of the boundary that they live in. The bottom row represents the number of students that "Live-In and Attend-Out" by school. The blue-colored cell shows the total number of students that "Live-in and Attend-Out". The farthest right column represents the number of students that "Live-Out and Attend-In" by school. The orange-colored cell shows the total number of students that "Live-Out and Attend-In".

**Where K-8th Students Live**

Live-in counts

Enrolled counts

| Where K-8th Students Attend | Enrolled | Baker | Coolidge Corner | Driscoll | Heath | Lawrence | Lincoln | Pierce | Runkle | Out of District | Unmatched | Live Out, Attend In (K-8) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 761 | 801 | 496 | 404 | 584 | 605 | 837 | 579 | 401 | 0 | 1342 |
| Edith C. Baker School | 750 | 650 | 2 | | 2 | | 3 | 2 | 1 | 90 | | 100 |
| Coolidge Corner School | 888 | 1 | 702 | 31 | 2 | 74 | 2 | 23 | 6 | 47 | | 186 |
| Michael Driscoll School | 600 | 6 | 15 | 415 | | 7 | 5 | 33 | 79 | 40 | | 185 |
| Heath School | 525 | 71 | 2 | 2 | 371 | | 2 | 1 | 21 | 55 | | 154 |
| Amos A. Lawrence School | 679 | 3 | 54 | 6 | 4 | 443 | 14 | 120 | 4 | 31 | | 236 |
| William H. Lincoln School | 576 | 13 | 6 | 4 | 12 | 6 | 454 | 13 | 14 | 54 | | 122 |
| Pierce School | 842 | 1 | 5 | 8 | 2 | 45 | 101 | 626 | 9 | 45 | | 216 |
| John D. Runkle School | 582 | 13 | 11 | 25 | 10 | 8 | 22 | 16 | 439 | 38 | | 143 |
| Non-PSB K-8 School | 26 | 3 | 4 | 5 | 1 | 1 | 2 | 3 | 6 | 1 | | |
| **Live In, Attend Out (K-8)** | 967 | 111 | 99 | 81 | 33 | 141 | 151 | 211 | 140 | | | |

Live out and attend in totals per school. Total is shown at the top in the blue-colored cell.

Green-colored numbers represent number of students who live in the zone and attend their zoned school. All other numbers represent students who attend school outside of the zone that they live in.

Live in and attend out totals per school. Total is shown at the left in the green-colored

**Where 9-12th Students Live**

|  | | Brookline | Out of District | Unmatched | Live Out, Attend In (9-12) |
|---|---|---|---|---|---|
|  |  | 1923 | 166 | 0 | 165 |
| Where 9-12th Students Attend | Brookline High School | 2064 | 1899 | 165 | | 165 |
|  | Non-PSB High School | | 24 | 1 | | |
|  | **Live In, Attend Out (9-12)** | **24** | 24 | | | |

Public Schools of Brookline, MA
Current Elementary School Zones
2019-20 Live-Attend Analysis

PUBLIC SCHOOLS of
BROOKLINE
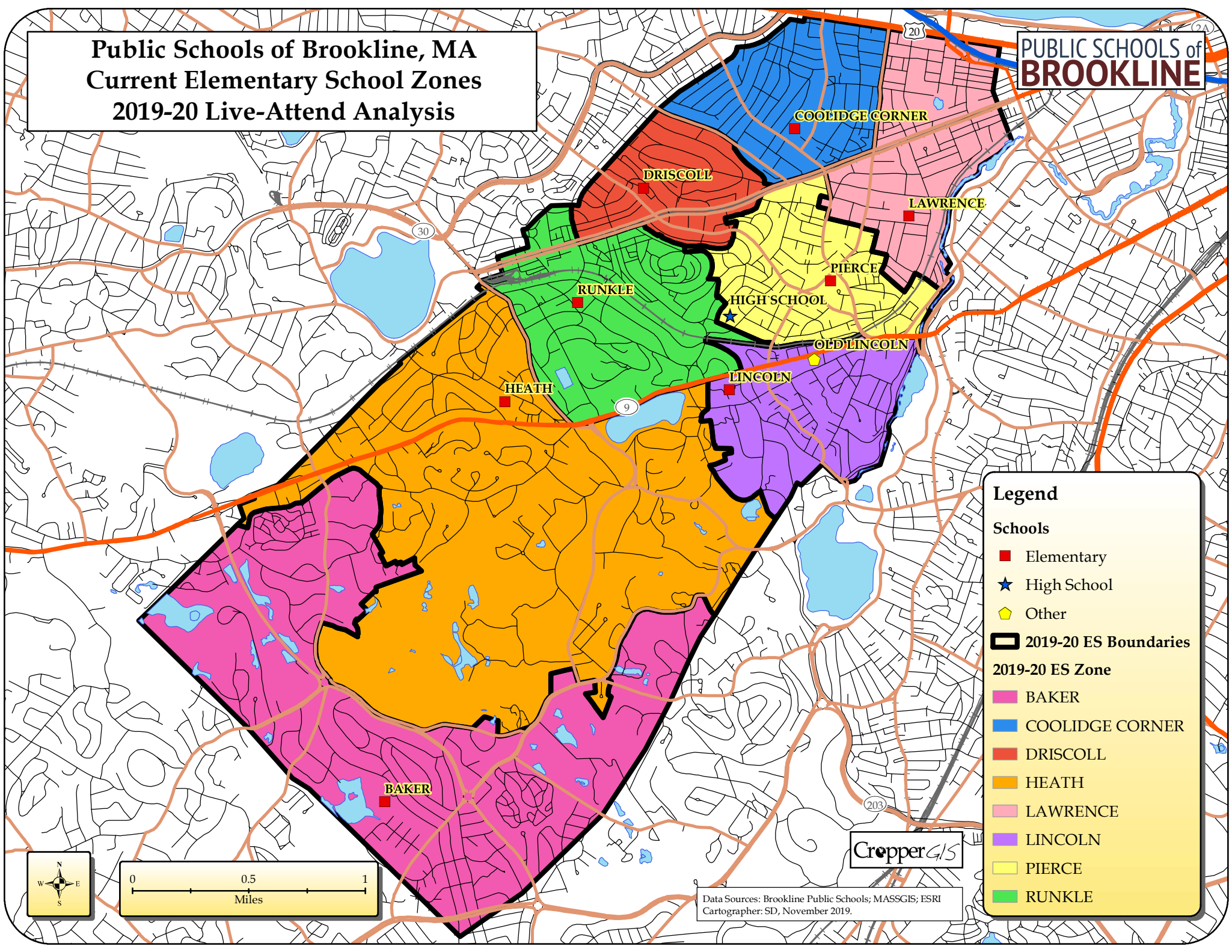
COOLIDGE CORNER

DRISCOLL

LAWRENCE

PIERCE

HIGH SCHOOL

RUNKLE

OLD LINCOLN

HEATH

LINCOLN

BAKER

**Legend**

**Schools**

■ Elementary

★ High School

⬟ Other

▬ 2019-20 ES Boundaries

**2019-20 ES Zone**

BAKER

COOLIDGE CORNER

DRISCOLL

HEATH

LAWRENCE

LINCOLN

PIERCE

RUNKLE

N
W E
S

0          0.5          1
Miles
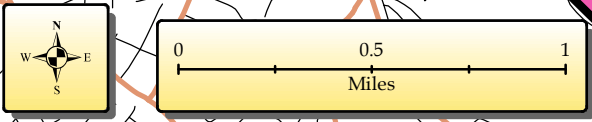
Cropper GIS

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: SD, November 2019.

# Public Schools of Brookline, MA
# Edith C. Baker School
# 2019-20 Student Density

PUBLIC SCHOOLS of
**BROOKLINE**

| Edith C. Baker School | |
|---|---|
| Total Enrollment (K-8th) | 750 |
| Out of District | 90 |
| Unmatched | 0 |
| Total Live-In (K-8th) | 761 |
| Live and Attend In | 650 |
| Live Out, Attend In | 100 |
| Live In, Attend Out | 111 |

## Legend

### Schools

- ■ Elementary
- ★ High School
- ⬠ Other
- ▬ **2019-20 ES Boundaries**

**2019-20 ES Zone**
- BAKER
- HEATH
- RUNKLE

### Student Density

(Quantile Classification)

- 122 - 270
- 74 - 121
- 53 - 73
- 44 - 52
- 33 - 43
- 25 - 32
- 17 - 24
- 12 - 16
- 9 - 11
- 6 - 8

BAKER

Cropper GIS

Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded.

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

0    0.25    0.5
Miles

# Public Schools of Brookline, MA
# Coolidge Corner School
# 2019-20 Student Density

| Coolidge Corner School | |
|---|---|
| Total Enrollment (K-8th) | 888 |
| Out of District | 47 |
| Unmatched | 0 |
| Total Live-In (K-8th) | 801 |
| Live and Attend In | 702 |
| Live Out, Attend In | 186 |
| Live In, Attend Out | 99 |

## Legend

### Schools

■ Elementary
★ High School
⬠ Other
▬ 2019-20 ES Boundaries

### 2019-20 ES Zone

- COOLIDGE CORNER
- DRISCOLL
- HEATH
- LAWRENCE
- LINCOLN
- PIERCE
- RUNKLE

### Student Density

(Quantile Classification)

- 188 - 249
- 157 - 187
- 121 - 156
- 95 - 120
- 67 - 94
- 44 - 66
- 28 - 43
- 14 - 27
- 8 - 13
- 6 - 7

Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

CropperGIS

PUBLIC SCHOOLS of BROOKLINE

0    0.25    0.5
Miles

COOLIDGE CORNER
DRISCOLL
LAWRENCE
PIERCE
OLD LINCOLN

# Public Schools of Brookline, MA
## Michael Driscoll School
## 2019-20 Student Density

**PUBLIC SCHOOLS of BROOKLINE**

| Michael Driscoll School | |
|---|---|
| Total Enrollment (K-8th) | 600 |
| Out of District | 40 |
| Unmatched | 0 |
| Total Live-In (K-8th) | 496 |
| Live and Attend In | 415 |
| Live Out, Attend In | 185 |
| Live In, Attend Out | 81 |

## Legend

**Schools**

- ■ Elementary
- ★ High School
- ⬟ Other

**▬ 2019-20 ES Boundaries**

**2019-20 ES Zone**

- COOLIDGE CORNER
- DRISCOLL
- HEATH
- LAWRENCE
- LINCOLN
- PIERCE
- RUNKLE

**Student Density**

(Quantile Classification)

- 136 - 211
- 102 - 135
- 79 - 101
- 64 - 78
- 48 - 63
- 34 - 47
- 23 - 33
- 13 - 22
- 8 - 12
- 6 - 7
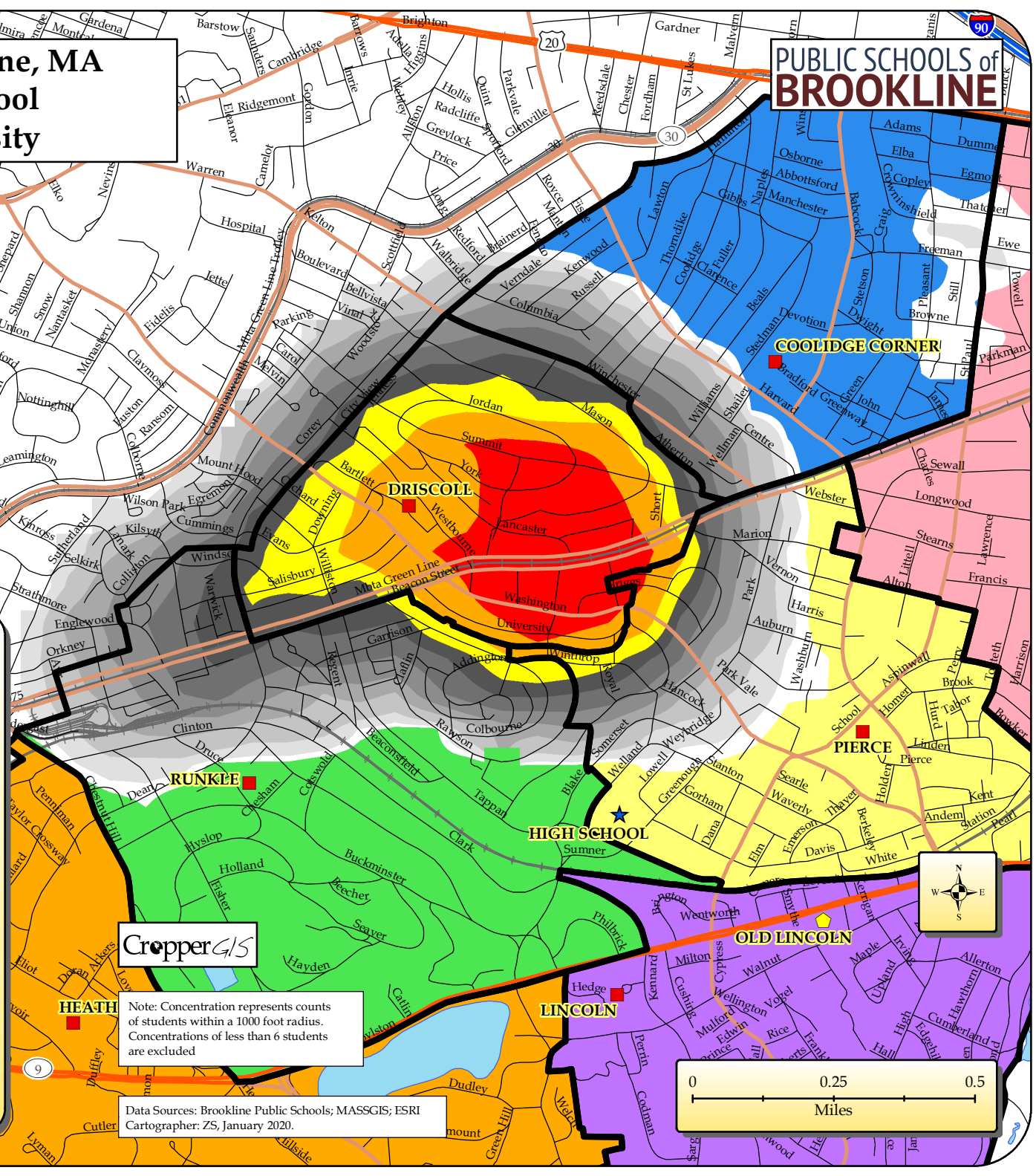
COOLIDGE CORNER

DRISCOLL

PIERCE

RUNKLE

HIGH SCHOOL

OLD LINCOLN

LINCOLN

HEATH

**CropperGIS**

Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded.

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

0    0.25    0.5
Miles

# Public Schools of Brookline, MA
## Heath School
## 2019-20 Student Density

**PUBLIC SCHOOLS of BROOKLINE**

| Heath School | |
|---|---|
| Total Enrollment (K-8th) | 525 |
| Out of District | 55 |
| Unmatched | 0 |
| Total Live-In (K-8th) | 404 |
| Live and Attend In | 371 |
| Live Out, Attend In | 154 |
| Live In, Attend Out | 33 |

## Legend

**Schools**

- ■ Elementary
- ★ High School
- ⬠ Other
- ▬ 2019-20 ES Boundaries

**2019-20 ES Zone**

- BAKER
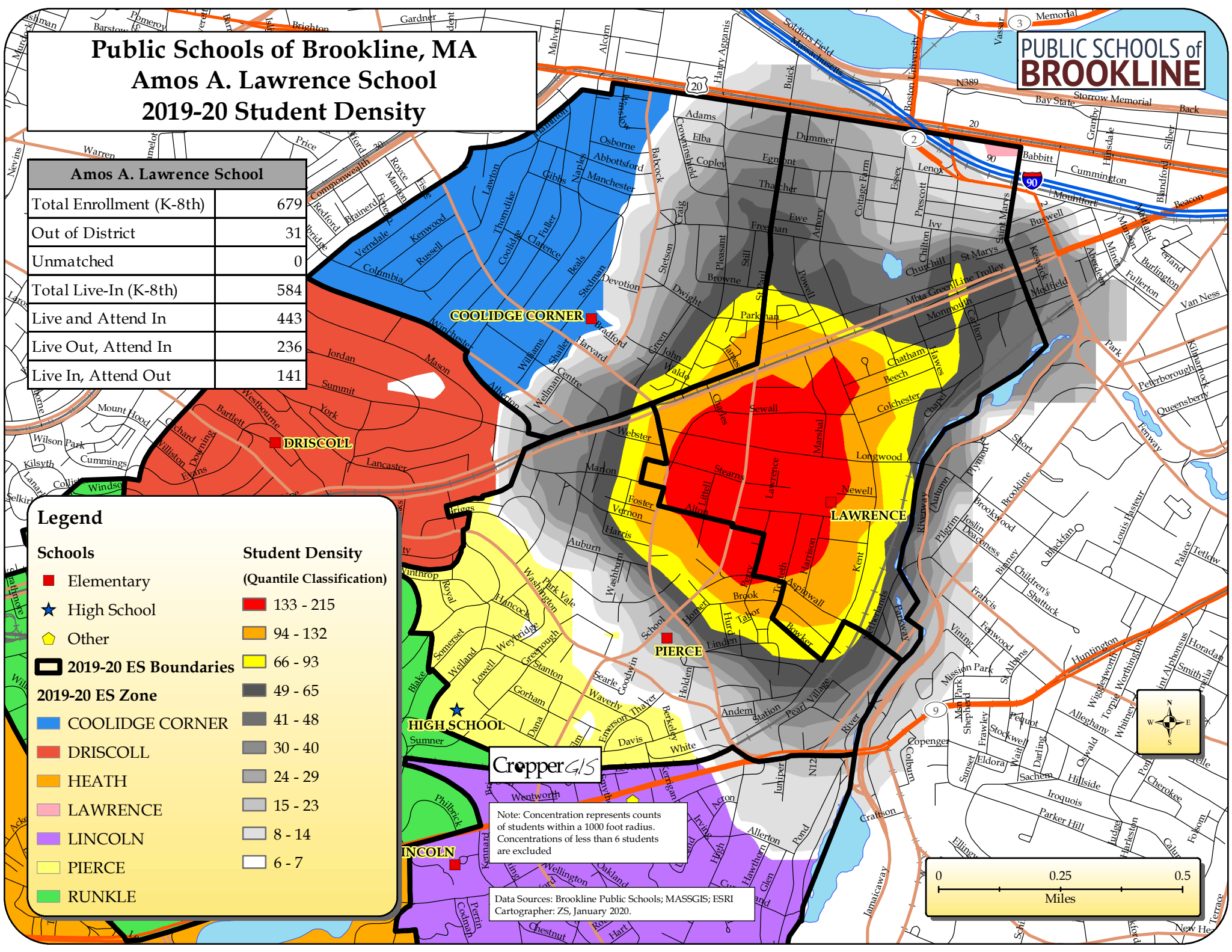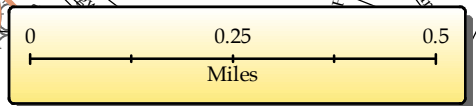- DRISCOLL
- HEATH
- LAWRENCE
- LINCOLN
- PIERCE
- RUNKLE

**Student Density**

(Quantile Classification)

- 69 - 140
- 44 - 68
- 30 - 43
- 22 - 29
- 18 - 21
- 14 - 17
- 11 - 13
- 9 - 10
- 7 - 8
- 6

Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

Cropper GIS

0    0.5    1
Miles

# Public Schools of Brookline, MA
## Amos A. Lawrence School
## 2019-20 Student Density

**PUBLIC SCHOOLS of BROOKLINE**

| Amos A. Lawrence School | |
|---|---|
| Total Enrollment (K-8th) | 679 |
| Out of District | 31 |
| Unmatched | 0 |
| Total Live-In (K-8th) | 584 |
| Live and Attend In | 443 |
| Live Out, Attend In | 236 |
| Live In, Attend Out | 141 |

## Legend

### Schools

- ■ Elementary
- ★ High School
- ⬠ Other
- ▬ 2019-20 ES Boundaries

### 2019-20 ES Zone

- COOLIDGE CORNER
- DRISCOLL
- HEATH
- LAWRENCE
- LINCOLN
- PIERCE
- RUNKLE

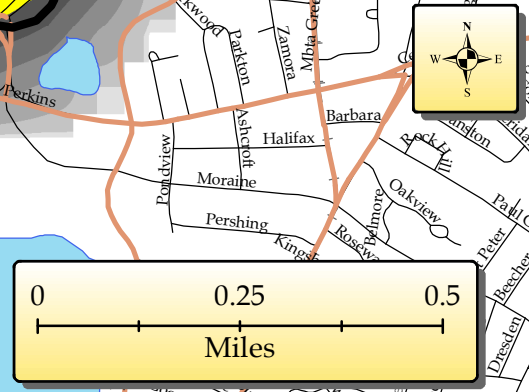### Student Density

(Quantile Classification)

- 133 - 215
- 94 - 132
- 66 - 93
- 49 - 65
- 41 - 48
- 30 - 40
- 24 - 29
- 15 - 23
- 8 - 14
- 6 - 7

COOLIDGE CORNER

DRISCOLL

LAWRENCE

PIERCE

HIGH SCHOOL

LINCOLN

CropperGIS

Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

| 0 | 0.25 | 0.5 |
|---|---|---|

Miles

# Public Schools of Brookline, MA
## William H. Lincoln School
## 2019-20 Student Density

**PUBLIC SCHOOLS of BROOKLINE**

| William H. Lincoln School | |
|---|---|
| Total Enrollment (K-8th) | 576 |
| Out of District | 54 |
| Unmatched | 0 |
| Total Live-In (K-8th) | 605 |
| Live and Attend In | 454 |
| Live Out, Attend In | 122 |
| Live In, Attend Out | 151 |

## Legend

### Schools
- ■ Elementary
- ★ High School
- ⬠ Other
- ▬ 2019-20 ES Boundaries

### 2019-20 ES Zone
- BAKER
- COOLIDGE CORNER
- DRISCOLL
- HEATH
- LAWRENCE
- LINCOLN
- PIERCE
- RUNKLE

### Student Density
(Quantile Classification)
- 149 - 200
- 104 - 148
- 83 - 103
- 64 - 82
- 48 - 63
- 31 - 47
- 17 - 30
- 10 - 16
- 8 - 9
- 6 - 7
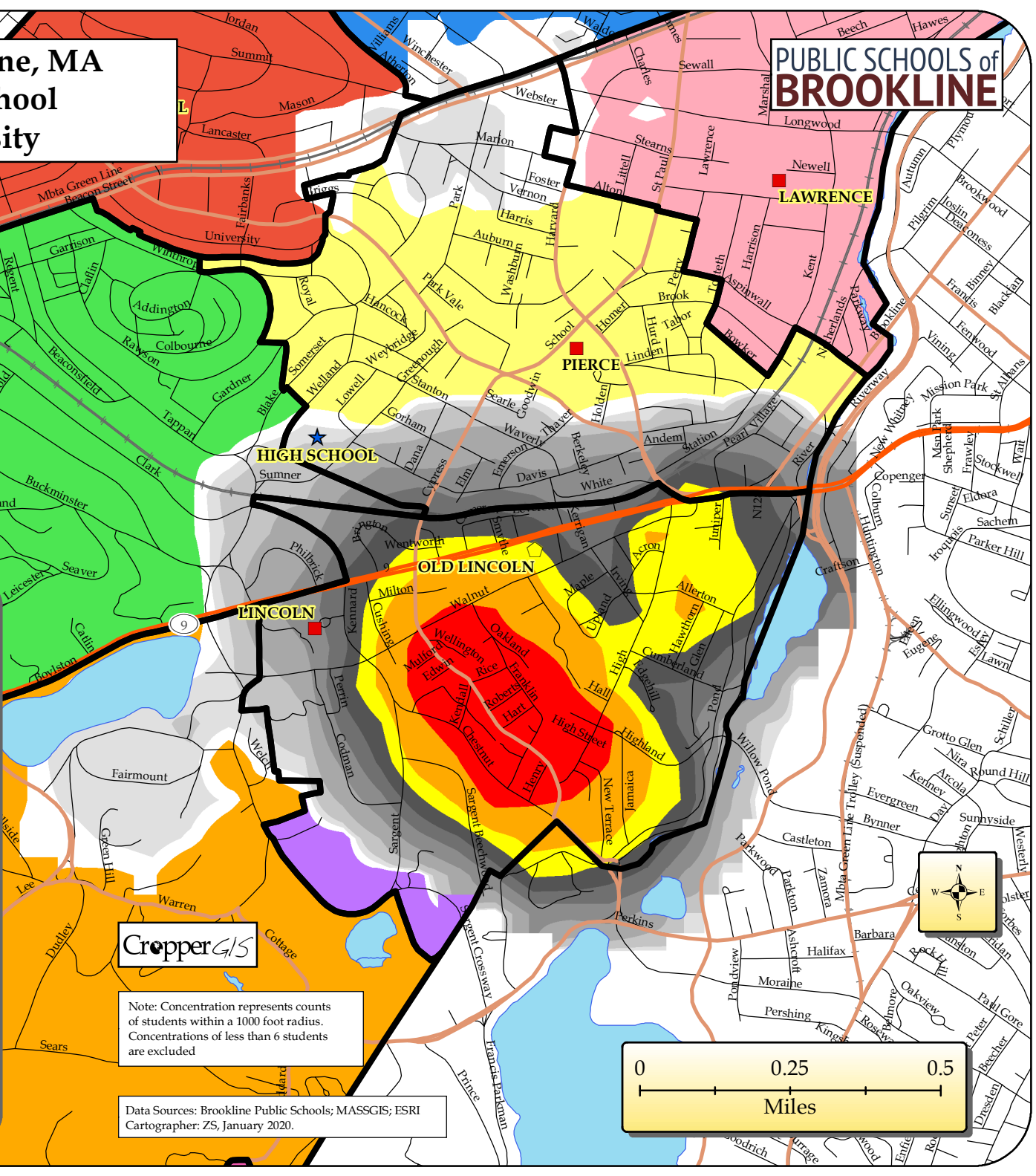
Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded

CropperGIS

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

0    0.25    0.5
Miles

# Public Schools of Brookline, MA
## Pierce School
## 2019-20 Student Density

PUBLIC SCHOOLS of
**BROOKLINE**

| Pierce School | |
|---|---|
| Total Enrollment (K-8th) | 842 |
| Out of District | 45 |
| Unmatched | 0 |
| Total Live-In (K-8th) | 837 |
| Live and Attend In | 626 |
| Live Out, Attend In | 216 |
| Live In, Attend Out | 211 |

## Legend

**Schools**

■ Elementary
★ High School
⬟ Other
�⬛ 2019-20 ES Boundaries

**2019-20 ES Zone**

- COOLIDGE CORNER
- DRISCOLL
- HEATH
- LAWRENCE
- LINCOLN
- PIERCE
- RUNKLE

**Student Density**

(Quantile Classification)

- 193 - 251
- 143 - 192
- 111 - 142
- 85 - 110
- 61 - 84
- 43 - 60
- 28 - 42
- 16 - 27
- 9 - 15
- 6 - 8

CropperGIS

Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded.

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

0    0.25    0.5
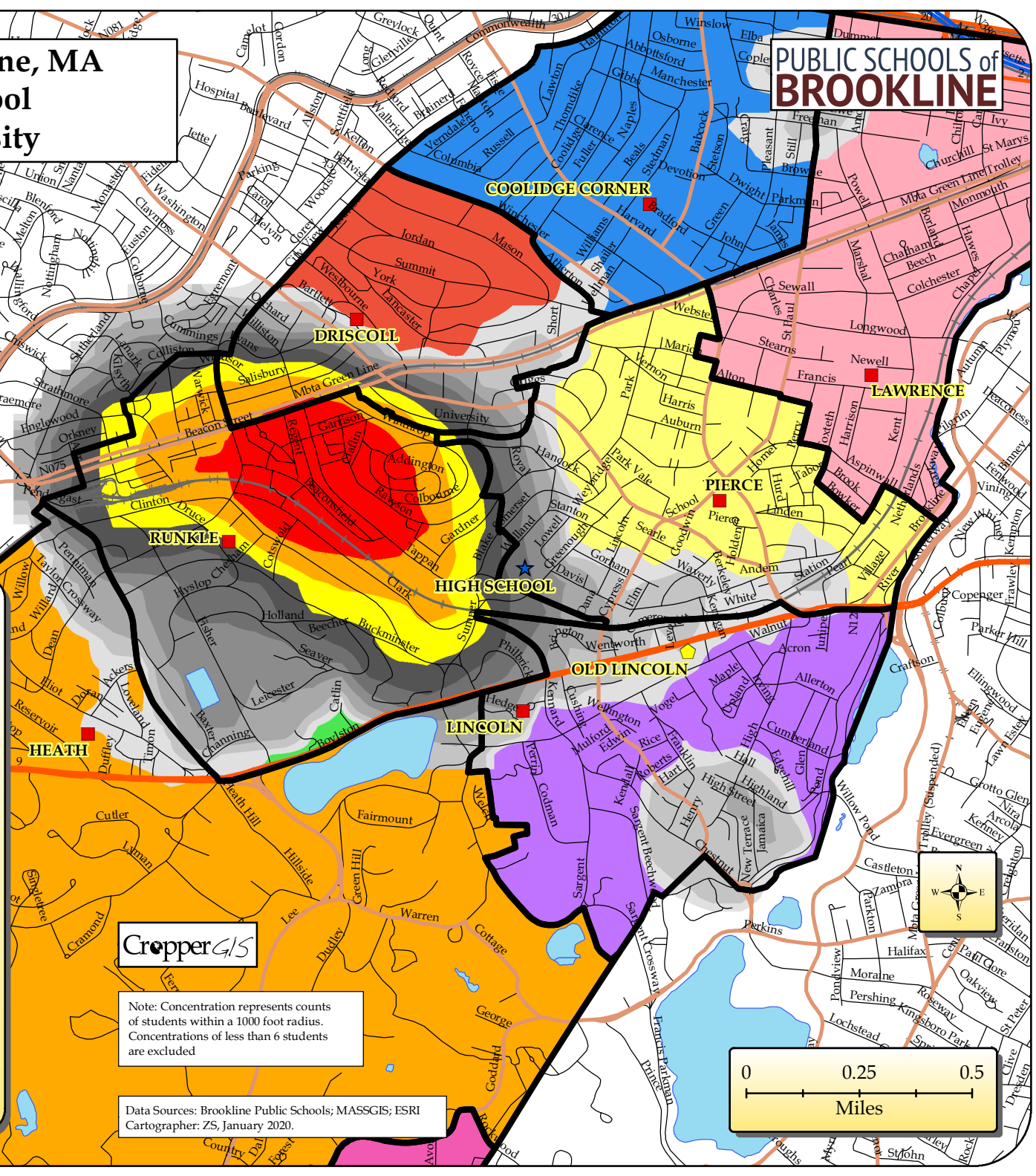Miles

# Public Schools of Brookline, MA
## John D. Runkle School
## 2019-20 Student Density

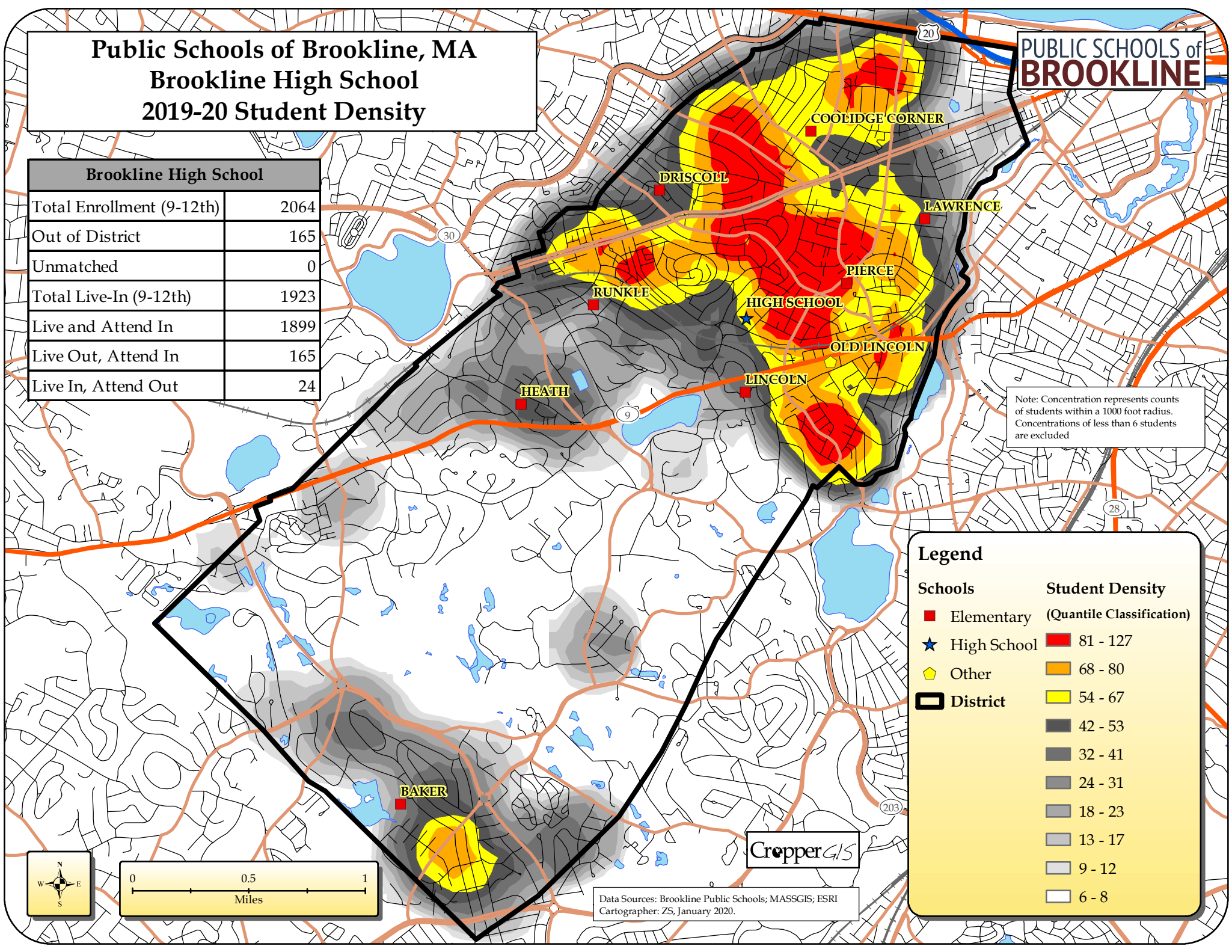| John D. Runkle School | |
| --- | --- |
| Total Enrollment (K-8th) | 582 |
| Out of District | 38 |
| Unmatched | 0 |
| Total Live-In (K-8th) | 579 |
| Live and Attend In | 439 |
| Live Out, Attend In | 143 |
| Live In, Attend Out | 140 |

## Legend

**Schools**

- ■ Elementary
- ★ High School
- ⬠ Other

**━ 2019-20 ES Boundaries**

**2019-20 ES Zone**

- BAKER
- COOLIDGE CORNER
- DRISCOLL
- HEATH
- LAWRENCE
- LINCOLN
- PIERCE
- RUNKLE

**Student Density**

(Quantile Classification)

- 111 - 183
- 73 - 110
- 54 - 72
- 38 - 53
- 26 - 37
- 18 - 25
- 11 - 17
- 9 - 10
- 7 - 8
- 6

Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded

CropperGIS

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

0   0.25   0.5
Miles

COOLIDGE CORNER
DRISCOLL
LAWRENCE
PIERCE
RUNKLE
HIGH SCHOOL
OLD LINCOLN
LINCOLN
HEATH

# Public Schools of Brookline, MA
## Brookline High School
## 2019-20 Student Density

PUBLIC SCHOOLS of
**BROOKLINE**

| Brookline High School | |
|---|---|
| Total Enrollment (9-12th) | 2064 |
| Out of District | 165 |
| Unmatched | 0 |
| Total Live-In (9-12th) | 1923 |
| Live and Attend In | 1899 |
| Live Out, Attend In | 165 |
| Live In, Attend Out | 24 |

COOLIDGE CORNER

DRISCOLL

LAWRENCE

PIERCE

RUNKLE

HIGH SCHOOL

OLD LINCOLN

HEATH

LINCOLN

Note: Concentration represents counts of students within a 1000 foot radius. Concentrations of less than 6 students are excluded

BAKER

CropperGIS

Data Sources: Brookline Public Schools; MASSGIS; ESRI
Cartographer: ZS, January 2020.

## Legend

**Schools**

■ Elementary

★ High School

⬠ Other

▭ District

**Student Density**

(Quantile Classification)

| | |
|---|---|
| ■ | 81 - 127 |
| ■ | 68 - 80 |
| ■ | 54 - 67 |
| ■ | 42 - 53 |
| ■ | 32 - 41 |
| ■ | 24 - 31 |
| ■ | 18 - 23 |
| ■ | 13 - 17 |
| ■ | 9 - 12 |
| ■ | 6 - 8 |

N
W    E
S

| 0 | 0.5 | 1 |
|---|---|---|

Miles