



JOINT MEETING

HWRSD SCHOOL COMMITTEE & HAMILTON & WENHAM BOARD OF SELECTMEN

Buker Elementary School
Multi-Purpose Room

Thursday, May 11, 2017

7:00 PM

1. Call to Order 7:00

2. Pledge of Allegiance

3. Discussion

A. Apportionment Formula

- Review of existing data (historical actuals and projected forecasts)
- Initial discussion of potential changes to apportionment formula, including alternative measures
- Proposal for shared enrollment study focused on specific enrollment demographics in each town

B. Selection of Committee Members

- Initial discussion of potential for minimum representation from each town on the committee
- Proposed change in methodology of nominations from District Secretary to Town Clerks

C. Process for further evaluation and discussion of options to potential changes to district agreement

D. Formation and direction of the Longmeadow Joint Study Committee

4. Vote to Adjourn 9:30

Secretary: Kerry Gertz, HWRSC

Hamilton Wenham Regional School District
Multiple Year Apportionment Scenario Analysis
Based Entirely on Resident Student Enrollment Figures*

FY	Assessment \$	Scenario 1 - 3 Yr Avg		Scenario 2 - 6 Yr Avg		Scenario 3 - 1 Yr		Variance: Scenario 2 vs 1		Variance: Scenario 3 vs 1	
		Hamilton	Wenham	Hamilton	Wenham	Hamilton	Wenham	Hamilton	Wenham	Hamilton	Wenham
FY18 Est	\$26,607,448	\$17,401,667	\$9,205,781	\$17,878,159	\$8,729,289	\$17,192,980	\$9,414,468	\$476,492	(\$476,492)	(\$208,687)	\$208,687
FY17	\$26,268,391	\$17,494,135	\$8,774,256	\$17,814,252	\$8,454,139	\$17,177,790	\$9,090,601	\$320,116	(\$320,116)	(\$316,345)	\$316,345
FY16	\$25,002,902	\$16,993,074	\$8,009,828	\$17,020,979	\$7,981,923	\$16,545,830	\$8,457,072	\$27,905	(\$27,905)	(\$447,244)	\$447,244
FY15	\$24,478,847	\$16,867,777	\$7,611,070	\$16,695,099	\$7,783,748	\$16,691,983	\$7,786,864	(\$172,678)	\$172,678	(\$175,794)	\$175,794
FY14	\$22,005,920	\$15,181,299	\$6,824,621	\$14,993,194	\$7,012,726	\$15,286,555	\$6,719,365	(\$188,106)	\$188,106	\$105,256	(\$105,256)
FY13	\$22,914,355	\$15,623,796	\$7,290,559	\$15,573,963	\$7,340,392	\$15,625,165	\$7,289,190	(\$49,832)	\$49,832	\$1,369	(\$1,369)
FY12	\$23,379,940	\$15,787,401	\$7,592,539	\$15,866,172	\$7,513,768	\$15,471,824	\$7,908,116	\$78,771	(\$78,771)	(\$315,576)	\$315,576
FY11	\$23,981,803	\$16,144,532	\$7,837,271	\$16,316,854	\$7,664,949	\$15,682,513	\$8,299,290	\$172,322	(\$172,322)	(\$462,019)	\$462,019

*-Scenarios are based strictly on Resident Student Enrollment. Scenarios do not factor in the impact of the unique apportionment calculation of Capital Costs for the HS/MS Project

Hamilton Wenham Regional School District
Historic Data: Resident Student Enrollment & Percentages

Resident Student Enrollments as of October 1st:

	<u>Hamilton</u>	<u>Wenham</u>	<u>District</u>	<u>Hamilton</u>	<u>Wenham</u>	<u>District</u>
10/1/2004	1,455	642	2,097	69.38%	30.62%	100.00%
10/1/2005	1,391	644	2,035	68.35%	31.65%	100.00%
10/1/2006	1,372	634	2,006	68.39%	31.61%	100.00%
10/1/2007	1,330	632	1,962	67.79%	32.21%	100.00%
10/1/2008	1,306	641	1,947	67.08%	32.92%	100.00%
10/1/2009	1,280	628	1,908	67.09%	32.91%	100.00%
10/1/2010	1,267	584	1,851	68.45%	31.55%	100.00%
10/1/2011	1,274	571	1,845	69.05%	30.95%	100.00%
10/1/2012	1,274	560	1,834	69.47%	30.53%	100.00%
10/1/2013	1,224	571	1,795	68.19%	31.81%	100.00%
10/1/2014	1,168	597	1,765	66.18%	33.82%	100.00%
10/1/2015	1,147	607	1,754	65.39%	34.61%	100.00%
10/1/2016	1,114	610	1,724	64.62%	35.38%	100.00%

Trailing 3 Year % Actual (Current Method):

10/1/2016 (FY18B Est)	65.40%	34.60%	5,243
10/1/2015 (FY17B)	66.60%	33.40%	5,314
10/1/2014 (FY16B)	67.96%	32.04%	5,394
10/1/2013 (FY15B)	68.91%	31.09%	5,474
10/1/2012 (FY14B)	68.99%	31.01%	5,530
10/1/2011 (FY13B)	68.18%	31.82%	5,604
10/1/2010 (FY12B)	67.53%	32.47%	5,706
10/1/2009 (FY11B)	67.32%	32.68%	5,817
10/1/2008 (FY10B)	67.76%	32.24%	5,915
10/1/2007 (FY09B)	68.18%	31.82%	6,003
10/1/2006 (FY08B)	68.72%	31.28%	6,138

Trailing 6 Year % Proforma (Proposed Methodology):

10/1/2016 (FY18B Est)	67.19%	32.81%	10,717
10/1/2015 (FY17B)	67.82%	32.18%	10,844
10/1/2014 (FY16B)	68.08%	31.92%	10,998
10/1/2013 (FY15B)	68.20%	31.80%	11,180
10/1/2012 (FY14B)	68.13%	31.87%	11,347
10/1/2011 (FY13B)	67.97%	32.03%	11,519
10/1/2010 (FY12B)	67.86%	32.14%	11,709
10/1/2009 (FY11B)	68.04%	31.96%	11,955

McKibben Demographic Research, LLC

March 29, 2017

Dr. Michael Harvey, Superintendent
Hamilton-Wenham Regional School District
5 School St.
Wenham, MA 01984

Dear Dr Harvey:

Please consider this letter a proposal for the following demographic work to be completed for the Hamilton-Wenham Regional School District. The work will include the following:

1. Population estimates/forecasts for the years 2015, 2020 and 2025 by age, sex, and total population for the town of Hamilton, the town of Wenham and the Hamilton-Wenham Regional School District.
2. Enrollment forecasts by grade for the years 2017-2018 to 2026-2027 inclusive, by grade for the town of Hamilton, the town of Wenham and the Hamilton-Wenham Regional School District.
3. One written report summarizing the methodology, assumptions, and historical patterns used in the calculations of the forecasts; and the results of the forecasts. Analysis of the demographic characteristics of the school district and its attendance areas, concentrating on age structure, housing composition, migration patterns, family size, district home sales and household structure.

The cost of this project will be \$4,000. This price includes all travel and materials expenses. If the school district would like to have a presentation of the forecast results there will be an additional \$900 charge. The project will be completed within 6 weeks of approval of contract or an agreed upon date.

If this proposal meets with your approval, we can begin work upon notification and receipt of five (5) previous years of enrollment data by grade by town, including the October 2016 ADM enrollment numbers. If you need additional information, please do not hesitate to contact me. Thank you for considering us for this project.

Sincerely,

Jerome N. McKibben Ph.D.
Senior Demographer

2. Review a number of narrowly-defined facilities reports developed in the last 5 years regarding the state of the District's facilities as well as work conducted by the District for repairs and/or replacement of certain building components.
3. Perform a Demographic Study to understand the population changes experienced already, as well as those anticipated over the next ten years.
4. Review the role and ramifications of School Choice on the population and needed facilities.
5. Develop a comprehensive Master Plan with options for incorporating goals identified through the Visioning process with demographics, School Choice and existing buildings.

The facilities of the District consist of six (6) buildings:

- Bessie Buker Elementary School, 1 School Street, Wenham, Massachusetts.
- Cutler Elementary School, 237 Asbury Street, Hamilton, Massachusetts.
- Winthrop Elementary School, 325 Bay Road, Hamilton, Massachusetts.
- Miles River Middle School, 787 Bay Road, Hamilton, Massachusetts.
- Hamilton-Wenham Regional High School, 775 Bay Road, Hamilton, Massachusetts.
- Administration Building, 5 School Street, Wenham, Massachusetts.

The three elementary schools, the administration building and their associated property are leased by the respective towns to the District. The terms of the lease agreements for these properties require the District to be responsible for maintaining the buildings. The High School and Middle School buildings and surrounding property are owned by the District.

1.3 DEMOGRAPHY AND ENROLLMENT FORECASTS

SMMA engaged Cropper GIS, in association with McKibbin Demographics, to conduct a demographic study of the Hamilton-Wenham School District. All population forecasts presented include a constant number of 115 Choice students at the high school. Prior to the completion of this study, the School Committee made a policy changes to the Choice program, reducing the number of Choice Students to a level that does not affect program sections.

Executive Summary Findings

1. Total enrollment is forecast to decrease by 93 students, or -4.8 %, between 2013-14 and 2017-18. Total enrollment will decline by 70 students, or -3.8%, from 2017-18 to 2023-24.
2. Changes in year-to-year enrollment will largely be due to smaller grade cohorts entering the system, in conjunction with larger grade cohorts leaving the system.
3. The major factors causing the District's enrollment to decline after 2013 is an increase in the number of out-migrants in the local 18- to 24-year old age group; the rise in the number of empty-nest households and a slight decrease in the

number of in-migrating of younger families.

4. If there was zero migration into the District during the 2013-14 to 2016-17 time period, the elementary (K-5) enrollment would decline by 130 students. The in-migration is projected to be 114 students for the same time period. Therefore, the elementary enrollment is forecast to decline by 26 students.
5. At the high school, the population declines are forecast to be significantly larger. The forecast population is expected to decline by approximately 95 students, from 678 students to 583 students (including 115 Choice), a decline of about 14%. Since the development of the Demographic report, the HWRSD School Committee voted to reduce Choice numbers to a level that does not materially impact class sections.
6. The locally raised 18-to-24 year old population (recent graduating high school seniors) continues to leave the District, going to college or moving to urban areas and not returning to the communities.
7. The fertility rates for the Hamilton-Wenham School District are below replacement levels during the entire life of the forecasts. (TFR=1.76 for the district versus 2.1 for replacement level)
8. Most of the in-migration households to the District contain population in the 0-to-9 and 30-to-44 age groups.
9. If the current home construction trends continue, the number of existing home sales and the occupancy rates of the rental housing units will continue to be the dominant factor affecting the population and enrollment change.

1.4 VISIONING

SMMA teamed with Frank Locker, Educational Planning, and a group of approximately 50 teachers, administrators, students, community leaders, and parents to guide the Hamilton-Wenham Regional School District Public to shape the educational vision for the District.

Group discussions included:

- Guiding Principles
- 21st-Century Education
- Learning Modalities
- Innovative Educational Deliveries
- School Organizational Structure
- School Choice and
- Many other aspects of 21st Century Teaching and Learning

It is important to note that one of the outcomes of the Visioning sessions was the identification of Guiding Principles. They included a need to look at how students develop 21st-Century skills, in order that their learning be student-centered, active, relevant, and personalized. Some examples of this kind of learning include:

Section 2

Demographics Report

- 2.1 INTRODUCTION / SUMMARY
- 2.2 DEMOGRAPHY AND ENROLLMENT PROJECTIONS
REPORT - CROPPER GIS

Executive Report – 2014 School District Master Plan
HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

DEMOGRAPHICS REPORT

2.1 INTRODUCTION AND SUMMARY

SMMA engaged Cropper GIS in association with McKibben' Demographics to conduct a demographic study of the Hamilton Wenham Regional School District. All population forecasts presented include a constant number of 115 Choice students at the high school. Prior to the completion of this study, the School Committee made a policy changes to the Choice program, reducing the number of Choice Students to a level that does not affect program sections.

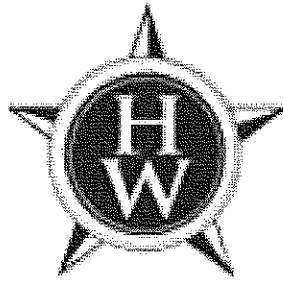
Executive Summary Findings:

1. Total enrollment is forecast to decrease by 93 students, or -4.8 %, between 2013-14 and 2017-18. Total enrollment will decline by 70 students, or -3.8%, from 2017-18 to 2023-24.
2. Changes in year-to-year enrollment will largely be due to smaller grade cohorts entering the system, in conjunction with larger grade cohorts leaving the system.
3. The major factors causing the District's enrollment to decline after 2013 is an increase in the number of out-migrants in the local 18-to 24-year old age group, the rise in the number of empty-nest households and a slight decrease in the number of in-migrating of younger families.
4. If there was zero migration into the District during the 2013-14 to 2016-17 time period, the elementary (K-5) enrollment would decline by 130 students. The in-migration is projected to be 114 students for the same time period. Therefore the elementary enrollment is forecast to decline by 26 students.
5. At the high school, the population declines are forecast to be significantly larger. The forecast population is expected to decline by approximately 95 students, from 678 students to 583 students (including 115 Choice), a decline of about 14%. Since the development of the Demographic report, the HWRSD School Committee voted to reduce Choice numbers to a level that does not materially impact class sections.
6. The locally raised 18-to-24 year-old population (recent graduating high school seniors) continues to leave the District, going to college or moving to urban areas and not returning to the communities.
7. The fertility rates for the Hamilton-Wenham School District are below replacement levels during the entire life of the forecasts. (TFR=1.76 for the district versus 2.1 for replacement level)
8. Most of the in-migration households to the District contain population in the 0-to-9 and 30-to-44 age groups.
9. If the current home construction trends continue, the number of existing home sales and the occupancy rates of the rental housing units will continue to be the dominant factor affecting the population and enrollment change.

The projections include 115 Choice students in the high school population. This number is carried consistently through all projected years.

The Choice Students currently make up approximately 17% of the high school population. If no policy changes take place, the Choice Students would comprise approximately 20% of the population in 2023 / 2024.

Since this demographic study was completed, the Hamilton Wenham School Committee has modified its policy on Choice to enroll only a number of students such that no additional sections are required to accommodate them.



**Hamilton Wenham Regional School
District
High School Students by Town**

December 2013

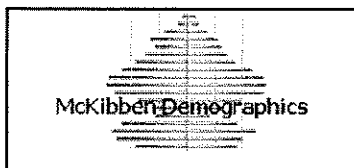




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Executive Summary

1. The fertility rates for the Hamilton-Wenham school district are below replacement levels during the entire life of the forecasts. (TFR=1.76 for the district vs. 2.1 for replacement level)
2. Most of the in-migrating households to the district contain population in the 0-to-9 and 30-to-44 age groups.
3. The locally raised 18-to-24 year old population (recent graduating high school seniors) continues to leave the district, going to college or moving to other urban areas.
4. The primary factors causing the district's enrollment to decline after 2013 is an increase in the number of out-migrants in the local 18-to-24 year old age group, the rise in the number of empty nest households and a slight decrease in the number of in-migrating of younger families.
5. Changes in year-to-year enrollment will largely be due to smaller grade cohorts in conjunction with larger grade cohorts leaving the system.
6. If there was zero migration in the district during the 2013-14 to 2016-17 time period, the elementary (K-5) enrollment would decline by 130 students. The elementary enrollment is forecasted to decline by 26 students the same period.
7. If the current home construction trends continue, the number of existing home sales and the occupancy rates of the rental housing units will continue to be the dominant factor affecting the amount of population and enrollment change.
8. Total enrollment is forecasted to decrease by 93 students, or -4.8 %, between 2013-14 and 2017-18. Total enrollment will decline by 70 students, or -3.8%, from 2017-18 to 2023-24.



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 growth 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. 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 and the household composition of the district. The unique nature of each district'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 level, have exactly the same demographic, social or economic 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 the district (as opposed to in neighboring districts); state or federal mandates that dictate the movement of students from one facility to another (No Child Left Behind is an excellent example of this factor); the development of charter schools in the district; any voucher system that is in place, 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.

The first part of the report will examine the assumptions made in calculating the population forecasts for the Hamilton-Wenham School District. 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. Enrollments by grade and attendance center were provided by the Hamilton-Wenham School District for school years 2008-2009 to 2013-14. Birth and death data were obtained from the Massachusetts Department of Public Health for the years 2000 through 2011. The net migration values were calculated using Internal Revenue Service migration reports for the years 2000 through 2010. The data used for the calculation of migration models came from the United States Bureau of the Census, 2000-2010, 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 120 of the over 4,000 current households in the district would have been included. For comparison over 700 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 drop in the average household size in the Hamilton-Wenham School District area as well as most other areas of the state during the previous 20 years, the rate of this decline has been forecasted to slow 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 level. Thus, significant changes are not foreseen in district's mortality rates between now and the year 2023. 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 total fertility rate (TFR), the average number of births a woman will have in her lifetime, is estimated to be 1.76 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, over the course of the forecast period, fertility will not be sufficient, in the absence of sufficient in migration, to maintain the current level of population within the Hamilton-Wenham School District.

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

As the Hamilton-Wenham School District or Essex County are not currently contemplating any major expansions or contractions, the forecasts also assume the current economic, political, transportation and public works infrastructure (with a few notable exceptions), social, and environmental factors of the Hamilton-Wenham School District will remain the same through the year 2023.

Below is a list of assumptions and issues that are specific to the Hamilton-Wenham School District and the rest of the Boston Metropolitan area. These issues have been used to modify the population forecast

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT DEMOGRAPHIC STUDY



models to more accurately predict the impact of these factors on the area's population change and composition. Specifically, the forecasts for the Hamilton-Wenham School District assume that throughout the 10 years of the study period:

- a. There will be no significant short term economic recovery in the next 18 months and the national, state or regional economy does not go into deep recession at anytime 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 an 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 5.5%;
- c. The rate of mortgage approval stays at 1999-2002 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 2005-2007 average of Essex County for any year in the forecasts;
- f. All currently planned, platted, and approved housing developments are built out and completed by 2022. All housing units constructed are occupied by 2023;
- g. The unemployment rates for Essex County will remain below 8.5% for the 10 years of the forecasts;
- h. The rate of students transferring into and out of the Hamilton-Wenham School District will remain at the 2008-09 to 2013-14 average;
- i. The inflation rate for gasoline will stay below 5% per year for the 10 years of the forecasts;
- j. There will be no building moratorium within the district;
- k. Businesses within the district and Essex County will remain viable;
- l. 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;
- m. 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 55;

- n. Private school and home school attendance rates will remain constant;
- o. The recent decline in new home construction has ended and building rates have stabilized;
- p. The rate of foreclosures for commercial property remains at the 2004-2008 average for the Essex County area;

If a major employer in the district or in Essex County 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, water usage restrictions, 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 Hamilton-Wenham School District 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 high out-migration in the 18-to-24 age group and was taken into account when calculating these forecasts. The out-migration of graduating high school seniors is expected to continue over the period of the forecasts and the rate of out-migration has been forecasted to remain the same over the life of the forecast series.

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

METHODOLOGY

The population forecasts presented in this report are the result of using the Cohort-Component Method of population forecasting (Siegel, and Swanson, 2004: 561-601) (Smith et. al. 2004). As stated in the INTRODUCTION, the difference between a projection and a forecast is in the use of explicit judgment based upon the unique features of the area under study. Strictly speaking, a cohort-component projection refers



to the future population that would result if a mathematical extrapolation of historical trends were applied to the components of change (i.e., births, deaths, and migration). 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 believed to be critical factors of influence in each specific area.

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

- a. a base-year population (here, the 2010 Census population for the Hamilton-Wenham School District);
- b. a set of age-specific fertility rates to be used over the forecast period;
- c. a set of age-specific survival (mortality) rates;
- d. a set of age-specific migration rates for each; and
- e. the historical enrollment figures by grade.

The most significant and difficult aspect of producing enrollment forecasts is the generation of the population forecasts in which the school age population (and enrollment) is embedded. In turn, the most difficult 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 Hamilton-Wenham School District is classified as "small area" populations (as compared to the population of the state of Massachusetts or to that of the United States). Small area population forecasts are more difficult to calculate because local variations in fertility, mortality, and migration may be more irregular than those at the state or national scale. Especially challenging to project are 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 Hamilton-Wenham School District 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 the Hamilton-Wenham School District.

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 eight. 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 and 10-to-14 year olds cohorts in the Hamilton-Wenham School District for the period 2005 to 2010. 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 two through eight for the period 2010 to 2015. The survivorship rates were adjusted again for the period 2015 to 2020 to reflect the predicted changes in the amount of age-specific migration in the districts 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

From 2010 to 2020, the populations of the Hamilton-Wenham School District, Essex County; the state of Massachusetts, and the United States are forecasted to change as follows; the Hamilton-Wenham School District will decrease by -0.2%, Essex County will grow by 4.4% Massachusetts will increase by 3.7%; and the United States grow by 8.4% (see Table 1).

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Table 1: Forecasted Population Change, 2010 to 2020

	2010	2015	2020	10-Year Change
U.S. (in millions)	308	322	334	8.4%
Massachusetts	6,483,800	6,603,100	6,695,700	3.3%
Essex County	47,536	48,200	48,900	2.9%
H-W R.S.D.	12,639	12,640	12,610	-0.2%

A number of general demographic factors will influence the growth rate of the Hamilton-Wenham School District during this period, and include the following:

- The bulk of the in-migrating households from the 1990s and 2000s have moved through the prime childbearing ages and will increasingly become empty nest over the next 10 years;
- The remaining population in childbearing ages (women ages 15-45) will have fewer children;
- A large proportion of the locally raised 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,
- The district will experience an increase in housing stock, with an average of 10 units being built each year through 2020.

The Hamilton-Wenham School District will continue to experience 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 continue to leave the district.

From 2010 to 2015, the district's population is forecasted to increase by 1 or 0.0%, to 12,640. From 2015 to 2020, the population is forecasted to decrease by 30 persons or -0.2%. While all parts of the district will see some amount of gross in-migration, (primarily in the 0-to-9 and 30-to-44 age groups,) all areas also will continue to see gross out-migration. This out-migration primarily will be young adults, 18-to-24 years old, as graduating seniors continue to leave the district to go to college or seek employment in larger urban areas. Consequently,

the district will experience a modest reduction in their average household size.

**Table 2: Hamilton-Wenham School District Population:
2015 & 2020 Forecast**

	2010	2015	2010-2015 Change	2020	2015-2020 Change	2010-2020 Change
District Total	12,639	12,640	0.0%	12,610	-0.2%	-0.2%

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 women between the ages of 20 and 29. As the graduating seniors continue leave the district, the number of women at risk of childbirth during the next decade declines. Consequently, even though the district's fertility rate is just slightly below the replacement level, the small number of women in the district in prime child bearing ages will keep the number of births declining at a modest rate despite the district having a growing population (see the population pyramid in the appendix of this report for a graphic representation of the age/sex distribution of the district). This will require the district to become dependent on the in-migration of children just to maintain current grade cohort sizes.

As a general rule of thumb, for every two graduating 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 forecast period, the average number of graduating seniors will be approximately 160 per year and at least 75% of them will move out of the district within three years of graduation. Using the general rule, approximately 60 new families will be required to move into the district every year or 600 new families for the ten-year study period to replace the graduating seniors and their lost fertility. It is forecasted that the impact of the steadily increasing out-migration of young adults will continue to be mostly offset by younger families (30-39 year old householders) in-migration and that the total number of births will decline only 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

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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 experience 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.

**Table 3: Hamilton-Wenham Regional School District
Household Characteristics, 2010 Census**

	HH w/ Pop Under 18	% HH w/ Pop Under 18	Total Households	Household Population	Persons Per Household
Hamilton	1125	41.8%	2692	7616	2.83
Wenham	508	37.4%	1358	3622	2.67
District Total	1633	40.3%	4050	11238	2.77

Clearly, the dominant factor that has affected the population growth rates of the Hamilton-Wenham School District over the last 20 years has been the number, pace and cost of existing home sales and some new homes 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 an immediate impact of the size of an area's population and the total impact of that change will be experiences immediately.

This "delayed demographic reaction" is a key issue when attempting to ascertain the impact and duration of a trend. 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 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 is the manifest issue in regards to future population and enrollment trends since the number of births in the Hamilton-Wenham School District is insufficient to maintain current enrollment levels. The number of women living in the district that are ages 20-29 (prime child bearing ages) is too small to produce birth cohorts that are the same size as those currently in the elementary grades.

Of additional concern are the issues of the district's aging population and the growing number of "empty nest" households. For example, after the last school age child leaves middle school, (for the

household's impact on the Hamilton-Wenham School District) 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.

**Table 4: Hamilton-Wenham Regional School
Dist. Household Characteristics, 2010 Census**

	Percentage of Householders aged 35-54	Percentage of Householders aged 65+	Percentage of Householders Who Own Homes
Hamilton	45.7%	21.8%	81.5%
Wenham	42.1%	32.5%	84.8%
District Total	44.5%	25.4%	82.6%

As a result of the "empty nest" syndrome, the Hamilton-Wenham School District will see a steady rise in the median age of their populations, even while the district as a whole continues to attract new young families. It should be noted that many of these "childless" households are single persons and/or elderly (See Table 5). Consequently, even 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. In these cases new housing units (elder housing) may be built in an area, 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. Included among these factors are: people building new "move up" 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.



**Table 5: Hamilton-Wenham
Regional School District - Single
Person Households and Single
Person Households over age 65,**

2010 Census		
	Percentage of Single Person Households	Percentage of Households single person and 65+
Hamilton	15.7%	7.3%
Wenham	23.2%	14.2%
District Total	18.2%	9.6%

RESULTS AND ANALYSIS OF ENROLLMENT FORECASTS

Elementary Enrollment

The total elementary enrollment (Grades PK through 5th) of the district is forecasted to decrease from 799 in 2013-14 to 787 in 2018-19, a drop of 12 students or -1.5%. From 2018-19 to 2023-24, elementary enrollment is expected to drop by 34 students to 753. This will represent a -4.3% decrease over the five-year period (see Table 6).

Table 6: Total Elementary Enrollment, 2013, 2018,
2023

	2013	2018	2013- 2018 Change	2023	2018- 2023 Change	2013- 2023 Change
Hamilton-Wenham	799	787	-1.5%	753	-4.3%	-5.8%

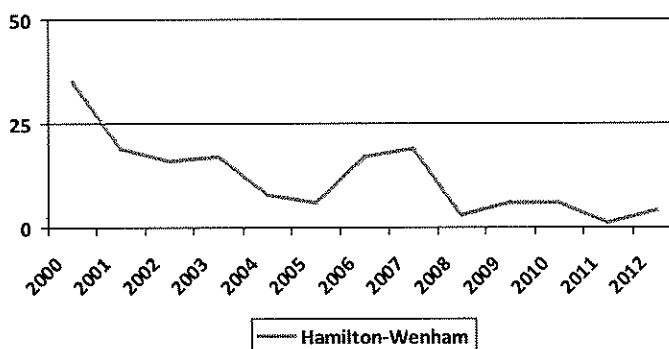
The reason for this overall decline in elementary enrollment over the next 10 years is the convergence of the effects of three factors, all having their full impact roughly by 2016. These factors are the reversal of cohort sizes in the elementary grades, the number of existing housing units turning over along with the low number of new homes constructed, and the existence of a "dearth" of population in the late pre-school ages. Each of these factors will contribute in part to the decline in elementary enrollment through 2016.

One of the reasons elementary enrollment will be decreasing over the next decade is due to the fact that the number of children entering Kindergarten and 1st grade is smaller than the number leaving elementary school after completing 5th grade. From 2012 to 2015, the number of students in 5th grade will average 137 each year while the entering Kindergarten and 1st grade cohort will average 121 students.

The second factor is the slowdown in the home sales/housing construction industry. While it is true that the Essex County housing market has performed somewhat better than the national trends the last three years, it is not immune the effects of a tightening of the mortgage market and in increasingly restrictive lending practices. The Hamilton-Wenham School District area, like most areas of the county, saw the number of primarily existing home sales increase in 2000 to 2008 as the expansion of sub-prime mortgage practices allowed many people to purchase new homes. Given the turmoil the collapse of the sub prime market has caused, it can be assumed that there will not be a return to these lending practices anytime in the near future.

Consequently, the Hamilton-Wenham School District (like most suburban/exurban areas in the country) have seen the number of new and existing homes sales drop back to the levels experienced before the sub prime boom. Further, these forecasts assume that there will not be a significant increase in the number of foreclosed housing units being put on the market in the immediate future. Yet despite this decline in home sales, the housing market in Hamilton-Wenham appears to have stabilized. There is a significant flow of young families into the district that are bringing elementary age and/or preschool age children to the district. On the short term, this in migration flow will be sufficiently large enough to provide some growth in the elementary grades.

**Chart 1: Residential Permitted Units, Hamilton-
Wenham - 2000 to 2012**



The third factor is the size of the individual age cohorts that are in the preschool ages and their size relative to the exiting elementary grade cohorts. A clear comprehension of the size of these incoming cohorts is imperative to understanding the base size of the prospective elementary cohort over the next five years. This allows for the forecasts to add or subtract students

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(via migration) to an accurate student base. If there are year to year changes in the size of the incoming Kindergarten cohort, they can be reflected in the forecast results.

The best example of this is the single year of age counts for the district from the 2010 Census (See Table 7). The population at age six is closely related to the combined 1th grade enrollment of the public and private students in the district (as it is for all elementary grades). However, note the slight decrease in the number of residents from age three to five. This trend is shows that for the last three years the district should have experienced a slight decrease in elementary enrollment even if in migration was at or near zero. Any net in or out migration of students would be seen elementary enrollment by grade that is in excess/reduction to these numbers. These numbers show that the district has a three year "dearth" in these grade cohorts that will be working in way through the elementary grades (and subsequently through the higher grades) over the next several years.

Table 7: Age <1 to Age Ten Population Counts, by Year of Age: 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
Hamilton town	109	88	90	101	104	98	134	110	117	119	114
Wenham town	18	23	39	28	34	45	53	62	54	51	72
Total District	127	111	129	129	138	143	187	172	171	170	186

The demographic factors that will become the most influential in the district over the next ten years are the growth rate of empty nest household in the district, the number of sales of existing homes, the rate and magnitude of existing housing unit "turn over," the relative size of the elementary and pre-school age cohorts and the district'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 district continues to be mostly dependent upon existing home sales to attract new families, the overall elementary enrollment trend of the district will be stable or show a slight decline. Thus, the best primary short- and long-term indicator for enrollment change in most of the district will be the year-to-year rate of existing housing turnover. If the Total Fertility Rates remain at their current low levels (and they are forecasted to do so) they will insure that enrollments will continue to see slowing growth (or outright declines) even if the level of net out-migration is greatly reduced.

Middle School Enrollment

The total middle school enrollment (Grades 6 through 8) for the district is forecasted to decline from 441 in 2013-14 to 387 in 2018-19, a 54 student or -12.2% decreases. Between 2018-19 and 2023-24 middle school enrollment is forecasted to grow to 419, an increase of 32 students or 8.3 %. The difference in the size of the individual grade cohorts and the aging of students through the school system are the primary reasons why the middle school enrollment trends deviate from those of the elementary grades.

There are currently smaller grade cohorts enrolled in the elementary school grades compared to those in the middle schools' grade cohorts. As these elementary school cohorts "age" into middle school and smaller middle school cohorts age into high school, they decrease the overall middle school enrollment level. Note how the size of the incoming 6th grade class is usually smaller than the previous year's 8th grade class, which has now moved on the high school. As long as this "deficit" in the enrollment pattern exists, there will be to some degree, a decrease in middle school enrollment at least until the 2019-2020 school years.

After the 2019-2020 school years, this cohort trend reverses. There will then be the grade cohorts entering the middle school grades will be larger compared to those leaving. The result is a slight increase of middle school enrollment until 2023. This trend will most likely continue beyond the end of the forecasts series ending sometime after 2025.

High School Enrollment

Enrollment at the high school level is forecasted to decline from 678 in 2013-14 to 651 in 2018-19, a decrease of 27 students or -4.0%. After 2018-19, the high school enrollment decline will accelerate. The net result for the five-year period 2018-19 to 2023-24 will be a decrease of 68 students to 583 or -10.4%.

The aforementioned effects of changes in cohort size on middle school enrollment are also affecting the growth patterns of the high school population. Until 2023, the smaller grade cohorts that will affect the middle school enrollment will enter high school. Until the current smaller grade cohorts of students (now in the elementary grades and middle school) passes through the high school grades, there will be continued decline at the district's high school. The main difference is that the decline in the high school enrollment will continue until at least 2023.

It is important to note that the vast majority of



this future high school enrollment change will be a result of students aging into those grades. Specifically, students who already live in the district (and not immigration of students ages 14 to 18) will be the primary cause of the forecasted change 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 were calculated for each grade 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.

REFERENCES

McKibben, J.

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

McKibben, J., M. Gann, and K. Faust.

The Baby Boomlet's Role in Future College Enrollment. American Demographics, June 1999.

Peters, G. and R. Larkin

Population Geography. 7th Edition. Dubuque, IA: Kendall Hunt Publishing, 2002.

Siegel, J. and D. Swanson

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

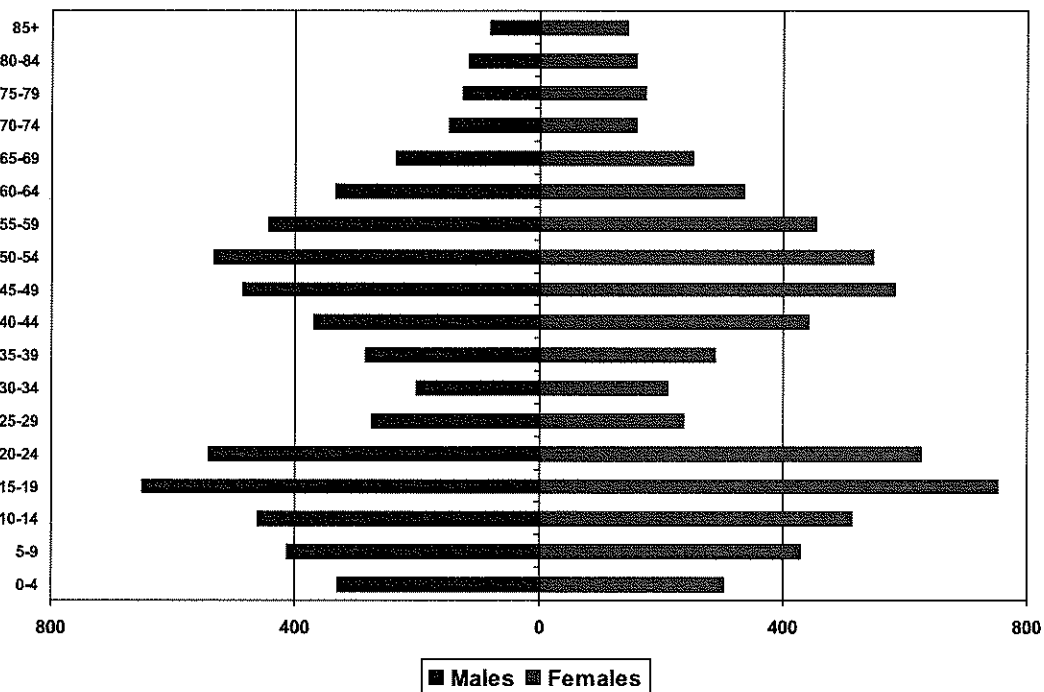
Smith, S., J. Tayman and D. Swanson

State and Local Population Projections, Academic Press, New York, New York. 2001.

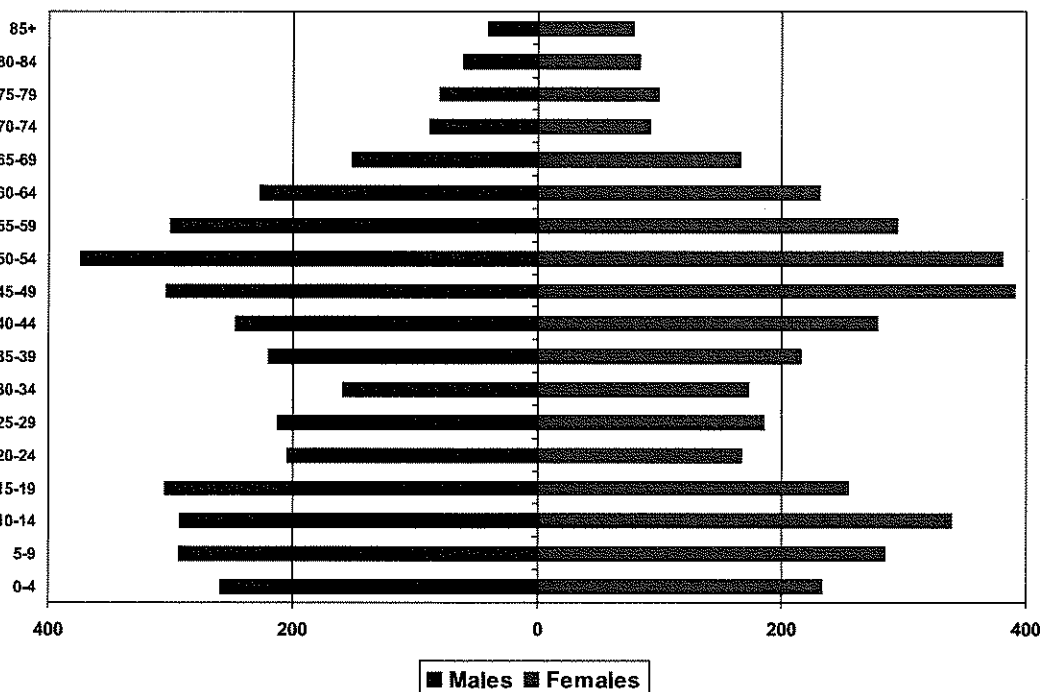


Appendix A: Population Pyramids (Age/Sex)

Hamilton Wenham District Total 2010 Census

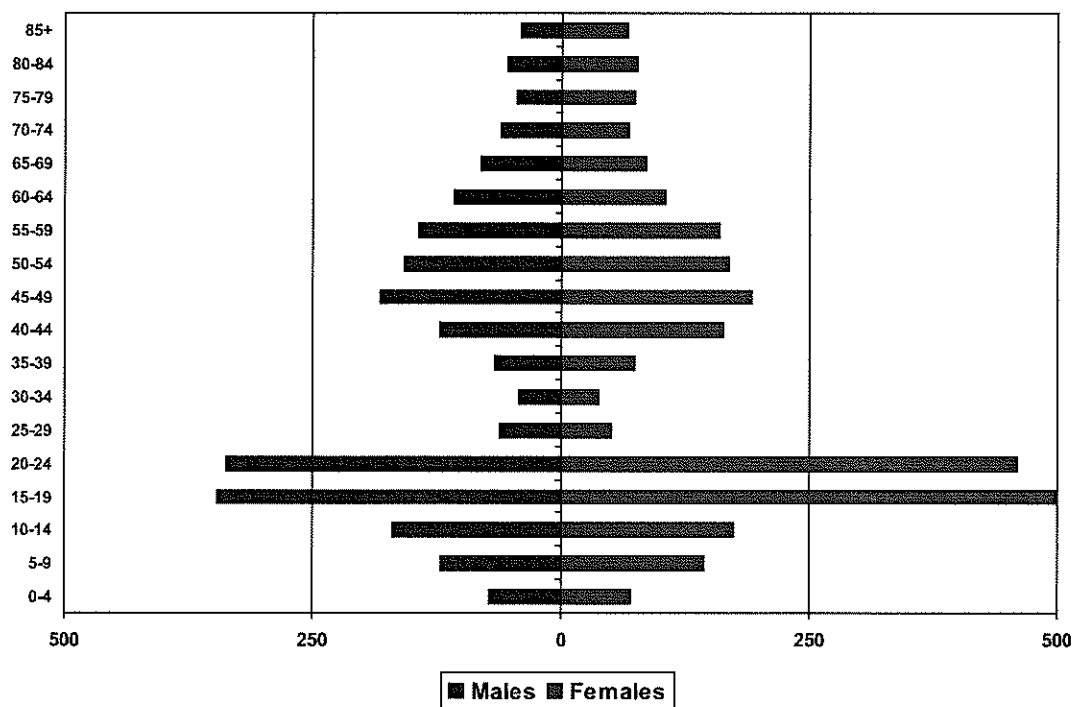


Hamilton Town 2010 Census





Wenham Town 2010 Census



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Appendix B: Enrollment Forecast Tables

Hamilton-Wenham Regional School District: Total District Enrollment

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
PK	20	11	20	29	25	25	25	25	25	25	25	25	25	25	25
K	130	133	101	120	120	118	125	122	121	119	118	115	112	109	112
1	138	127	132	106	121	119	120	128	125	124	121	120	117	114	111
2	135	137	129	140	119	126	125	126	134	131	132	129	128	124	120
3	151	144	142	136	134	120	127	126	127	135	132	133	130	129	125
4	135	155	149	142	137	137	123	127	128	129	138	135	135	132	131
5	148	137	148	145	143	135	134	119	123	124	127	135	132	132	129
Total: PK-5	857	844	821	818	799	780	779	773	783	787	793	792	779	765	753
Change		-13	-23	-3	-19	-19	-1	-6	10	4	6	-1	-13	-14	-12
%-Change		-1.5%	-2.7%	-0.4%	-2.3%	-2.4%	-0.1%	-0.8%	1.3%	0.5%	0.8%	-0.1%	-1.6%	-1.8%	-1.6%
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
6	142	151	138	156	142	146	138	137	122	127	128	132	140	138	138
7	154	144	150	141	154	143	147	139	138	123	128	129	134	142	140
8	173	152	142	149	145	153	142	146	138	137	122	127	128	133	141
Total: 6-8	469	447	430	446	441	442	427	422	398	387	378	388	402	413	419
Change		-22	-17	16	-5	1	-15	-5	-24	-11	-9	10	14	11	6
%-Change		-4.7%	-3.8%	3.7%	-1.1%	0.2%	-3.4%	-1.2%	-5.7%	-2.8%	-2.3%	2.6%	3.6%	2.7%	1.5%
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
9	166	173	175	169	165	165	175	163	168	159	158	141	148	149	155
10	187	166	181	175	163	163	163	173	161	166	157	156	140	147	148
11	173	178	171	184	170	161	161	161	170	159	164	155	154	138	145
12	175	166	177	166	180	167	158	158	158	167	156	161	152	151	135
Total: 9-12	701	683	704	694	678	656	657	655	657	651	635	613	594	585	583
Change		-18	21	-10	-16	-22	1	-2	2	-6	-16	-22	-19	-9	-2
%-Change		-2.6%	3.1%	-1.4%	-2.3%	-3.2%	0.2%	-0.3%	0.3%	-0.9%	-2.5%	-3.5%	-3.1%	-1.5%	-0.3%
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Total: PK-12	2027	1974	1955	1958	1918	1878	1863	1850	1838	1825	1806	1793	1775	1763	1755
Change		-53	-19	3	-40	-40	-15	-13	-12	-13	-19	-13	-18	-12	-8
%-Change		-2.6%	-1.0%	0.2%	-2.0%	-2.1%	-0.8%	-0.7%	-0.6%	-0.7%	-1.0%	-0.7%	-1.0%	-0.7%	-0.5%

Buker Elementary

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
K	43	39	35	39	36	33	37	36	36	36	36	35	34	33	34
1	41	46	40	35	39	35	34	39	38	38	37	37	36	35	34
2	44	42	46	44	40	41	37	36	41	40	41	40	40	39	37
3	51	48	39	47	41	39	40	36	35	40	39	40	39	39	38
4	38	51	51	36	46	40	38	38	35	34	39	38	39	38	38
5	41	40	46	49	37	44	38	36	36	33	33	37	36	37	36
Total K-5	258	266	257	250	239	232	224	221	221	221	225	227	224	221	217
Change		8	-9	-7	-11	-7	-8	-3	0	0	4	2	-3	-3	-4
% Change		3.1%	-3.4%	-2.7%	-4.4%	-2.9%	-3.4%	-1.3%	0.0%	0.0%	1.8%	0.9%	-1.3%	-1.3%	-1.8%

Cutler Elementary

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
K	45	41	31	42	50	48	51	50	50	49	48	47	46	45	46
1	57	41	40	33	45	52	50	53	52	52	51	50	49	48	47
2	46	52	39	44	37	46	54	52	55	54	55	54	53	51	50
3	50	48	57	43	43	38	47	55	53	56	55	56	55	54	52
4	56	52	49	60	46	45	40	48	57	55	58	57	58	57	56
5	46	57	48	49	60	46	45	39	47	56	54	57	56	57	56
Total K-5	300	291	264	271	281	275	287	297	314	322	321	321	317	312	307
Change		-9	-27	7	10	-6	12	10	17	8	-1	0	-4	-5	-5
% Change		-3.0%	-9.3%	2.7%	3.7%	-2.1%	4.4%	3.5%	5.7%	2.5%	-0.3%	0.0%	-1.2%	-1.6%	-1.6%

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT
DEMOGRAPHIC STUDY



Winthrop Elementary

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
PK	20	11	20	29	25	25	25	25	25	25	25	25	25	25	25
K	42	53	35	39	34	37	37	36	35	34	34	33	32	31	32
1	40	40	52	38	37	32	36	36	35	34	33	33	32	31	30
2	45	43	44	52	42	39	34	38	38	37	36	35	35	34	33
3	50	48	46	46	50	43	40	35	39	39	38	37	36	36	35
4	41	52	49	46	45	52	45	41	36	40	41	40	38	37	37
5	61	40	54	47	46	45	51	44	40	35	40	41	40	38	37
Total PK-5	279	276	280	268	254	248	243	230	223	219	222	219	213	207	204
Change		-3	4	-12	-14	-6	-5	-13	-7	-4	3	-3	-6	-6	-3
% Change		-1.1%	1.4%	-4.3%	-5.2%	-2.4%	-2.0%	-5.3%	-3.0%	-1.8%	1.4%	-1.4%	-2.7%	-2.8%	-1.4%

Miles River Middle School

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
6	142	151	138	156	142	146	138	137	122	127	128	132	140	138	138
7	154	144	150	141	154	143	147	139	138	123	128	129	134	142	140
8	173	152	142	149	145	153	142	146	138	137	122	127	128	133	141
Total: 6-8	469	447	430	446	441	442	427	422	398	387	378	388	402	413	419
Change		-22	-17	16	-5	1	-15	-5	-24	-11	-9	10	14	11	6
% Change		-4.7%	-3.8%	3.7%	-1.1%	0.2%	-3.4%	-1.2%	-5.7%	-2.8%	-2.3%	2.6%	3.6%	2.7%	1.5%

Hamilton-Wenham Regional High School

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
9	166	173	175	169	165	165	175	163	168	159	158	141	148	149	155
10	187	166	181	175	163	163	163	173	161	166	157	156	140	147	148
11	173	178	171	184	170	161	161	161	170	159	164	155	154	138	145
12	175	166	177	166	180	167	158	158	158	167	156	161	152	151	135
Total: 9-12	701	683	704	694	678	656	657	655	657	651	635	613	594	585	583
Change		-18	21	-10	-16	-22	1	-2	2	-6	-16	-22	-19	-9	-2
% Change		-2.6%	3.1%	-1.4%	-2.3%	-3.2%	0.2%	-0.3%	0.3%	-0.9%	-2.5%	-3.5%	-3.1%	-1.5%	-0.3%

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT DEMOGRAPHIC STUDY



Appendix C: Population Forecast Tables

Hamilton-Wenham Regional School District - Population Forecasts

Males	2010	2015	2020
0-4	331	330	300
5-9	413	400	400
10-14	461	420	410
15-19	649	680	630
20-24	541	560	590
25-29	274	290	300
30-34	201	290	310
35-39	286	310	400
40-44	369	350	370
45-49	485	410	390
50-54	532	470	400
55-59	444	510	450
60-64	335	370	450
65-69	233	250	310
70-74	148	110	120
75-79	125	90	60
80-84	114	120	80
85+	80	90	90
Total	6,021	6,050	6,060

Females	2010	2015	2020
0-4	303	330	300
5-9	430	370	390
10-14	513	440	380
15-19	752	750	670
20-24	627	640	650
25-29	237	270	280
30-34	211	260	290
35-39	290	320	360
40-44	442	350	380
45-49	584	480	390
50-54	549	580	470
55-59	455	540	560
60-64	336	390	490
65-69	252	270	350
70-74	159	200	220
75-79	173	100	130
80-84	160	140	80
85+	145	160	160
Total	6,618	6,590	6,550

Total	2010	2015	2020
0-4	634	660	600
5-9	843	770	790
10-14	974	860	790
15-19	1,401	1,430	1,300
20-24	1,168	1,200	1,240
25-29	511	560	580
30-34	412	550	600
35-39	576	630	760
40-44	811	700	750
45-49	1,069	890	780
50-54	1,081	1,050	870
55-59	899	1,050	1,010
60-64	671	760	940
65-69	485	520	660
70-74	307	310	340
75-79	298	190	190
80-84	274	260	160
85+	225	250	250
Total	12,639	12,640	12,610
Median Age	38.3	37.3	37.7

	2010 to 2015	2015 to 2020
Births	490	480
Deaths	710	710
Natural Increase	-220	-230
Net Migration	220	210
Change	1	-30

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



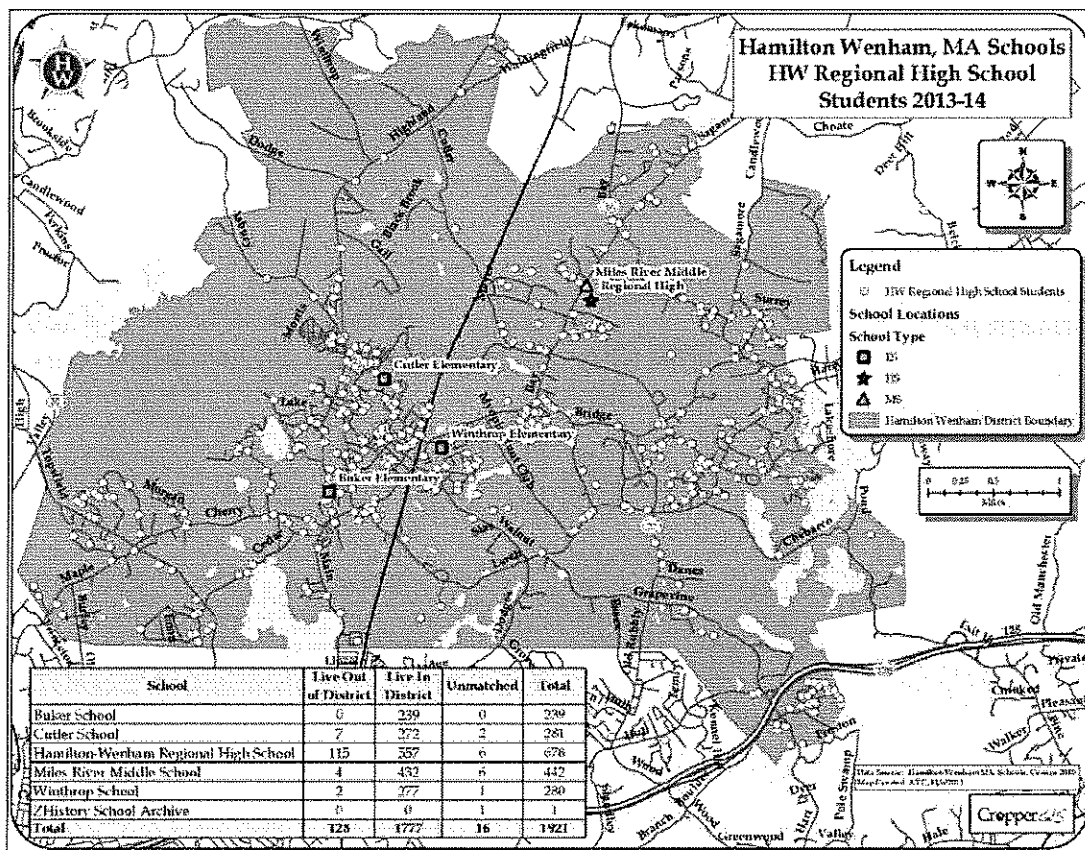
Appendix D: Live Attend Report



LIVE ATTEND ANALYSIS

This map series focuses on illustrating the geographic distribution of Hamilton Wenham students in relation to the district boundary.

Here is an example of a map from this series.



Basic Map Elements

The legend explains how different features are represented, either by a point (e.g. schools and students), or by an area/polygon (e.g. attendance boundaries). The scale bar references the distance ratio of the map in relation to the real world. So the length between 0 and 1 on the map image is equal to a real world distance of one mile.

Please note that each yellow dot represents a student's address, at which, multiple students could reside. Therefore, counting the number of dots shown on the map might not reflect the student population accurately.

Live-Attend Tables

Each map has a table listing various statistics about the student data in the district. Here is a guide for reading this table:

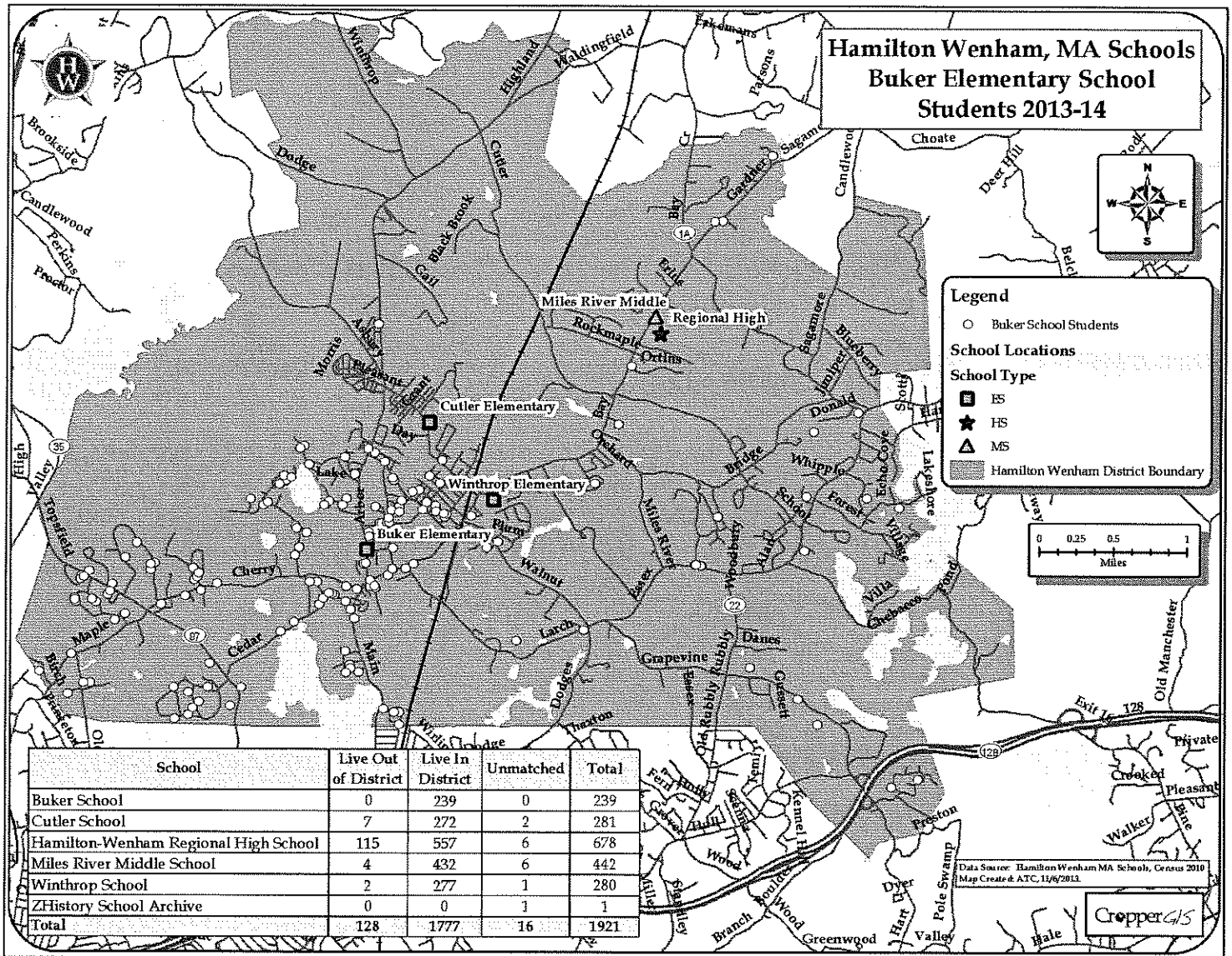
School	Live Out of District	Live In District	Unmatched	Total
Baker School	0	239	0	239
Cutler School	7	272	2	281
Hamilton-Wenham Regional High School	115	557	6	678
Miles River Middle School	4	432	6	442
Winthrop School	2	277	1	280
ZHistory School Archive	0	0	1	1
Total	128	1777	16	1921

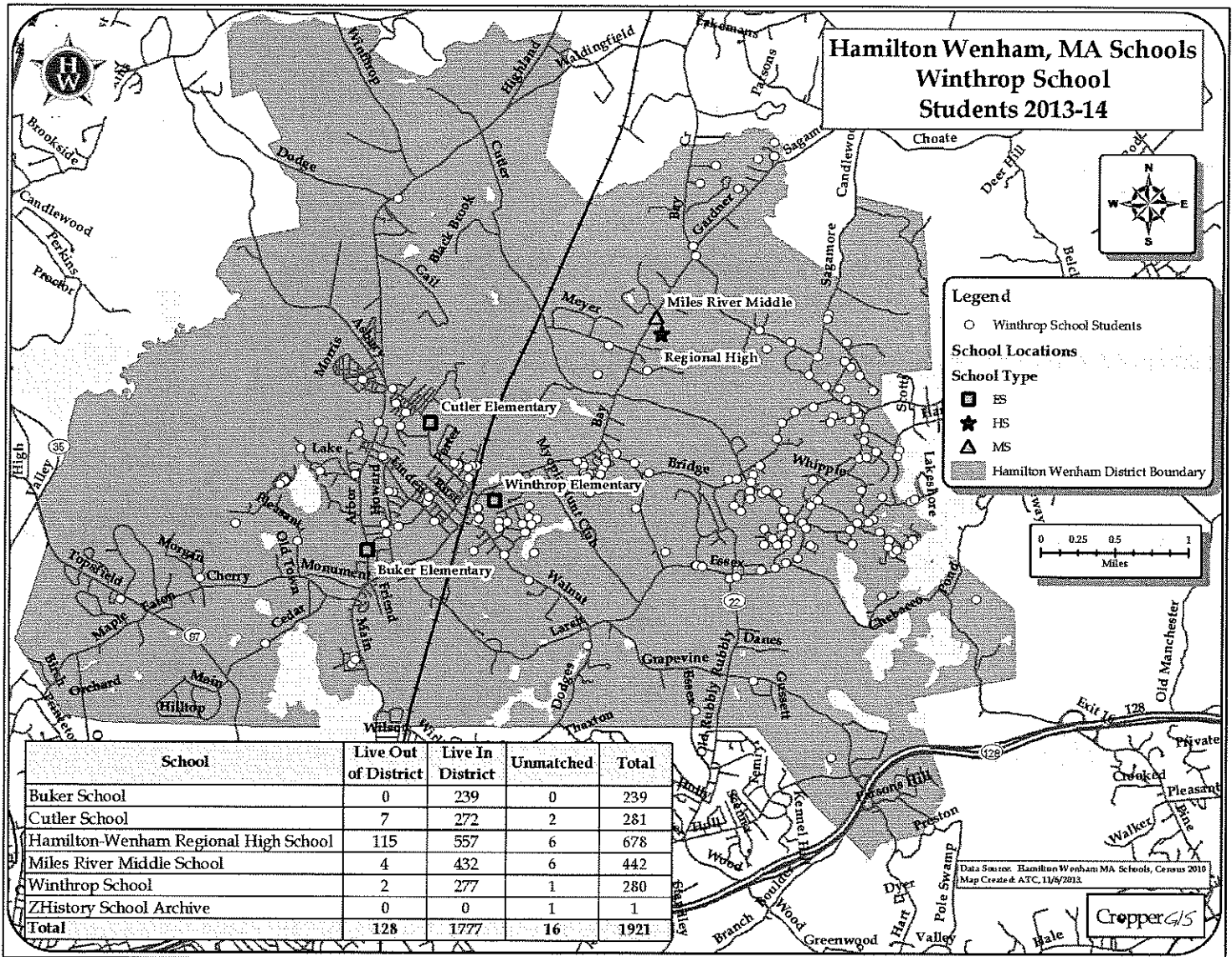
Live Out of District - number of students who live outside of the Hamilton Wenham district yet attend that school

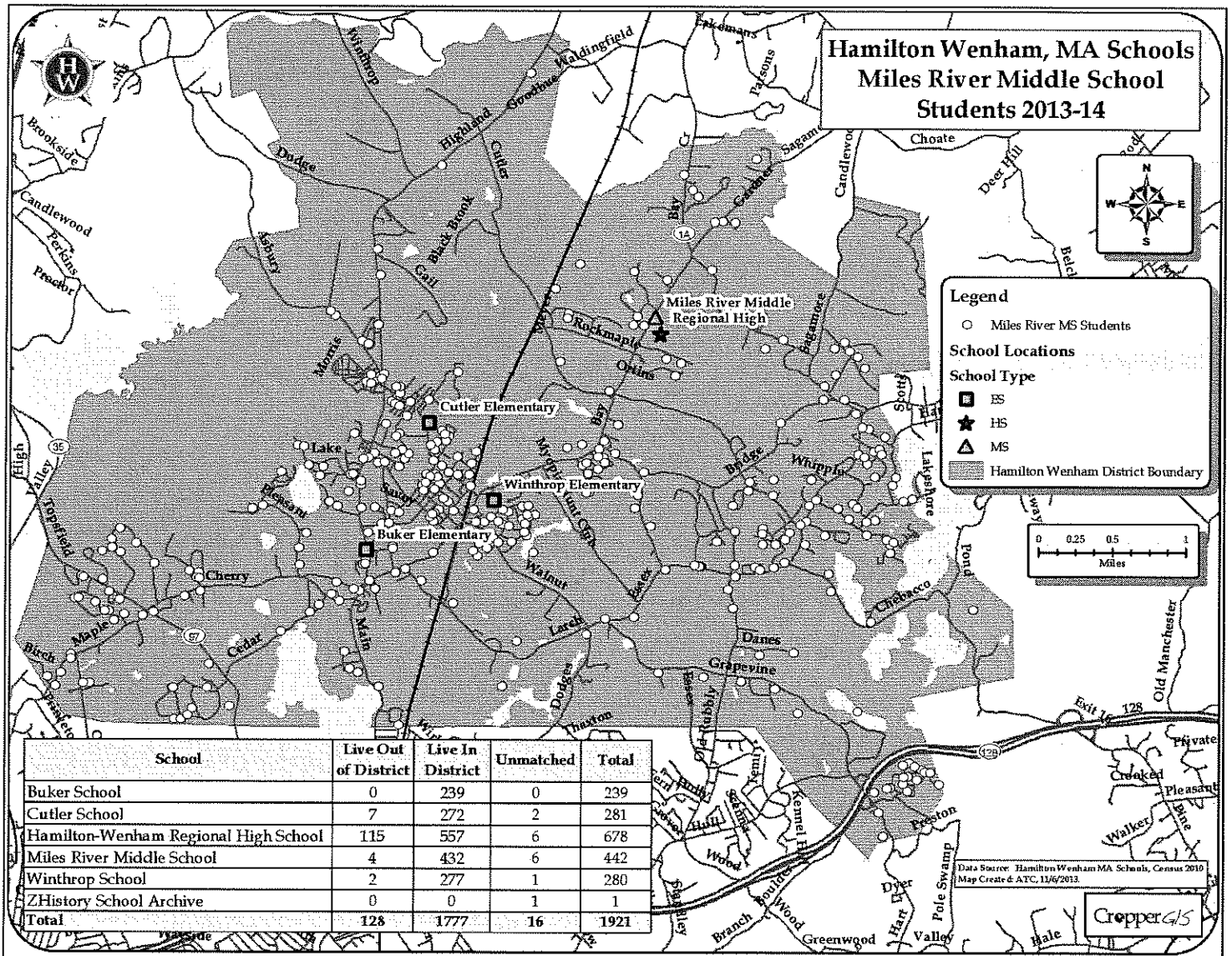
Live In District - number of students who live within the district boundary

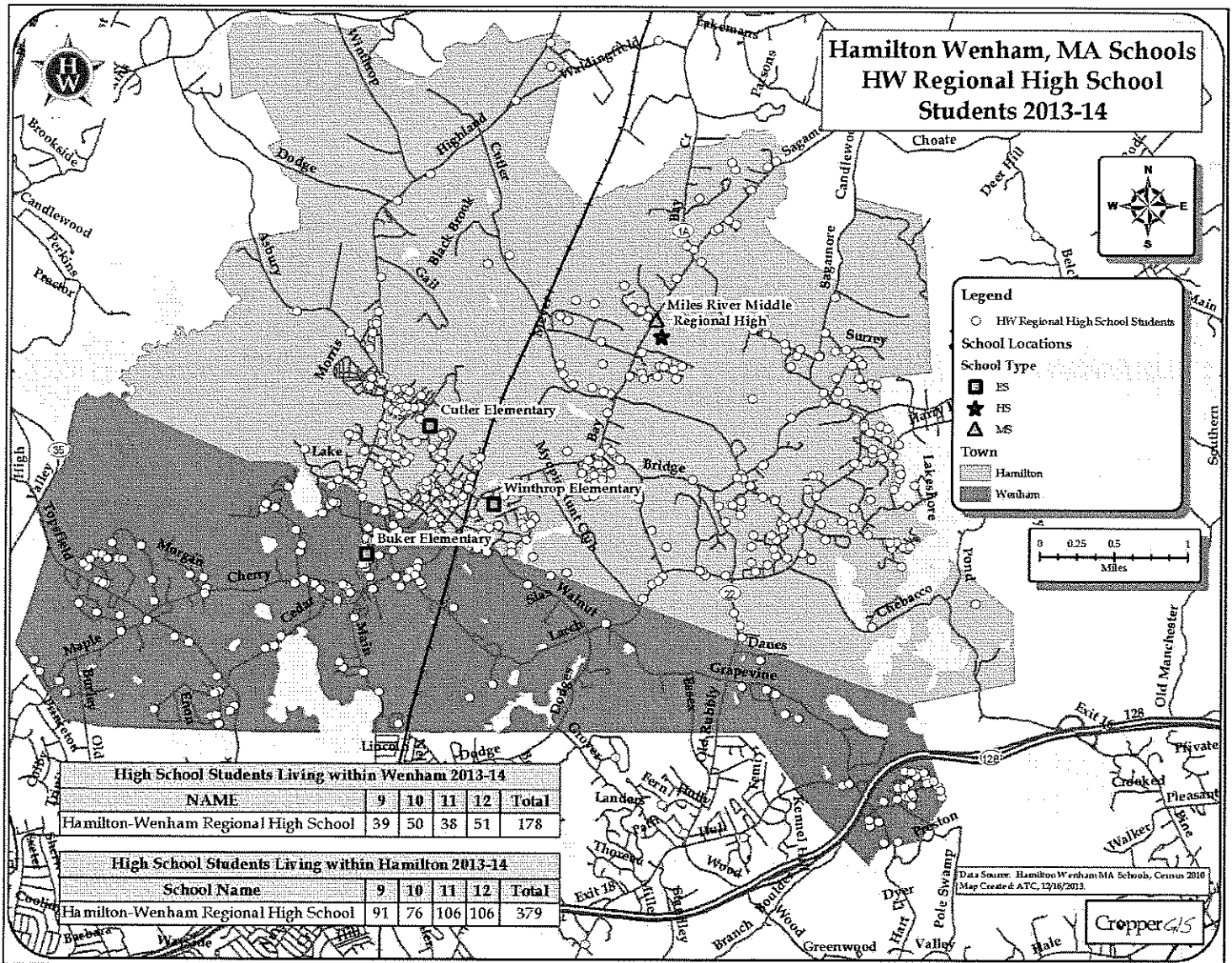
Total - number of students attending each school

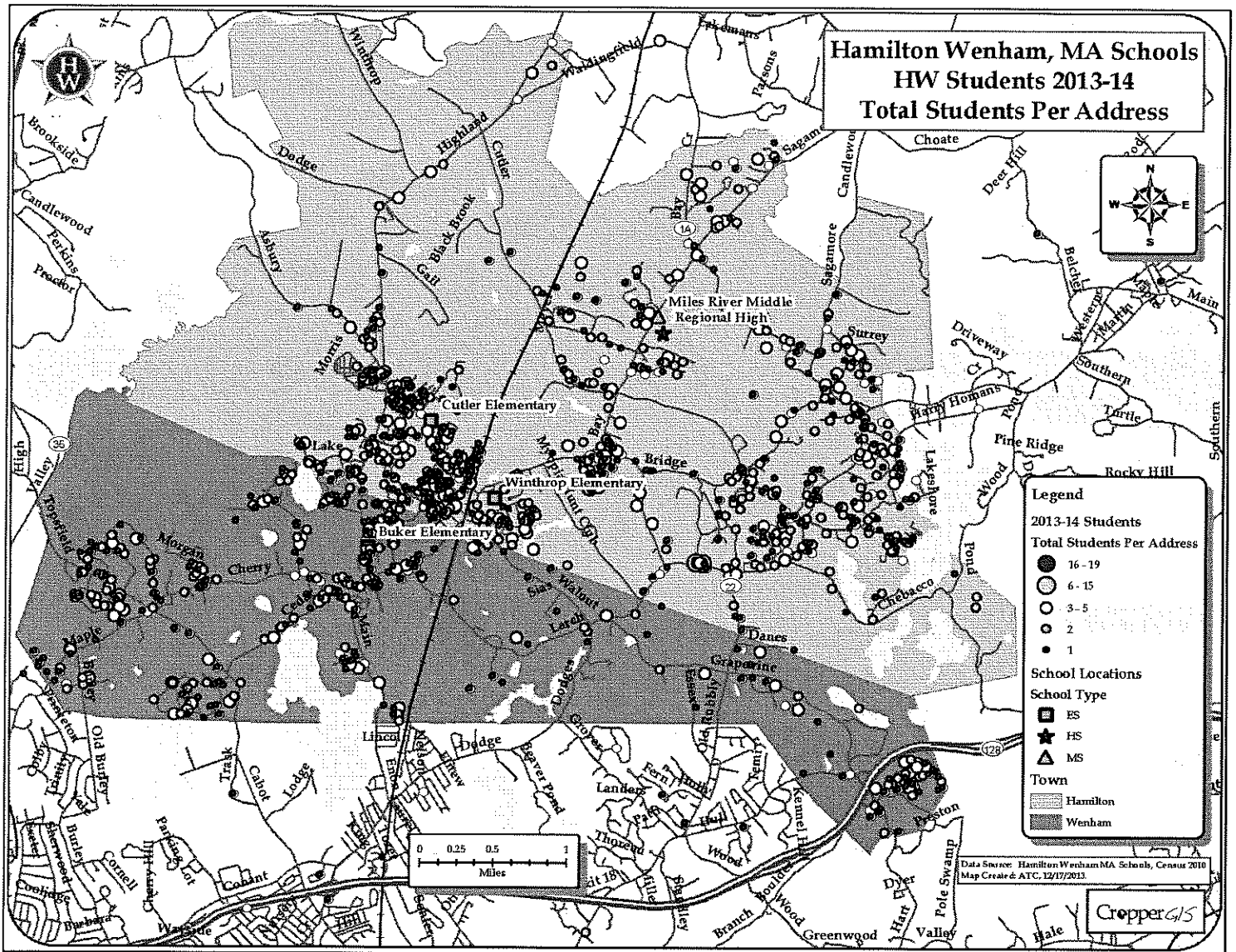
Unmatched - number of students whose addresses were not able to be located, and have not been placed on the map.













Hamilton Wenham HS Students by Town

The table below describes which town the 2013-14 Hamilton Wenham HS students live. According to this table 379 Hamilton-Wenham Regional High School students live in Hamilton, 178 in Wenham, and 121 live out of the district or were unmatched in the GIS.

Where Hamilton Wenham HS Students Live 2013-14			
School Name	Hamilton	Wenham	Out of District or Unmatched
Hamilton-Wenham Regional High School	379	178	121

The following tables show the by grade breakdown of 2013-14 HS students that live in Hamilton, Wenham, or Out of District/Unmatched.

High School Students Living within Wenham 2013-14					
School Name	9	10	11	12	Total
Hamilton-Wenham Regional High School	39	50	38	51	178

High School Students Living within Hamilton 2013-14					
School Name	9	10	11	12	Total
Hamilton-Wenham Regional High School	91	76	106	106	379

High School Students Living Out of District 2013-14					
School Name	9	10	11	12	Total
Hamilton-Wenham Regional High School	33	34	26	22	115

High School Students Unmatched in GIS 2013-14					
School Name	9	10	11	12	Total
Hamilton-Wenham Regional High School	2	3	1		6

**HAMILTON-WENHAM REGIONAL SCHOOL DISTRICT
RESIDENT ENROLLMENT BY TOWN: Final 10/24/16
as of October 1, 2016***

	Resident/Member	Hamilton	Wenham
K-12			
Buker	255	58	197
Cutler	254	214	40
Winthrop	260	227	33
MRMS	401	260	141
HWRHS	508	322	186
SUBTOTAL:	1678	1081	597

	Resident/Member	Hamilton	Wenham
PreK			
SPED	13	10	3
SUBTOTAL:	13	10	3

	Resident/Member	Hamilton	Wenham
Out of District Placements	33	23	10
SUBTOTAL:	33	23	10

TOTAL RESIDENT**	1724	1114	610
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* - Enrollment Data as of Monday, October 3, 2016 per DESE Instructions

** - Does not include Choice (71), Resident Tuitioned-In PreK (18), and Non-Resident Tuitioned- In PreK thru 12 Students (2)

HAMILTON-WENHAM REGIONAL SCHOOL DISTRICT
FINAL 10/24/16: RESIDENT ENROLLMENT BY TOWN
FOR USE IN BUDGETARY APPORTIONMENT CALCULATIONS

	<u>TOTAL</u>	<u>HAMILTON</u>	<u>WENHAM</u>
10/1/2016	1,724	1,114	610
10/1/2015	1,754	1,147	607
10/1/2014	1,765	1,168	597
3 Year AVG:		65.40%	34.60%
PR YR 3 Year AVG:		66.60%	33.40%
Change:		-1.20%	1.20%

Hamilton Wenham Regional School District
Historic Data: Resident Student Enrollment
Final October 24, 2016

Resident Student Enrollments as of October 1st:

	<u>Hamilton</u>	<u>Wenham</u>	<u>District</u>
10/1/2004	1,455	642	2,097
10/1/2005	1,391	644	2,035
10/1/2006	1,372	634	2,006
10/1/2007	1,330	632	1,962
10/1/2008	1,306	641	1,947
10/1/2009	1,280	628	1,908
10/1/2010	1,267	584	1,851
10/1/2011	1,274	571	1,845
10/1/2012	1,274	560	1,834
10/1/2013	1,224	571	1,795
10/1/2014	1,168	597	1,765
10/1/2015	1,147	607	1,754
10/1/2016	1,114	610	1,724

Trailing 3 Year % Actual (Current Method):

10/1/2016 (FY18B)	65.40%	34.60%
10/1/2015 (FY17B)	66.60%	33.40%
10/1/2014 (FY16B)	67.96%	32.04%
10/1/2013 (FY15B)	68.91%	31.09%
10/1/2012 (FY14B)	68.99%	31.01%
10/1/2011 (FY13B)	68.18%	31.82%
10/1/2010 (FY12B)	67.53%	32.47%
10/1/2009 (FY11B)	67.32%	32.68%
10/1/2008 (FY10B)	67.76%	32.24%
10/1/2007 (FY09B)	68.18%	31.82%
10/1/2006 (FY08B)	68.72%	31.28%



2015-16 Enrollment Projections

TO: Dr. Michael M. Harvey, Superintendent of Schools, Hamilton-Wenham RSD, MA.
FROM: Donald G. Kennedy, Ed.D., Demographic Specialist
DATE: February 19, 2016
RE: Enrollment Projections (dated December 10, 2015)

We are pleased to send you the enclosed documents displaying the past, present, and projected enrollments for the Hamilton-Wenham RSD. We have used the figures given to us by the district and we assume that the method of collecting the enrollment data has been consistent from year to year. It is worth noting that this time of transition is the most difficult of the past 25 years to reliably forecast future enrollments, due to the irregular/uneven pace of communities recovering from the effects of the economic cycle upon real estate markets and school enrollments.

NESDEC's enrollment projection totals for the Hamilton-Wenham district from fall of 2014 data came within 11 students of the actual Grade K-12 enrollment total for fall, 2015 (1,718 projected v. 1,707 actual). In Grades K-5, 789 pupils were projected v. 782 enrolled, a variance of 7 children, in Grades 6-8, 411 pupils were forecast v. 402 enrolled - a difference of 9 students. In Grades 9-12, projections fell within 5 pupils (518 projected v. 523 actual). In Kindergarten the most difficult grade to forecast, 123 children were projected v. 119 enrolled, a variance of only 4 children. The NESDEC projection for the **Hamilton** K-12 total was right on target (1,116 were forecast and 1,116 enrolled). **Wenham** fell within 11 students of the projected number for K-12. (602 projected v. 591 enrolled). **Hamilton** registered 8 **fewer** Kindergarteners than expected, (89 projected v. 81 enrolled) while **Wenham** registered 4 **more** students than projected with 34 projected v. 38 registered.

The two factors now at work which will have the greatest effect upon future enrollments are: the varying number of births to residents of **Hamilton-Wenham** and, to a greater degree, b. the buildup of new in-migration which had slowed, due to the real estate slowdown. The students currently in Grades 1-10 were born during a period when **Hamilton-Wenham** was averaging 134 births per year. Recently (and expected over the next 6-7 years) are about 106-123 births annually...averaging about 22 fewer per year than previously. The decline in births at present is spread fairly evenly between **Hamilton (almost 13 fewer)** and **Wenham (almost 9 fewer)**, each of

which is experiencing fewer births per year. Hard-hit Connecticut experienced an 8.6% decline in births from 2007 to 2009 (in part caused by the economic Recession), the largest decline among the six New England states – followed by an 8.1% decline in Rhode Island births, the two states with the highest rates of unemployment in the New England region – **Massachusetts births declined by only 3.9% over these three years**. Economists are forecasting a slow-yet-steady recovery from the current rates of unemployment which, in turn, may lead to additional in-migration and births. The unemployment rate as of December, 2015 in CT was 5.2%; RI 5.1%; US non-farm unemployment 5.0% (US unemployment was above 10% during the Great Recession); New England average 4.7%; **MA 4.7%**; ME 4.0%; VT 3.6%; and NH 3.1% - other nearby states: NJ 5.1%; PA 4.8%; NY 4.8%. This rate affects the likelihood of improving real estate sales, residential construction and number of new families moving into the community.

The ever-changing relationship between Hamilton-Wenham births and Kindergarten enrollments is displayed on the B-K graphs. **Hamilton-Wenham** combined over the past seven years, have registered about 99 Kindergarteners for every 100 births (five years previous), a relationship which has been fairly stable but has increased slightly over the last three years. This fall there were 106 Kindergarteners for every 100 births registered in the district. However, the towns vary somewhat, a common experience in small communities. In **Hamilton**, about 93 children register for Kindergarten per 100 births five years prior. This fall there were 91 Kindergarten students registered per every 100 births. In **Wenham**, about 124 Kindergarteners register per 100 births five years prior. This fall there were 165 Kindergarten students registered per every 100 births. Grade 1 in **Hamilton** is expected to be 2% smaller as Kindergarten transitions into the next grade, whereas in **Wenham**, Grade 1 is expected to be 16% larger than the prior year's Kindergarten.

“Hidden Trends” within the district: Like many nearby communities Hamilton-Wenham continues to experience enrollment fluctuations of in/out-migration in Grades 1-8 (Grades 9-12 are excluded from this calculation, as often there sometimes is a decrease of 11% in Grade 9 in **Hamilton** and a 5% decrease in **Wenham** for vocational choices that have little to do with families moving out of the two communities). There are additional trends and counter-trends to consider. More so than other grade levels, **Grades 1-8 in most districts tend to be quite stable in their numbers.** For example, if last year the Grade 1-7 total was 1,000 children, then (if no one moved in or out) this fall's Grades 2-8 would equal 1,000 – the same cohort of children. Because Grades 1-8 tend to be the most stable in total K-12 enrollment, these Grades 1-8 are excellent places to discover “hidden trends” that otherwise might go unnoticed and provide a useful yardstick by which to measure a district's tendency toward in-/out-migration. The past three school years have seen a very slight average net in-migration into Hamilton-Wenham at grade levels which more commonly experience stability. For example, in **Hamilton-Wenham**, the 943 children in Grades 1-7 in 2013-14 **decreased by 1 student** and resulted in 942 children in Grades 2-8 in the 2014-15 school year. The 917 children in Grades 1-7 in 2014-15,

increased by 2 students to become 919 in 2015-16. In **Hamilton** this year, there are 597 students in Grades 2-8 v. 600 in Grades 1-7 last year (2014-15), a net **loss** of 3 students. In **Wenham** in 2015-16 there was a net **gain** of 5 students in these grades (317 v. 322 in 2014-15), a departure from the gain of 18 students experienced from 2013-14 to 2014-15. The presence of a net in/out-migration trend is **evidence of the complexity of enrollments in these unsettled economic times**, quite opposite from the factor of declining numbers of births. Analysis of these hidden trends provides an additional benchmark by which to assess enrollment trends.

Over the next three years, K-5 enrollments in **Hamilton-Wenham** are forecast to **increase** by a total of 17 students. Grades 6-8 to **decrease** by 15 children; and Grades 9-12 to **decrease** by 31 pupils ...all within the next three years. After that point these projections show a general trend towards fairly stable enrollments across all grade levels with fluctuations in some years as classes move through the grades. Looking at the individual towns, over the next three school years, the K-5 enrollment in **Hamilton** is forecast to **decline** by 29 children; to **increase slightly** by 2 students in Grades 6-8; and to **decrease** by 33 pupils in Grades 9-12. Years #6-10 indicate a trend towards slight fluctuations year to year resulting in the total K-12 projected decrease in **Hamilton** to be 138 students over a decade. **Wenham** is projected to **increase** by 46 children in Grades K-5 over the next three years; to **decrease** by 17 students in Grades 6-8; to **increase slightly** by 2 pupils in Grades 9-12 ...all as classes move up the grades. Over the decade, K-12 **Wenham** enrollments are forecast to **increase** by 118 students. That said, it is quite possible that real estate turnover in both communities will have increased, bringing in additional new families - see the "Projections" page.

Will these patterns of increasing enrollments really last for as long as ten years? That is difficult to answer. All projections are more reliable in Years #1-5; and less reliable in Years #6-10. As soon as the economy and real estate situation become more stable in the region, additional in-migration may occur in Hamilton-Wenham. Many communities in the region sold during 2008-2013 only about 60-80% as many homes as in 2003-2005. Building permits had slowed as well; see the "Additional Data" table below. According to data from the Warren Group, Wenham's 2015 single family sales total was the second highest in the past 29 years. Hamilton's single family sales total was the second highest in 16 years. Should this sales pattern continue, it is likely that **as additional families move in, any forecasted declines may require adjustment.** See the description on Page 4 below regarding "reliability of projections". The birth numbers used in the projections, through 2012, are from the MA Department of Public Health. The "estimated" years, beginning with 2013 are a rolling five-year average, which NESDEC has found to be the most accurate method of estimation. Local City/Town Clerks have up-to-date birth information however do not have access to the numbers of Hamilton-Wenham residents born out-of-state (information which will eventually become known to the MA DPH).

The two most difficult grades to forecast in all districts are Kindergarten and Grade 9. The latter is difficult to anticipate, as there are so many options for Grade 9 (in vocational or agricultural schools, private or parochial non-public schools, etc.). Kindergarten can be difficult to project based upon births alone, as many districts have large numbers of “net move-ins/move-outs” who are ages 1-4. **Some districts take the extra steps to track 3 and 4-year olds with a local census, or report to NESDEC the known number of 4-year olds in local preschools/nursery schools which typically enroll Kindergarteners in the district. Knowing this information helps NESDEC to project Kindergarteners more reliably...as does data from the Kindergarten Screening in districts which also track 3 and 4-year old siblings (or neighbors) at that time. The more data, in addition to births, which is sent to NESDEC, the greater is the chance that “enrollment surprises” will be minimized.**

Will many new families be moving into our school district? Everyday across America, 10,000 “Baby Boomers” celebrate their 65th birthday - a phenomenon which will continue for a decade. New England has a disproportionately large share of these senior citizens, many of whom had planned to “downsize” their living arrangements, yet postponed putting homes on the market due to the Great Recession. School enrollments are influenced strongly by the number of real estate sales, as these contribute new families moving into many districts. In over 80% of districts, the number of real estate sales is 4-5 times larger than the number of building permits for new residential construction – **thus the number of real estate sales often is a more important factor than building permits.**

In New England, how rapidly will additional homes be placed on the market? A mid-2014 study using data from the Federal Housing Finance Agency, Bureau of Economic Analysis and the U.S. Census Bureau directly links home prices to the “real Gross Domestic Product” (GDP) in each of the nine regions in the country. However New England ranks only 7th among the 9 regions in the recovery of its regional economy (as measured in “the bubble” prior to the Recession, in “real GDP”). Comparing the regional economies from 2 Quarter of 2007 to 4 Quarter 2013: W. South Central = +18.6% (that is, many jobs are available); W. North Central +11.8%; Pacific +7.4%; E. South Central + 5.6%; Middle Atlantic + 5.1%; Mountain + 4.1%; **New England +3.4%;** South Atlantic + 2.1%; and E. North Central + 2.0%. Home sales prices are +14.6% in the W. South Central region (including Texas, Arkansas, Louisiana, and Oklahoma) with the strongest “real G.D.P.” v. -4.4% in New England. Thus, although real estate sales and rentals are very strong in some New England towns and cities, there are many senior citizens still refraining from placing their homes on the market – as house prices still may be rising. New England births, however, are likely to remain at low levels, due to the advanced age of the New England population.



Historical Public Enrollments

1. After the "YEAR" column can be found the "BIRTHS" column. The number of births to residents for each of eleven years is displayed. Note any trends, e.g., have births been decreasing? increasing? leveling off? Kindergarten and Grade 1 enrollments normally are quite responsive to these fluctuations.
2. Look **down** the K and 1 columns, noting the direction of the trend. This affords a comparison of these classes over a ten-year period. Add the K and Grade 1 enrollments of the first school year recorded, and compare them with the sum of the current K and Grade 1 enrollments.
3. Take the first K class and follow it diagonally to trace its movement to Grade 1, 2, etc. up to its current 10th grade status. This comparison (which can be accomplished for other classes also) gives some measure of the effects of migration in your school district. If a sixth grade class today is larger than it was as a K class six years ago, then net in-migration probably has occurred; if it is smaller, then net out-migration probably has occurred.
4. Compare each K class with the previous year's graduating class. Note which is larger and by what amount one surpasses the other. Larger graduating classes generally reflect declining enrollments; larger K classes generally indicate increasing enrollments.
5. In the "Grade Combinations" section, note the trends of elementary, middle school and high school enrollments. A significant and consistent trend in these summaries usually results in the corresponding trend for projected enrollments. If enrollments are leveling off in the elementary grades after a period of decline, then the secondary enrollments might be expected to continue to decline for several years until the leveling off experience has had time to take hold at the secondary grades.

Enrollment Projections

1. Note the trends exhibited in the total K-12 (or 1-12) projection for the next five years as well as the projections for various grade combinations. The trends on this page should generally exhibit a continuation of the trends mentioned above for historical enrollments, although the **rate** of change may be quite different.
2. Look at the births in the most recent years and note whether the trend is up, down, or level.
3. Make similar comparisons as appropriate on this page as were suggested for the "Historical Public Enrollments" page.

PROJECTION METHODOLOGY

Cohort component (survival) technique is a frequently used method of preparing enrollment forecasts. NESDEC uses this method, but modifies it in order to move away from forecasts which are wholly computer or formula driven. Such modification permits the incorporation of important, current town-specific information into the generation of the enrollment forecasts (such as the volume of real estate sales, building permits, in/out-migration, etc.). Basically, percentages are calculated from the historical enrollment data to determine a reliable percentage of increase or decrease in enrollment between any two grades. For example, if 100 students enrolled in Grade 1 in 2013-14, increased to 104 students in Grade 2 in 2014-15, the percentage of survival would have been 104% or a ratio of 1.04. Such ratios are calculated between each pair of grades or years in school over several recent years.

After study and analysis of the historical ratios, and based upon a reasonable set of assumptions regarding births, migration rates, retention rates, etc., ratios most indicative of future growth patterns are determined for each pair of grades. The ratios thus selected are applied to the present enrollment statistics for a pre-determined number of years. The ratios used are the key factors in the reliability of the projections, given the validity of the data at the starting point. The strength of the ratios lies in the fact that each ratio encompasses **collectively** the variables that account for increases or decreases in the size of a grade enrollment as it moves on to the next grade. Each ratio represents the cumulative effect of the following factors:

1. Real estate turnover and new residential construction;
2. Migration, in or out, of the schools;
3. Drop-outs, transfers, etc.;

4. Births to residents;
5. Retention in the same grade.

RELIABILITY OF ENROLLMENT PROJECTIONS

Projections can serve as useful guides to school administrators for educational planning. In this regard, the projections are generally most reliable when they are closest in time to the current year. Projections six to ten years out may serve as a guide to future enrollments, and are useful for facility planning purposes. However, they should be viewed as subject to change given the likelihood of changes in the underlying assumptions/trends.

Projections that are based upon **the children who already are in the district** (the current K-12 population only) will be the most reliable; the second level of reliability will be for those children already **born into the community but not yet old enough to be in school**. A less reliable category is the group for which an estimate must be made **to predict the number of births**, thereby adding an additional variable. See these three multi-colored groupings on the “Projected Enrollment” slide/page.

How often do the actual enrollments closely match the NESDEC projections? The research literature reports the closest that enrollment forecasters are likely to come to actual enrollments is about 1% variance per year-from-the-known-data. That is, a 1% variance from projection-to-actual “one-year-out” into the future (2% variance “two-years-out” ... 10% variance “ten-years-out”). NESDEC reaches this “highest possible” standard in about 90% of cases. When our NESDEC variance is greater, the reasons often are one of the following: a. imbedded/intervening “hidden” variables (examples: a parochial school closed or other students returned from non-public schools, a charter school opened, the Kindergarten program changed entrance age or to extended/full-day, the high school toughened its course credit/graduation requirements, the District set new attendance boundaries for elementary schools, or the District had well-publicized budget/referendum academic accreditation difficulties); b. the District size was below 500 students, thus subject to fluctuations in total numbers; or c. the District has not done enrollment projections on an annual basis.

Annual updates allow for early identification of recent changes in historical trends. When the actual enrollment in a grade is significantly different (high or low) from the projected number, it is important (yet difficult) to determine whether this is a one-year aberration or whether a new trend may have begun. **In light of this possibility, NESDEC urges all school districts to have updated enrollment forecasts developed by NESDEC each October.** This service is available at no cost to affiliated school districts.

Using This Information Electronically

If you would like to extract the information contained in this report for your own documents or presentations, you can use Adobe Acrobat reader to convert the desired information to a “snapshot,” which can be inserted into PowerPoint slides, Word documents, etc. Because the snapshot tool creates a graphic, the image is not editable.

Steps for Using The Snapshot Tool in Adobe Acrobat Reader 8.0:

1. Click on Tools Menu;
2. Choose “Select & Zoom;”
3. Choose “Snapshot Tool;”
4. Click and drag around the text, chart, and/or graphics that you would like to capture: your selection will be copied to the clipboard automatically;
5. Click in the document where you would like the information to appear;*
6. Give Paste command.

If you have an earlier version of Adobe Acrobat and these instructions don’t work for you, contact your tech support person, or NESDEC and we will try to assist you. Telephone (508)481-9444 or ep@nesdec.org. Ask for Peggy, Don, or Carol.

*You may paste your snapshot onto a PowerPoint slide, onto an Excel sheet, or even into a graphics program to save as a separate graphic file (in .jpg or other format), so that it is available for inserting into future documents.

Hamilton-Wenham RSD, MA Historical Enrollment

School District: Hamilton-Wenham RSD, MA

12/10/2015

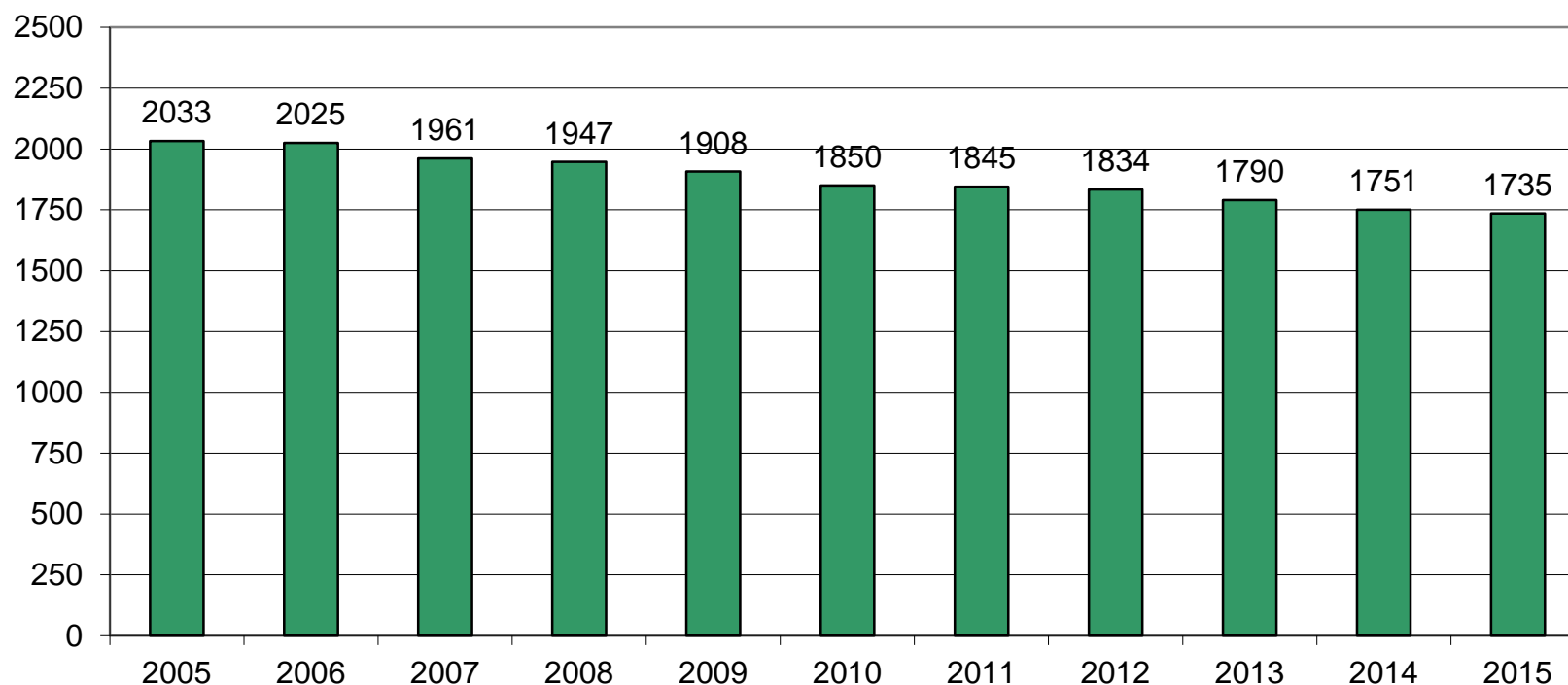
Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2000	133	2005-06	24	118	138	138	149	176	169	183	154	181	155	145	165	138	0	2009	2033
2001	146	2006-07	34	143	129	140	141	148	174	170	178	154	161	149	147	157	0	1991	2025
2002	156	2007-08	29	125	141	130	146	144	146	165	166	177	139	163	147	143	0	1932	1961
2003	149	2008-09	33	124	132	145	135	147	144	144	166	158	168	135	167	149	0	1914	1947
2004	127	2009-10	19	127	133	135	151	133	148	142	143	172	144	165	139	157	0	1889	1908
2005	142	2010-11	11	132	125	132	144	155	134	150	144	141	154	138	156	134	0	1839	1850
2006	123	2011-12	20	101	131	127	137	149	148	135	149	142	148	161	143	152	2	1825	1845
2007	133	2012-13	28	120	106	139	134	137	146	156	138	148	134	145	162	141	0	1806	1834
2008	114	2013-14	23	120	121	119	133	135	139	142	154	141	132	129	144	158	0	1767	1790
2009	119	2014-15	18	142	128	123	121	135	135	136	139	153	128	128	129	136	0	1733	1751
2010	112	2015-16	28	119	146	123	129	125	140	132	135	135	143	128	125	127	0	1707	1735

Historical Enrollment in Grade Combinations									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2005-06	912	888	1071	1406	687	518	335	938	603
2006-07	909	875	1045	1377	676	502	332	946	614
2007-08	861	832	997	1340	654	508	343	935	592
2008-09	860	827	971	1295	612	468	324	943	619
2009-10	846	827	969	1284	605	457	315	920	605
2010-11	833	822	972	1257	569	435	285	867	582
2011-12	813	793	928	1219	574	426	291	895	604
2012-13	810	782	938	1224	588	442	286	868	582
2013-14	790	767	909	1204	576	437	295	858	563
2014-15	802	784	920	1212	563	428	292	813	521
2015-16	810	782	914	1184	542	402	270	793	523

Historical Percentage Changes			
Year	K-12	Diff.	%
2005-06	2009	0	0.0%
2006-07	1991	-18	-0.9%
2007-08	1932	-59	-3.0%
2008-09	1914	-18	-0.9%
2009-10	1889	-25	-1.3%
2010-11	1839	-50	-2.6%
2011-12	1825	-14	-0.8%
2012-13	1806	-19	-1.0%
2013-14	1767	-39	-2.2%
2014-15	1733	-34	-1.9%
2015-16	1707	-26	-1.5%
Change		-302	-15.0%

Hamilton-Wenham RSD, MA Historical Enrollment

PK-12, 2005-2015



Hamilton-Wenham RSD, MA Projected Enrollment

School District: Hamilton-Wenham RSD, MA

12/10/2015

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2010	112		2015-16	28	119	146	123	129	125	140	132	135	135	143	128	125	127	0	1707	1735
2011	106		2016-17	29	116	123	152	125	131	127	137	130	134	123	140	126	120	0	1684	1713
2012	123		2017-18	31	133	120	128	153	128	133	124	135	129	122	121	139	123	0	1688	1719
2013	110		2018-19	32	119	138	125	130	156	131	130	123	134	118	120	119	135	0	1678	1710
2014	110		2019-20	34	119	123	144	127	133	160	130	128	122	122	116	119	116	0	1659	1693
2015	112	(est.)	2020-21	35	121	123	128	146	130	136	157	128	127	111	120	114	115	0	1656	1691
2016	112	(est.)	2021-22	37	122	125	128	130	149	133	134	155	128	116	109	119	111	0	1659	1696
2017	113	(est.)	2022-23	38	122	126	130	130	133	153	132	132	155	118	114	108	115	0	1668	1706
2018	112	(est.)	2023-24	40	121	126	131	132	133	136	151	130	132	142	117	113	104	0	1668	1708
2019	112	(est.)	2024-25	41	121	125	131	133	135	136	133	149	130	121	140	115	109	0	1678	1719
2020	112	(est.)	2025-26	43	121	125	130	133	136	138	134	131	149	120	119	138	113	0	1687	1730

*Projections should be updated on an annual basis.



Based on an estimate of births



Based on children already born



Based on students already enrolled

Projected Enrollment in Grade Combinations*									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2015-16	810	782	914	1184	542	402	270	793	523
2016-17	803	774	911	1175	528	401	264	773	509
2017-18	826	795	919	1183	521	388	264	769	505
2018-19	831	799	929	1186	518	387	257	749	492
2019-20	840	806	936	1186	540	380	250	723	473
2020-21	819	784	941	1196	548	412	255	715	460
2021-22	824	787	921	1204	550	417	283	738	455
2022-23	832	794	926	1213	572	419	287	742	455
2023-24	819	779	930	1192	549	413	262	738	476
2024-25	822	781	914	1193	548	412	279	764	485
2025-26	826	783	917	1197	552	414	280	770	490

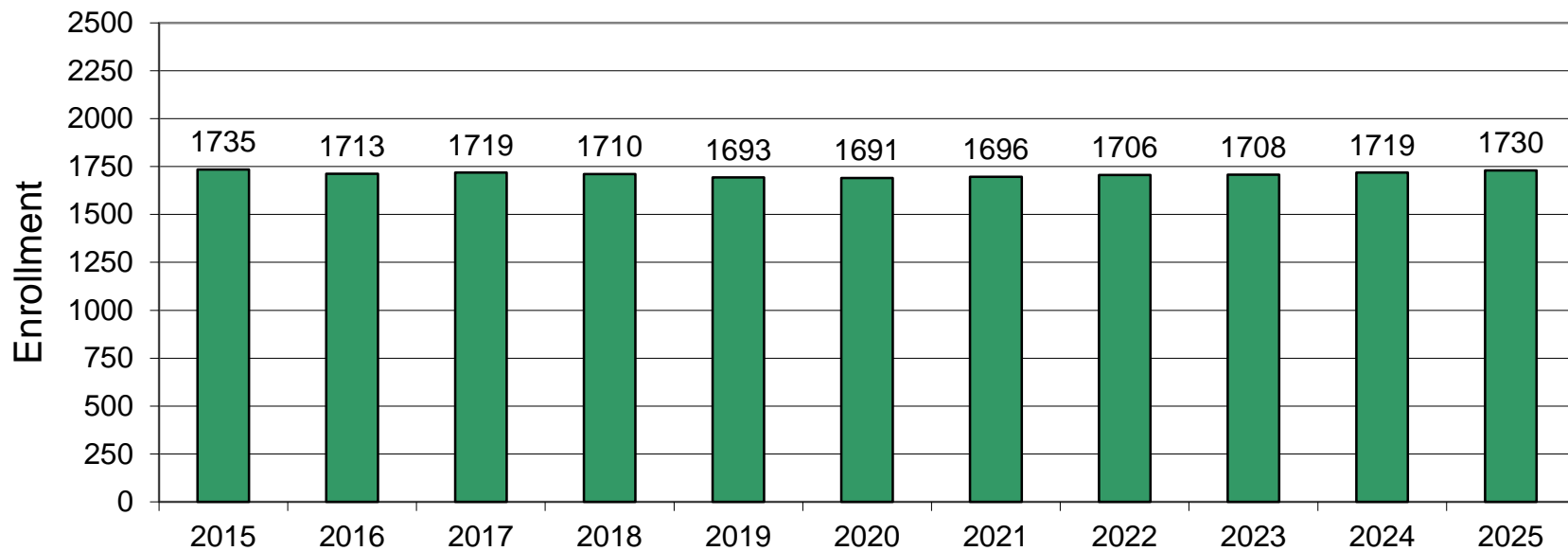
See "Reliability of Enrollment Projections" section of accompanying letter.

Projections are more reliable for Years #1-5 in the future than for Years #6 and beyond.

Projected Percentage Changes			
Year	K-12	Diff.	%
2015-16	1707	0	0.0%
2016-17	1684	-23	-1.3%
2017-18	1688	4	0.2%
2018-19	1678	-10	-0.6%
2019-20	1659	-19	-1.1%
2020-21	1656	-3	-0.2%
2021-22	1659	3	0.2%
2022-23	1668	9	0.5%
2023-24	1668	0	0.0%
2024-25	1678	10	0.6%
2025-26	1687	9	0.5%
Change	-20	-1.2%	

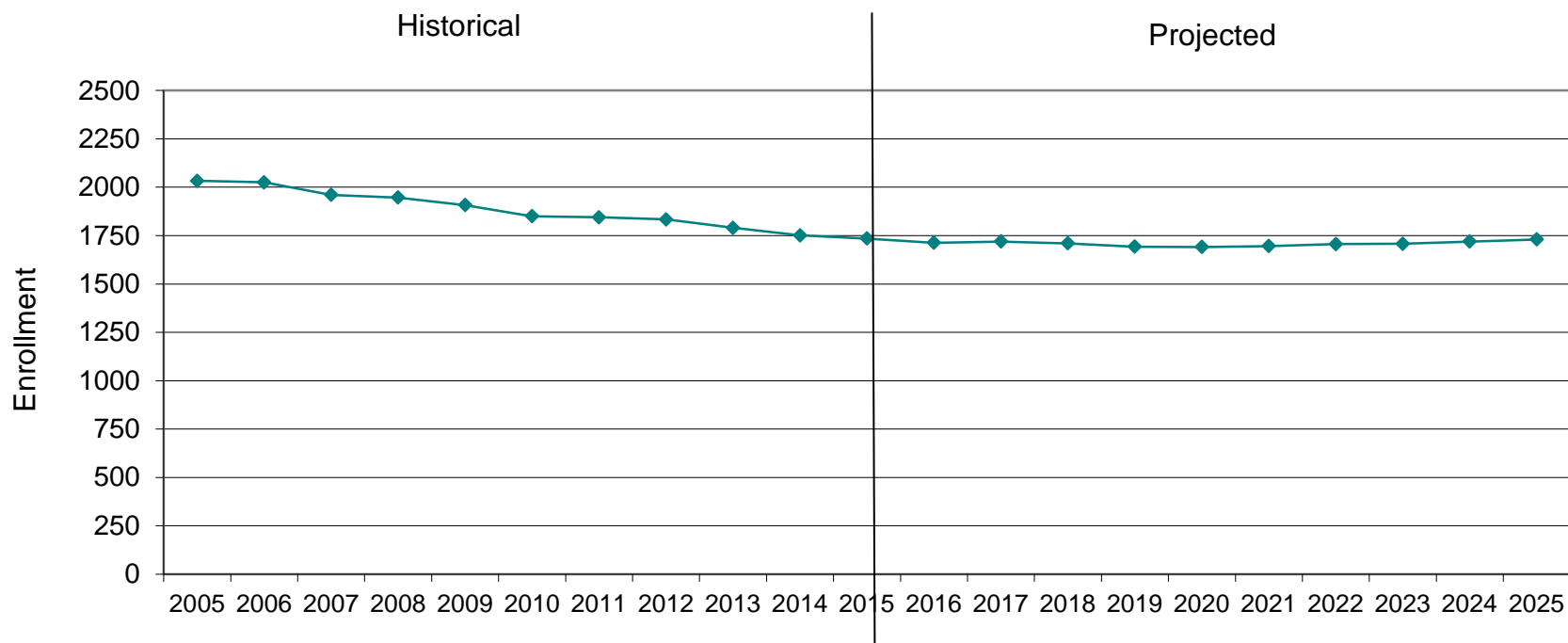
Hamilton-Wenham RSD, MA Projected Enrollment

PK-12 TO 2025 Based On Data Through School Year 2015-16

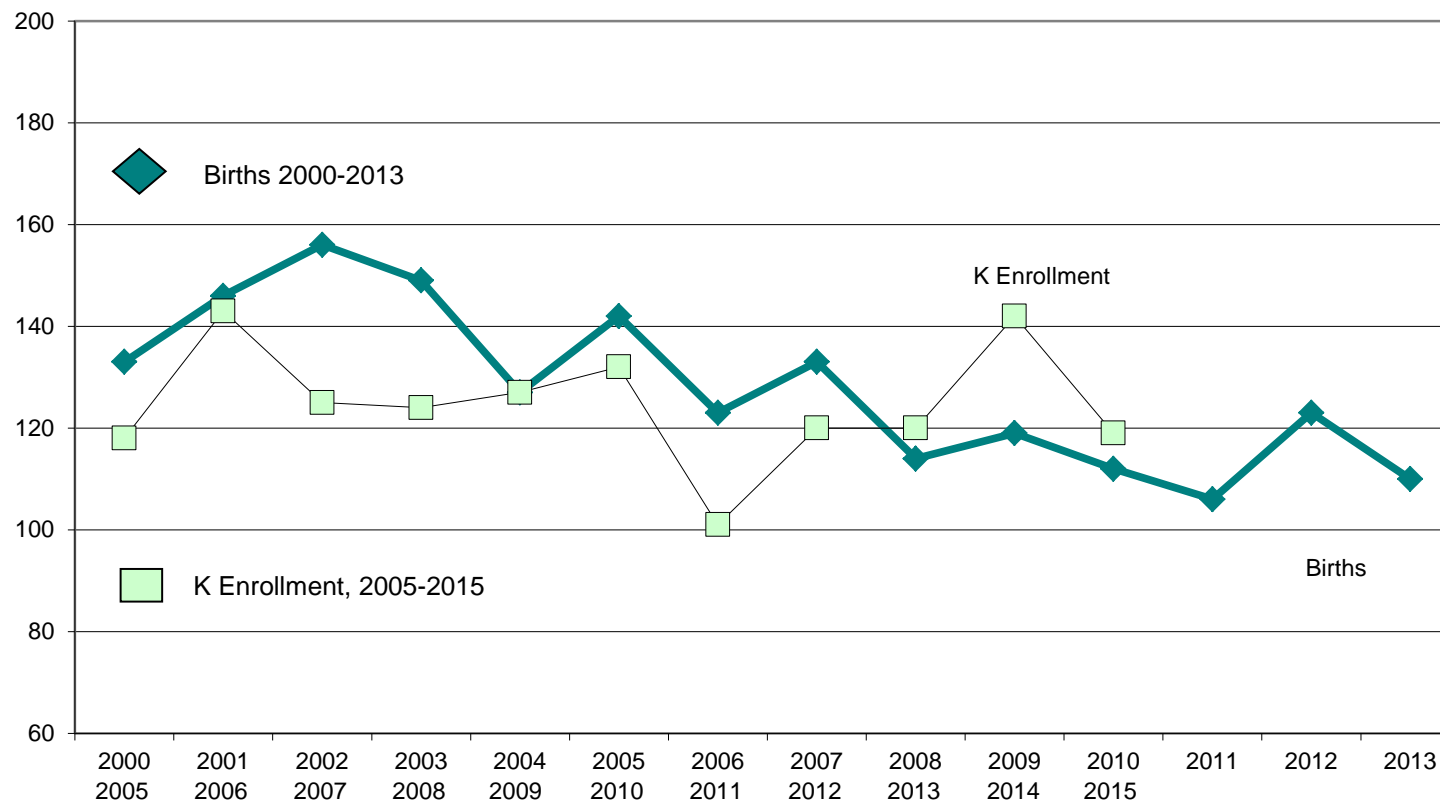


Hamilton-Wenham RSD, MA Historical & Projected Enrollment

PK-12, 2005-2025



Hamilton-Wenham RSD, MA Birth-to-Kindergarten Relationship



Hamilton, MA Historical Enrollment

School District: Hamilton, MA

11/24/2015

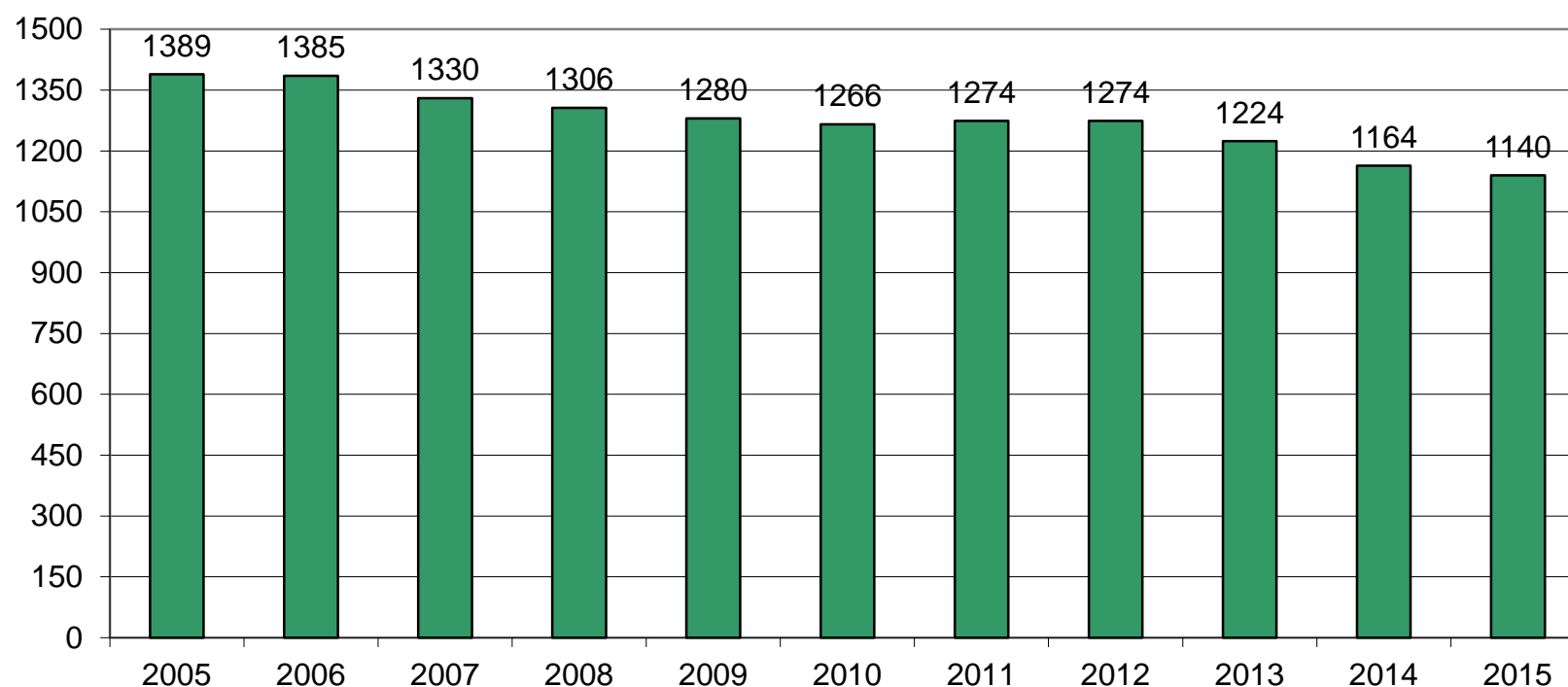
Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2000	102	2005-06	16	76	94	82	100	125	118	122	95	127	110	104	121	99	0	1373	1389
2001	103	2006-07	22	103	88	95	86	99	122	121	119	95	112	105	105	113	0	1363	1385
2002	118	2007-08	24	81	100	85	101	88	98	115	116	119	86	112	101	104	0	1306	1330
2003	107	2008-09	25	86	83	102	91	103	90	94	116	110	108	84	114	100	0	1281	1306
2004	86	2009-10	14	80	93	87	107	92	104	87	94	121	100	109	86	106	0	1266	1280
2005	110	2010-11	6	109	79	94	91	110	91	108	89	96	111	98	101	83	0	1260	1266
2006	93	2011-12	14	77	102	80	97	92	105	89	108	90	102	116	101	99	2	1260	1274
2007	100	2012-13	23	90	80	101	83	102	89	106	91	106	86	105	112	100	0	1251	1274
2008	93	2013-14	18	80	89	87	97	84	98	86	107	93	93	79	106	107	0	1206	1224
2009	91	2014-15	15	98	75	86	86	95	84	91	83	104	80	88	80	99	0	1149	1164
2010	89	2015-16	24	81	98	72	89	87	95	81	92	81	98	80	86	76	0	1116	1140

Historical Enrollment in Grade Combinations									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2005-06	611	595	717	939	462	344	222	656	434
2006-07	615	593	714	928	457	335	214	649	435
2007-08	577	553	668	903	448	350	235	638	403
2008-09	580	555	649	875	410	320	226	632	406
2009-10	577	563	650	865	406	302	215	616	401
2010-11	580	574	682	867	384	293	185	578	393
2011-12	567	553	642	840	392	287	198	616	418
2012-13	568	545	651	848	392	303	197	600	403
2013-14	553	535	621	821	384	286	200	585	385
2014-15	539	524	615	802	362	278	187	534	347
2015-16	546	522	603	776	349	254	173	513	340

Historical Percentage Changes			
Year	K-12	Diff.	%
2005-06	1373	0	0.0%
2006-07	1363	-10	-0.7%
2007-08	1306	-57	-4.2%
2008-09	1281	-25	-1.9%
2009-10	1266	-15	-1.2%
2010-11	1260	-6	-0.5%
2011-12	1260	0	0.0%
2012-13	1251	-9	-0.7%
2013-14	1206	-45	-3.6%
2014-15	1149	-57	-4.7%
2015-16	1116	-33	-2.9%
Change		-257	-18.7%

Hamilton, MA Historical Enrollment

PK-12, 2005-2015



Hamilton, MA Projected Enrollment

School District: Hamilton, MA

11/24/2015

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2010	89		2015-16	24	81	98	72	89	87	95	81	92	81	98	80	86	76	0	1116	1140
2011	80		2016-17	24	76	79	98	72	89	86	91	81	91	72	94	80	81	0	1090	1114
2012	96		2017-18	25	91	74	79	97	72	88	82	91	80	81	69	94	76	0	1074	1099
2013	87		2018-19	25	83	89	74	79	97	71	84	82	90	71	78	69	89	0	1056	1081
2014	86		2019-20	26	82	81	89	74	79	96	68	84	81	80	68	78	65	0	1025	1051
2015	88	(est.)	2020-21	26	83	80	81	89	74	78	91	68	83	72	77	68	74	0	1018	1044
2016	87	(est.)	2021-22	27	83	81	80	81	89	73	74	91	67	74	69	77	64	0	1003	1030
2017	89	(est.)	2022-23	27	84	81	81	80	81	88	70	74	90	60	71	69	73	0	1002	1029
2018	87	(est.)	2023-24	28	83	82	81	81	80	80	84	70	73	80	58	71	65	0	988	1016
2019	87	(est.)	2024-25	28	83	81	82	81	81	79	76	84	69	65	77	58	67	0	983	1011
2020	88	(est.)	2025-26	29	83	81	81	82	81	80	75	76	83	62	62	77	55	0	978	1007

*Projections should be updated on an annual basis.



Based on an estimate of births



Based on children already born



Based on students already enrolled

Projected Enrollment in Grade Combinations*									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2015-16	546	522	603	776	349	254	173	513	340
2016-17	524	500	591	763	349	263	172	499	327
2017-18	526	501	583	754	341	253	171	491	320
2018-19	518	493	577	749	327	256	172	479	307
2019-20	527	501	569	734	329	233	165	456	291
2020-21	511	485	576	727	320	242	151	442	291
2021-22	514	487	561	719	305	232	158	442	284
2022-23	522	495	565	729	322	234	164	437	273
2023-24	515	487	571	714	307	227	143	417	274
2024-25	515	487	563	716	308	229	153	420	267
2025-26	517	488	563	722	314	234	159	415	256

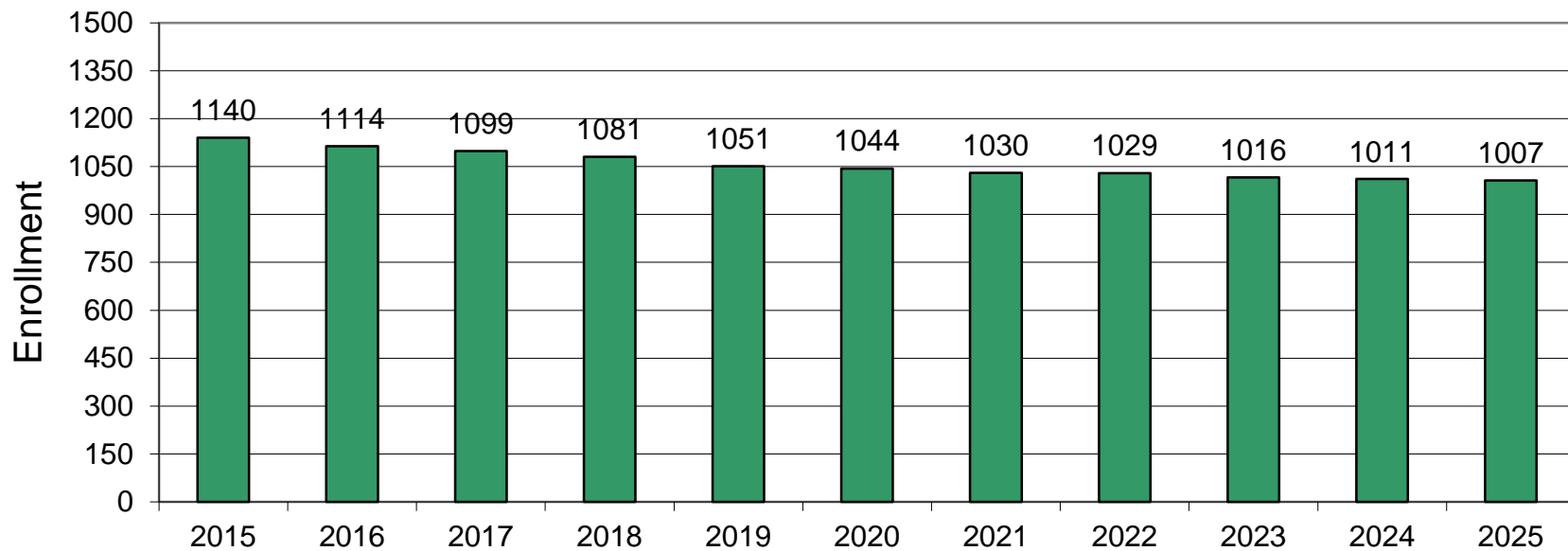
See "Reliability of Enrollment Projections" section of accompanying letter.

Projections are more reliable for Years #1-5 in the future than for Years #6 and beyond.

Projected Percentage Changes			
Year	K-12	Diff.	%
2015-16	1116	0	0.0%
2016-17	1090	-26	-2.3%
2017-18	1074	-16	-1.5%
2018-19	1056	-18	-1.7%
2019-20	1025	-31	-2.9%
2020-21	1018	-7	-0.7%
2021-22	1003	-15	-1.5%
2022-23	1002	-1	-0.1%
2023-24	988	-14	-1.4%
2024-25	983	-5	-0.5%
2025-26	978	-5	-0.5%
Change		-138	-12.4%

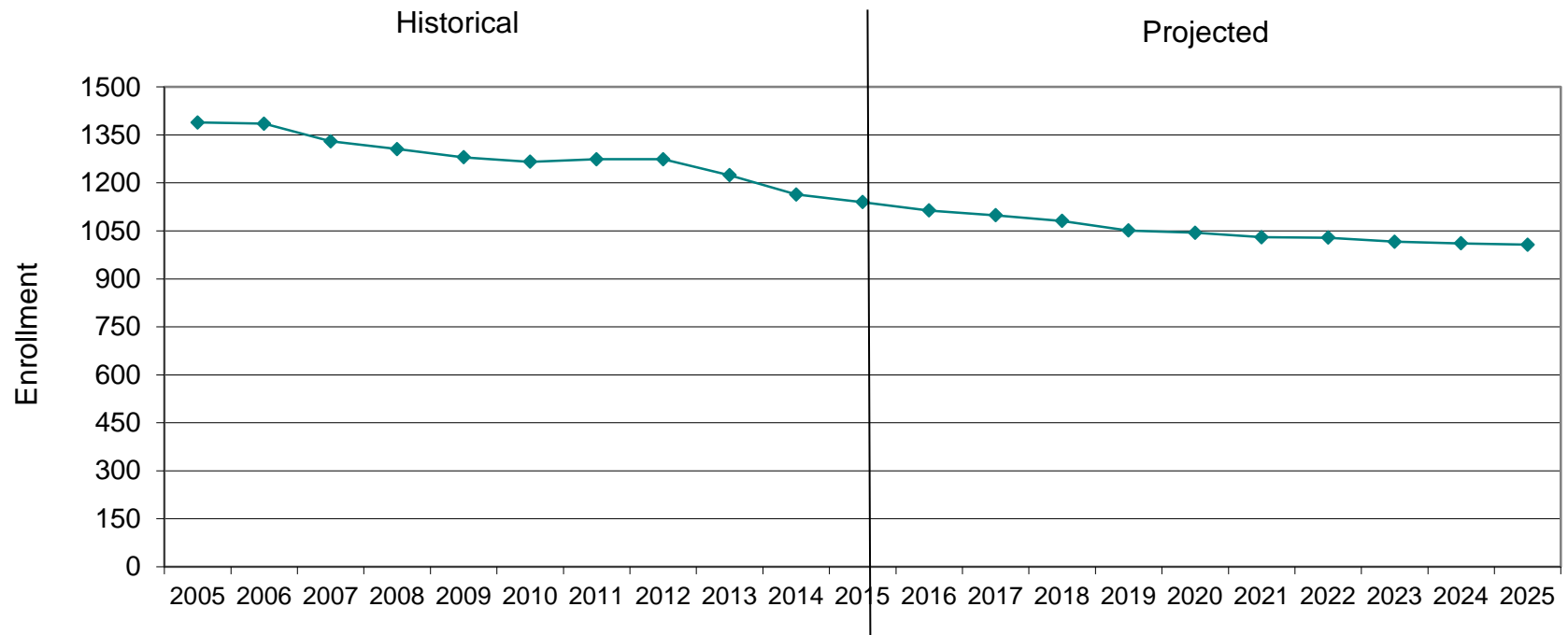
Hamilton, MA Projected Enrollment

PK-12 TO 2025 Based On Data Through School Year 2015-16

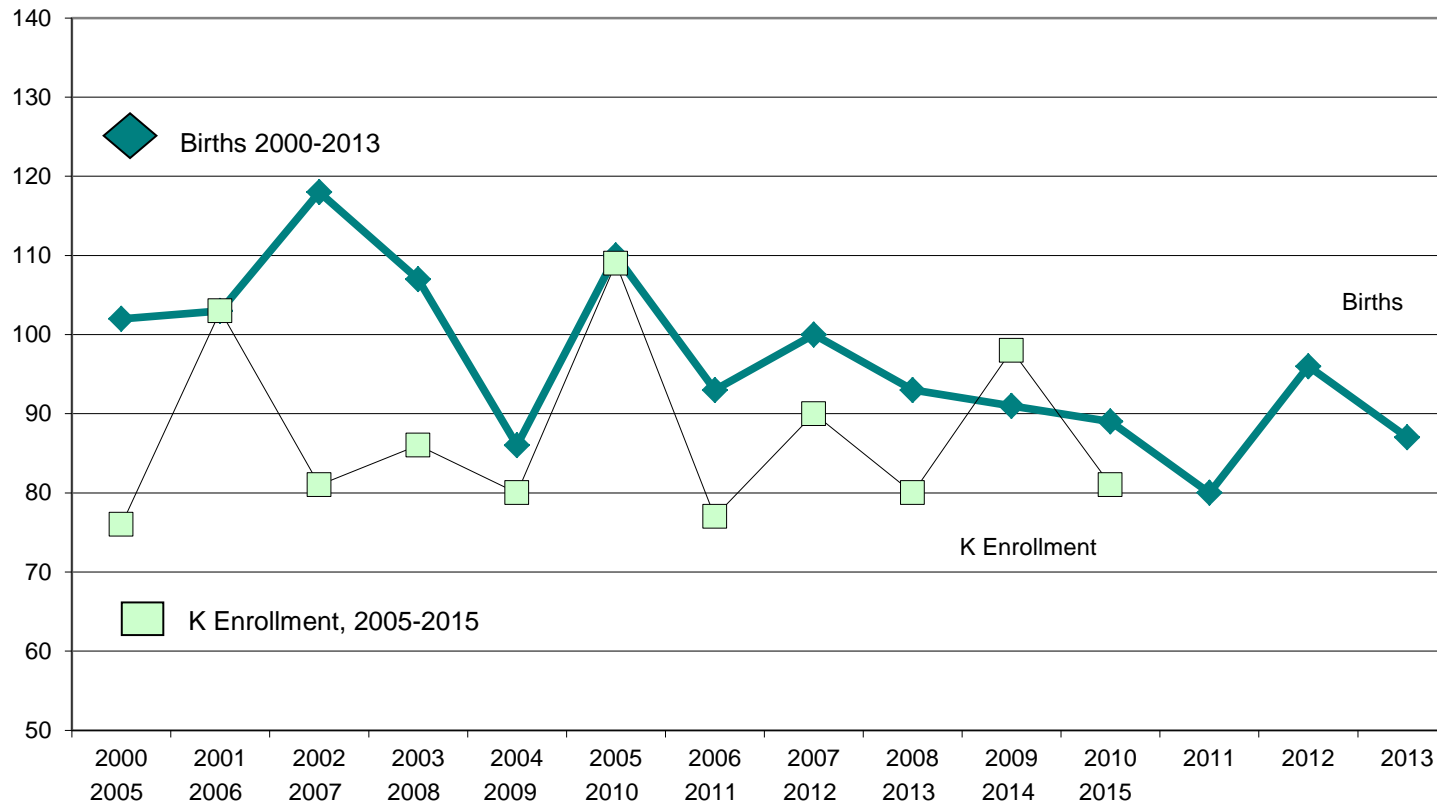


Hamilton, MA Historical & Projected Enrollment

PK-12, 2005-2025



Hamilton, MA Birth-to-Kindergarten Relationship



Hamilton, MA Additional Data

Building Permits Issued		
Year	Single-Family	Multi-Units
2005	3	0
2011	1	0
2012	3	0
2013	10	0
2014	5	0
2015	2 to Oct 31	0

Source: HUD and Building Department

Enrollment History		
Year	Voc-Tech 9-12 Total	Non-Public K-12 Total
2005-06	3	244
2011-12	9	237
2012-13	6	187
2013-14	9	196
2014-15	12	230
2015-16	15	221

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of Oct. 1	K	1	2	3	4	5	6	7	8	9	10	11	12	K-12 TOTAL
	15	14	16	16	23	15	18	11	12	16	21	25	19	221

K-12 Home-Schooled Students	
2015	38

K-12 Residents "Choiced-out" or in Charter or Magnet Schools	
2015	2

K-12 Special Education Outplaced Students	
2015	17

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2015	93

The above data were used to assist in the preparation of the enrollment projections. If additional demographic work is needed, please contact our office.

Wenham, MA Historical Enrollment

School District: Wenham, MA

12/10/2015

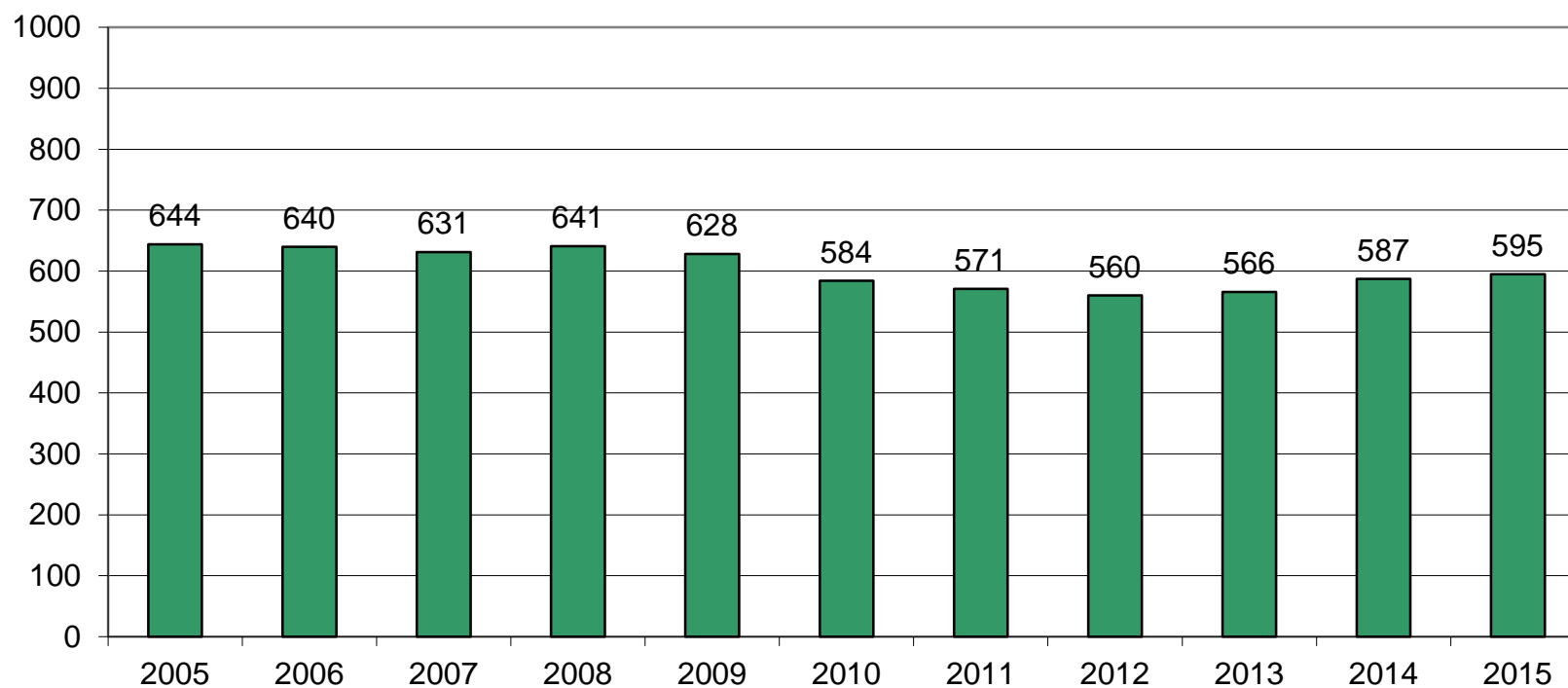
Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2000	31	2005-06	8	42	44	56	49	51	51	61	59	54	45	41	44	39	0	636	644
2001	43	2006-07	12	40	41	45	55	49	52	49	59	59	49	44	42	44	0	628	640
2002	38	2007-08	5	44	41	45	45	56	48	50	50	58	53	51	46	39	0	626	631
2003	42	2008-09	8	38	49	43	44	44	54	50	50	48	60	51	53	49	0	633	641
2004	41	2009-10	5	47	40	48	44	41	44	55	49	51	44	56	53	51	0	623	628
2005	32	2010-11	5	23	46	38	53	45	43	42	55	45	43	40	55	51	0	579	584
2006	30	2011-12	6	24	29	47	40	57	43	46	41	52	46	45	42	53	0	565	571
2007	33	2012-13	5	30	26	38	51	35	57	50	47	42	48	40	50	41	0	555	560
2008	21	2013-14	5	40	32	32	36	51	41	56	47	48	39	50	38	51	0	561	566
2009	28	2014-15	3	44	53	37	35	40	51	45	56	49	48	40	49	37	0	584	587
2010	23	2015-16	4	38	48	51	40	38	45	51	43	54	45	48	39	51	0	591	595

Historical Enrollment in Grade Combinations									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2005-06	301	293	354	467	225	174	113	282	169
2006-07	294	282	331	449	219	167	118	297	179
2007-08	284	279	329	437	206	158	108	297	189
2008-09	280	272	322	420	202	148	98	311	213
2009-10	269	264	319	419	199	155	100	304	204
2010-11	253	248	290	390	185	142	100	289	189
2011-12	246	240	286	379	182	139	93	279	186
2012-13	242	237	287	376	196	139	89	268	179
2013-14	237	232	288	383	192	151	95	273	178
2014-15	263	260	305	410	201	150	105	279	174
2015-16	264	260	311	408	193	148	97	280	183

Historical Percentage Changes			
Year	K-12	Diff.	%
2005-06	636	0	0.0%
2006-07	628	-8	-1.3%
2007-08	626	-2	-0.3%
2008-09	633	7	1.1%
2009-10	623	-10	-1.6%
2010-11	579	-44	-7.1%
2011-12	565	-14	-2.4%
2012-13	555	-10	-1.8%
2013-14	561	6	1.1%
2014-15	584	23	4.1%
2015-16	591	7	1.2%
Change		-45	-7.1%

Wenham, MA Historical Enrollment

PK-12, 2005-2015



Wenham, MA Projected Enrollment

School District: Wenham, MA

12/10/2015

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2010	23		2015-16	4	38	48	51	40	38	45	51	43	54	45	48	39	51	0	591	595
2011	26		2016-17	5	40	44	54	53	42	41	46	49	43	51	46	46	39	0	594	599
2012	27		2017-18	6	42	46	49	56	56	45	42	44	49	41	52	45	47	0	614	620
2013	23		2018-19	7	36	49	51	51	59	60	46	41	44	47	42	50	46	0	622	629
2014	24		2019-20	8	37	42	55	53	54	64	62	44	41	42	48	41	51	0	634	642
2015	25	(est.)	2020-21	9	38	43	47	57	56	58	66	60	44	39	43	46	41	0	638	647
2016	25	(est.)	2021-22	10	39	44	48	49	60	60	60	64	61	42	40	42	47	0	656	666
2017	25	(est.)	2022-23	11	38	45	49	50	52	65	62	58	65	58	43	39	42	0	666	677
2018	24	(est.)	2023-24	12	38	44	50	51	53	56	67	60	59	62	59	42	39	0	680	692
2019	24	(est.)	2024-25	13	38	44	49	52	54	57	57	65	61	56	63	57	42	0	695	708
2020	25	(est.)	2025-26	14	38	44	49	51	55	58	59	55	66	58	57	61	58	0	709	723

*Projections should be updated on an annual basis.



Based on an estimate of births



Based on children already born



Based on students already enrolled

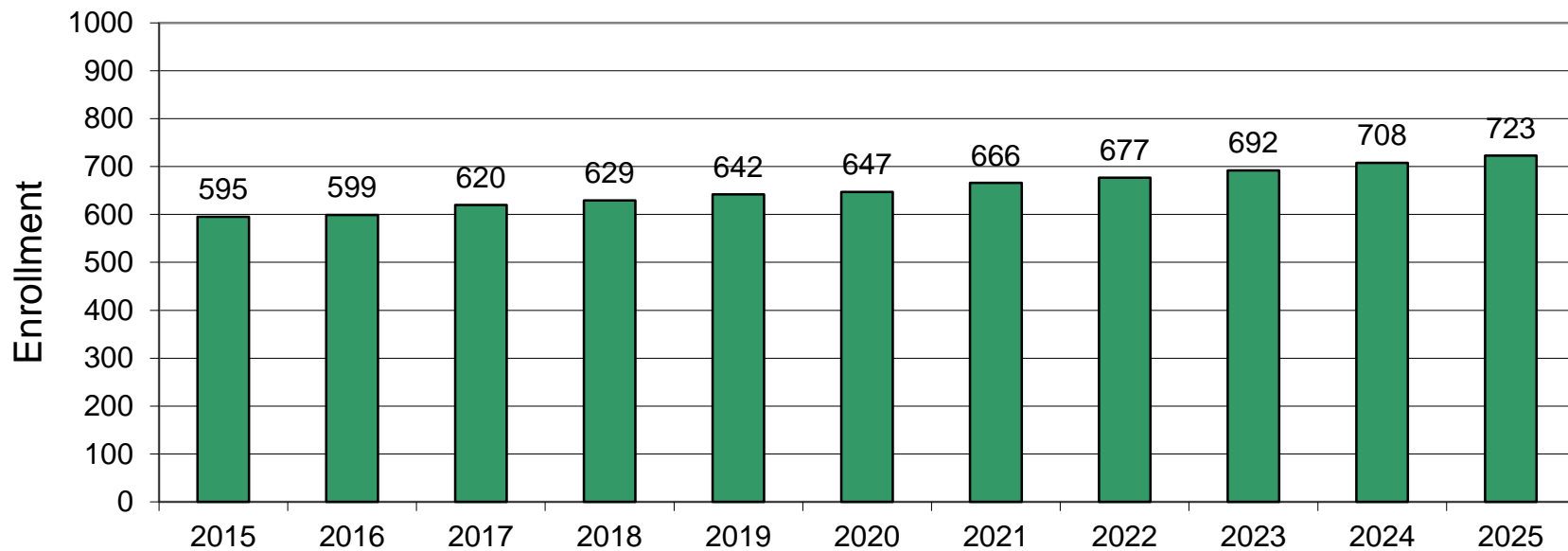
Projected Enrollment in Grade Combinations*									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2015-16	264	260	311	408	193	148	97	280	183
2016-17	279	274	320	412	179	138	92	274	182
2017-18	300	294	336	429	180	135	93	278	185
2018-19	313	306	352	437	191	131	85	270	185
2019-20	313	305	367	452	211	147	85	267	182
2020-21	308	299	365	469	228	170	104	273	169
2021-22	310	300	360	485	245	185	125	296	171
2022-23	310	299	361	484	250	185	123	305	182
2023-24	304	292	359	478	242	186	119	321	202
2024-25	307	294	351	477	240	183	126	344	218
2025-26	309	295	354	475	238	180	121	355	234

See "Reliability of Enrollment Projections" section of accompanying letter.
Projections are more reliable for Years #1-5 in the future than for Years #6 and beyond.

Projected Percentage Changes			
Year	K-12	Diff.	%
2015-16	591	0	0.0%
2016-17	594	3	0.5%
2017-18	614	20	3.4%
2018-19	622	8	1.3%
2019-20	634	12	1.9%
2020-21	638	4	0.6%
2021-22	656	18	2.8%
2022-23	666	10	1.5%
2023-24	680	14	2.1%
2024-25	695	15	2.2%
2025-26	709	14	2.0%
Change	118		20.0%

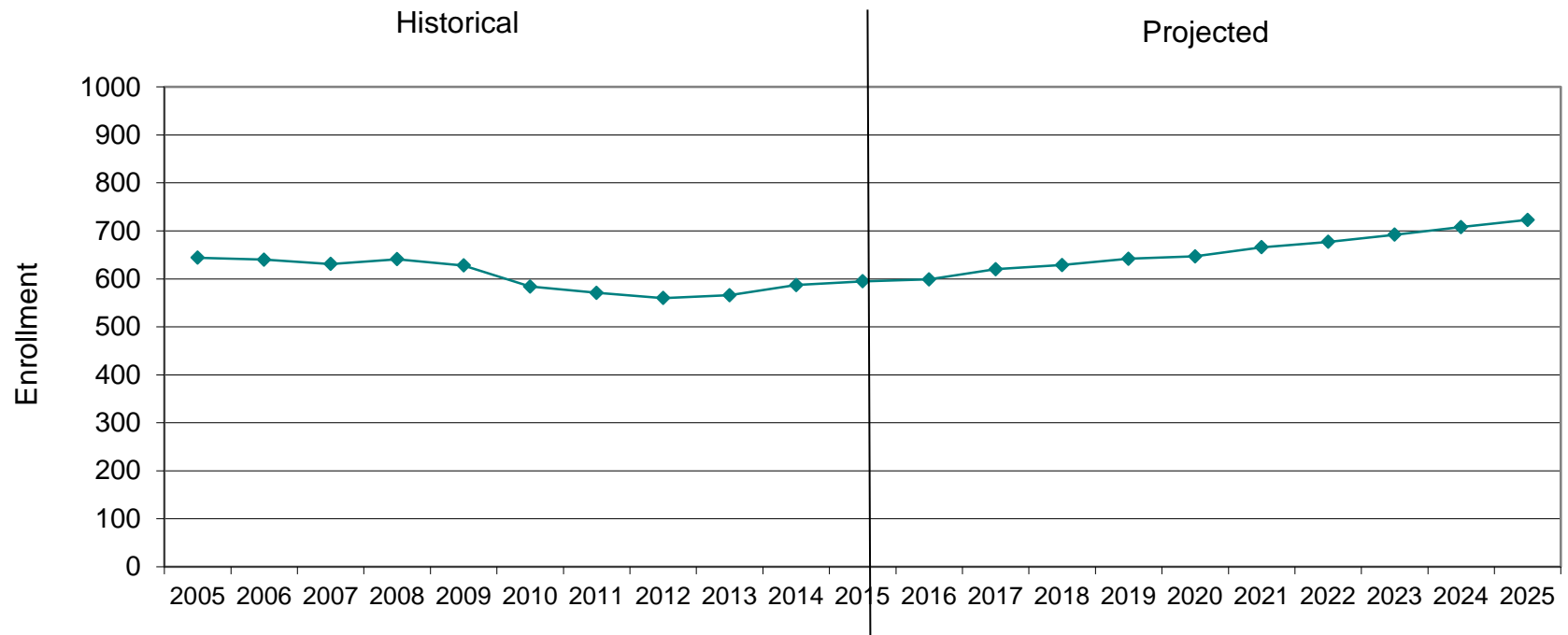
Wenham, MA Projected Enrollment

PK-12 TO 2025 Based On Data Through School Year 2015-16

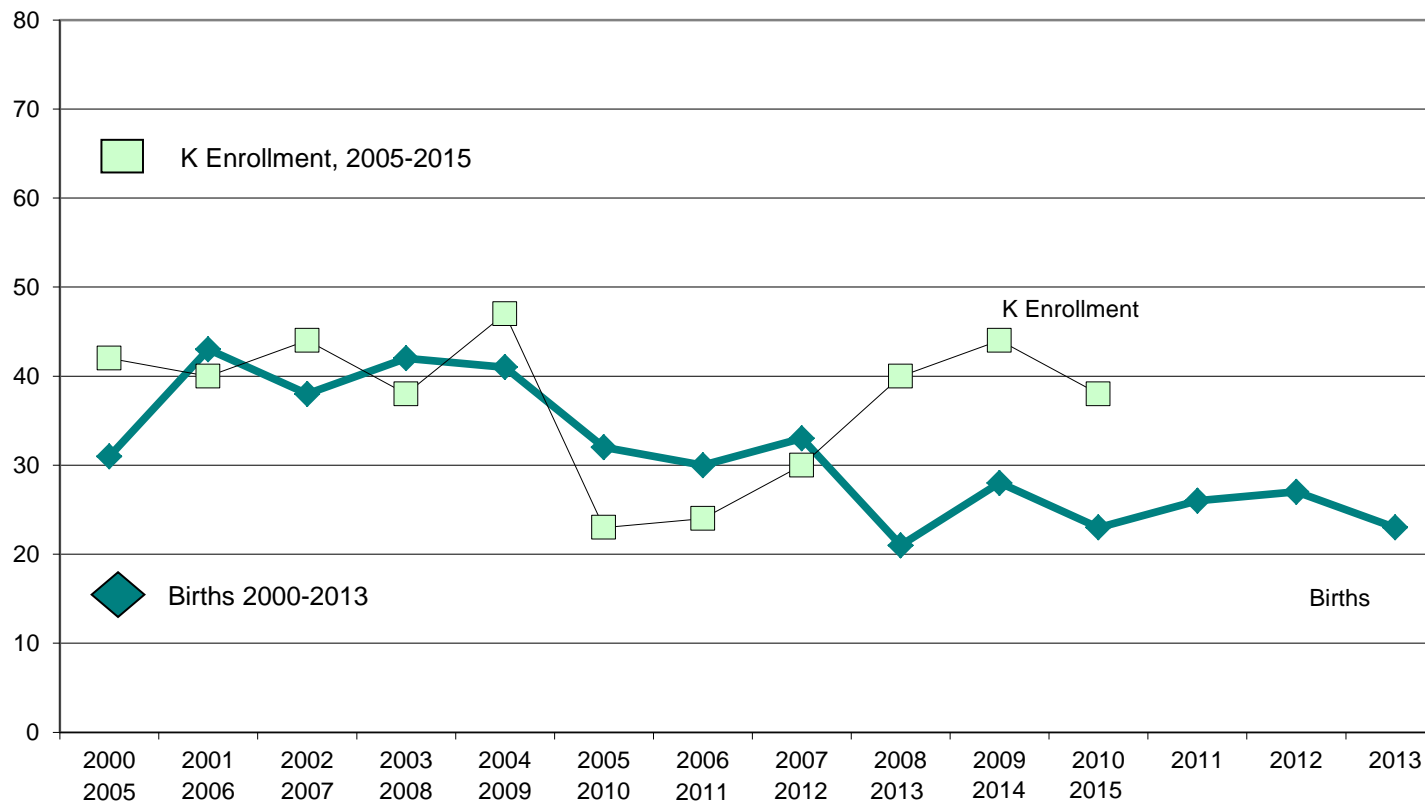


Wenham, MA Historical & Projected Enrollment

PK-12, 2005-2025



Wenham, MA Birth-to-Kindergarten Relationship



Wenham, MA Additional Data

Building Permits Issued		
Year	Single-Family	Multi-Units
2005	3	0
2011	1	0
2012	2	0
2013	6	0
2014	6	0
2015	3 to Oct 31	2 to Oct 31

Source: HUD and Building Department

Enrollment History		
Year	Voc-Tech 9-12 Total	Non-Public K-12 Total
2005-06	n/a	140
2011-12	6	158
2012-13	7	154
2013-14	8	149
2014-15	8	134
2015-16	10	121

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of Oct. 1	K	1	2	3	4	5	6	7	8	9	10	11	12	K-12 TOTAL
	4	5	2	8	6	11	13	12	15	9	16	10	10	121

K-12 Home-Schooled Students	
2015	10

K-12 Residents "Choiced-out" or in Charter or Magnet Schools	
2015	7

K-12 Special Education Outplaced Students	
2015	16

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2015	0

The above data were used to assist in the preparation of the enrollment projections. If additional demographic work is needed, please contact our office.

2016-17 Enrollment Projections

TO: Dr. Michael Harvey, Superintendent of Schools, Hamilton-Wenham School District, MA.
FROM: Donald G. Kennedy, Ed.D., Demographic Specialist
DATE: December 15, 2016
RE: Enrollment Projections by Town (dated October 17, 2016)

We are pleased to send you the enclosed documents displaying the past, present, and projected enrollments for the Hamilton-Wenham School District. We have used the figures given to us by the District and we assume that the method of collecting the enrollment data has been consistent from year to year. It is worth noting that this time of transition is the most difficult of the past 25 years to reliably forecast future enrollments, due to the irregular/uneven pace of communities recovering from the effects of the economic cycle upon real estate markets and school enrollments.

NESDEC's enrollment projection totals from fall of 2015 data for **Hamilton-Wenham** came within 6 students of the actual Grade K-12 enrollment total for fall, 2016 (1,684 projected v. 1,678 actual). In **Hamilton**, Grades K-12, 1,090 pupils were projected v. 1,082 enrolled a difference of 8 students. In **Wenham**, Grades K-12, 594 students were forecast v. 596. **Hamilton** is shrinking by about 38 students per year, while **Wenham** is increasing by 12 students per year.

The two factors now at work which will have the greatest effect upon future enrollments are: a. a steady, though smaller, number of births to Hamilton-Wenham residents and, b. new in-migration - which had slowed, due to the 2008 Recession. The students currently in Grades 1-10 were born during a period when Hamilton-Wenham was averaging 132 births per year. More recently (and expected over the next 6-7 years) are 105-112 births annually... averaging about 109 births per year. **Hamilton** births are about 14 fewer than in the recent decade, whereas **Wenham** births are down about 9 from that same time period. Hard-hit Connecticut experienced an 8.6% decline in births from 2007 to 2009 (in part caused by the economic Recession), the largest decline among the six New England states - followed by an 8.1% decline in Rhode Island births, the two states with the highest rates of unemployment in the New England region - **Massachusetts births declined by only -3.9%** over these three years. Economists are forecasting a slow-yet-steady

recovery from the current rates of unemployment which, in turn, may lead to additional in-migration and births. The unemployment rate as of October, 2016 in RI was 5.5%; CT 5.1%; US non-farm unemployment 4.9%; ME 4.0%; New England average 3.9%; **MA 3.3%**; VT 3.3%; and NH 2.8% - other nearby states: PA 5.8%; NJ 5.2%; and NY 5.2%. The rate of unemployment influences the likelihood of improving real estate sales, residential construction and thus affects the number of new families moving into the community – the US unemployment rate was above 10% during the Great Recession of 2008.

The ever-changing relationship between Hamilton-Wenham births and Kindergarten enrollments is displayed on the B-K graph. The **Hamilton** School District, over the past seven years, has registered about 80 Kindergarteners for every 100 births (five years previous), a relationship which has been increasing; this fall there were 105 Kindergarteners for every 100 births five-years-prior. **Wenham**, for the past seven years, has enrolled 130 Kindergarteners per 100 births, yet in 2016-17 registered 154 Kindergarteners per 100 births five-years-prior. Across the **Hamilton-Wenham District**, NESDEC Kindergarten projections for 2015-16 anticipated 116 children v. 124 enrolled. Next year's Grade 1 is expected to be about 3% smaller than the previous year's Kindergarten class in **Hamilton**, and 17% larger in **Wenham**.

“Hidden Trends” within the district: Like many nearby communities, **Hamilton-Wenham** continues to experience fluctuations in enrollment and in/out-migration in Grades 1-8. There are additional trends and counter-trends to consider. More so than other grade levels, **Grades 1-8 in most districts tend to be quite stable in their numbers.** Grades 9-12 are excluded from the calculation as there tends to be an average 7% decrease for reasons having little to do with students moving out of the community. Re the Grade 1-8 stability, if last year the Grade 1-7 total was 500 children, then (if no one moved in or out) this fall's Grades 2-8 would equal about 500 – the same cohort of children. Because Grades 1-8 tend to be the most stable in total K-12 enrollment, these Grades 1-8 are excellent places to discover “hidden trends” that otherwise might go unnoticed and provide a useful yardstick by which to measure a district's tendency toward in-/out-migration. **In the case of Hamilton-Wenham, we know that the school district is currently experiencing a “net in/migration” of families with school age children the last five years. For example, in 2016-17 Hamilton's Grade 1-7 group of 614 children from 2015-16 decreased by 18 children to 596 in Grades 2-8 this year. This has averaged a decrease of 13 children per year over the last three of the past five school years. Wenham on the other hand, had 316 children in Grades 1-7 last year, increasing by 13 children to 329 students in Grades 2-8 in 2016-17 – Wenham's increase consistently has averaged 12 children over each of the past five years.** The presence of a mixed in/out-migration trend is evidence of the complexity of enrollments in these unsettled economic times. Analysis of these hidden trends provides an additional benchmark by which to assess enrollment trends.

Over the next three years of these projections, K-5 Hamilton enrollments are forecast to decrease by 79 children; and Wenham to grow by 25 students. After that point these projections show decreasing enrollment in Grades K-5 of 98 Hamilton

students, and increasing enrollment of 3 students in Wenham. That said, it is possible that real estate turnover will have increased further, bringing in additional new families - see the “Projections” page. **Although the Year #1-3 forecast likely will occur, the longer-term future is better viewed as a possible direction which may be affected by improved real estate conditions. That longer-term future also will be affected by the number of babies-yet-to-be-born...it is quite likely that the birth numbers will increase as the new families move in.**

Will these patterns of increasing enrollments really last for as long as ten years? That is difficult to answer. All projections are more reliable for Years #1-5 in the future; and less reliable in Years #6-10 – as some many factors can change. As soon as the economy and real estate situation become more stable in the region, additional in-migration may occur in Hamilton-Wenham School District. Many communities in the region sold during 2008-2014 only about 60-80% as many homes as in 2003-2007. **In the case of Hamilton**, the town was selling about 76 homes per year “one the bubble” prior to the 2008 Recession; this number declined to 61 homes in 2008 (80% of the earlier pace). Sales have recovered to 102 in 2013, 97 in 2015, and are poised to exceed 90 in 2016. **Wenham** was closing on an average of 41 homes “on the bubble”, a pace decreasing to 21 home sales in 2009. In 2013, sales rose to 67 homes, followed by 61 in 2015 – and should top 50 homes in 2016. Building permits had slowed as well; see the “Additional Data” table below. **As additional families move in, any forecasted declines may moderate.** See the description on Page 4 below regarding “reliability of projections”. The birth numbers used in the projections, through 2014, are from the MA Department of Public Health. The “estimated” years, beginning with 2015 are a rolling five-year average, which NESDEC has found to be the most accurate method of estimation. Local City/Town Clerks have up-to-date information on local births however do not have access to the number of Hamilton-Wenham residents born out-of-state (information which will eventually become known to the MA DPH).

The two most difficult grades to forecast in all districts are Kindergarten and Grade 9. The latter is difficult to anticipate, as there are so many options for Grade 9 (in vocational or agricultural schools, private or parochial non-public schools, etc.). Kindergarten can be difficult to project based upon births alone, as many districts have large numbers of “net move-ins/move-outs” who are ages 1-4. **Some districts take extra steps to track 3 and 4-year olds with a local census, or report to NESDEC the known number of 4-year olds in local preschools/nursery schools which typically enroll Kindergarten in the district. Knowing this information helps NESDEC to project Kindergarten more reliably...as does data from the Kindergarten Screening in districts which also track 3 and 4-year old siblings (or neighbors) at that time. The more data, in addition to births, which is sent to NESDEC regarding the incoming Kindergarten class, the greater is the chance that “enrollment surprises” will be minimized.**

Will many new families be moving into our school district? Everyday across America, 10,000 “Baby Boomers” celebrate their 65th birthday - a phenomenon which will continue for a decade. New England has a disproportionately large share of these senior citizens, many of whom had planned to “downsize” their living arrangements, yet postponed putting homes on the market due to the Great

Recession. School enrollments are influenced strongly by the number of real estate sales, as these contribute new families moving into many districts. In over 80% of districts, the number of real estate sales is 4-5 times larger than the number of building permits for new residential construction – **thus the number of real estate sales often is a more important factor than building permits.**

In New England, how rapidly will additional homes be placed on the market? A mid-2014 study using data from the Federal Housing Finance Agency, Bureau of Economic Analysis and the U.S. Census Bureau directly links home prices to the “real Gross Domestic Product” (GDP) in each of the nine regions in the country. However New England ranks only 7th among the 9 regions in the recovery of its regional economy (as measured in “the bubble” prior to the Recession, in “real GDP”). Comparing the regional economies from 2 Quarter of 2007 to 4 Quarter 2013: W. South Central = +18.6% (that is, many jobs are available); W. North Central +11.8%; Pacific +7.4%; E. South Central + 5.6%; Middle Atlantic + 5.1%; Mountain + 4.1%; **New England +3.4%**; South Atlantic + 2.1%; and E. North Central + 2.0%. Home sales prices are +14.6% in the W. South Central region (including Texas, Arkansas, Louisiana, and Oklahoma) with the strongest “real G.D.P.” v. -4.4% in New England. Thus, although real estate sales and rentals are very strong in some New England towns and cities, there are many senior citizens still refraining from placing their homes on the market – as house prices still may be rising. New England births, however, are likely to remain at low levels, due to the advanced age of the New England population.

Analyzing Your Enrollment

Historical Public Enrollments

1. After the "YEAR" column can be found the "BIRTHS" column. The number of births to residents for each of eleven years is displayed. Note any trends, e.g., have births been decreasing? increasing? leveling off? Kindergarten and Grade 1 enrollments normally are quite responsive to these fluctuations.
2. Look **down** the K and 1 columns, noting the direction of the trend. This affords a comparison of these classes over a ten-year period. Add the K and Grade 1 enrollments of the first school year recorded, and compare them with the sum of the current K and Grade 1 enrollments.
3. Take the first K class and follow it diagonally to trace its movement to Grade 1, 2, etc. up to its current 10th grade status. This comparison (which can be accomplished for other classes also) gives some measure of the effects of migration in your school district. If a sixth grade class today is larger than it was as a K class six years ago, then net in-migration probably has occurred; if it is smaller, then net out-migration probably has occurred.
4. Compare each K class with the previous year's graduating class. Note which is larger and by what amount one surpasses the other. Larger graduating classes generally reflect declining enrollments; larger K classes generally indicate increasing enrollments.
5. In the "Grade Combinations" section, note the trends of elementary, middle school and high school enrollments. A significant and consistent trend in these summaries usually results in the corresponding trend for projected enrollments. If enrollments are leveling off in the elementary grades after a period of decline, then the secondary enrollments might be expected to continue to decline for several years until the leveling off experience has had time to take hold at the secondary grades.

Enrollment Projections

1. Note the trends exhibited in the total K-12 (or 1-12) projection for the next five years as well as the projections for various grade

combinations. The trends on this page should generally exhibit a continuation of the trends mentioned above for historical enrollments, although the **rate** of change may be quite different.

2. Look at the births in the most recent years and note whether the trend is up, down, or level.
3. Make similar comparisons as appropriate on this page as were suggested for the "Historical Public Enrollments" page.

PROJECTION METHODOLOGY

Cohort component (survival) technique is a frequently used method of preparing enrollment forecasts. NESDEC uses this method, but modifies it in order to move away from forecasts which are wholly computer or formula driven. Such modification permits the incorporation of important, current town-specific information into the generation of the enrollment forecasts (such as the volume of real estate sales, building permits, in/out-migration, etc.). Basically, percentages are calculated from the historical enrollment data to determine a reliable percentage of increase or decrease in enrollment between any two grades. For example, if 100 students enrolled in Grade 1 in 2014-15, increased to 104 students in Grade 2 in 2015-16, the percentage of survival would have been 104% or a ratio of 1.04. Such ratios are calculated between each pair of grades or years in school over several recent years.

After study and analysis of the historical ratios, and based upon a reasonable set of assumptions regarding births, migration rates, retention rates, etc., ratios most indicative of future growth patterns are determined for each pair of grades. The ratios thus selected are applied to the present enrollment statistics for a pre-determined number of years. The ratios used are the key factors in the reliability of the projections, given the validity of the data at the starting point. The strength of the ratios lies in the fact that each ratio encompasses **collectively** the variables that account for increases or decreases in the size of a grade enrollment as it moves on to the next grade. Each ratio represents the cumulative effect of the following factors:

1. Real estate turnover and new residential construction;
2. Migration, in or out, of the schools;
3. Drop-outs, transfers, etc.;
4. Births to residents;
5. Retention in the same grade.

RELIABILITY OF ENROLLMENT PROJECTIONS

Projections can serve as useful guides to school administrators for educational planning. In this regard, the projections are generally most reliable when they are closest in time to the current year. Projections six to ten years out may serve as a guide to future enrollments, and are useful for facility planning purposes. However, they should be viewed as subject to change given the likelihood of changes in the underlying assumptions/trends.

Projections that are based upon **the children who already are in the district** (the current K-12 population only) will be the most reliable; the second level of reliability will be for those children already **born into the community but not yet old enough to be in school**. A less reliable category is the group for which an estimate must be made **to predict the number of births**, thereby adding an additional variable. See these three multi-colored groupings on the “Projected Enrollment” slide/page.

How often do the actual enrollments closely match the NESDEC projections? The research literature reports the closest that enrollment forecasters are likely to come to actual enrollments is about 1% variance per year-from-the-known-data. That is, a 1% variance from projection-to-actual “one-year-out” into the future (2% variance “two-years-out” ... 10% variance “ten-years-out”). NESDEC reaches this “highest possible” standard in about 90% of cases. When our NESDEC variance is greater, the reasons often are one of the following: a. imbedded/intervening “hidden” variables (examples: a parochial school closed or other students returned from non-public schools, a charter school opened, the Kindergarten program changed entrance age or to extended/full-day, the high school toughened its course credit/graduation requirements, the District set new attendance boundaries for elementary schools, or the District had well-publicized budget/referendum academic accreditation difficulties); b. the District size was below 500 students, thus subject to fluctuations in total numbers; or c. the District has not done enrollment projections on an annual basis.

Annual updates allow for early identification of recent changes in historical trends. When the actual enrollment in a grade is significantly different (high or low) from the projected number, it is important (yet difficult) to determine whether this is a one-year aberration or whether a new trend may have begun. **In light of this possibility, NESDEC urges all school districts to have updated enrollment forecasts developed by NESDEC each October.** This service is available at no cost to affiliated school districts.

Using This Information Electronically

If you would like to extract the information contained in this report for your own documents or presentations, you can use Adobe Acrobat reader to convert the desired information to a “snapshot,” which can be inserted into PowerPoint slides, Word documents, etc. Because the snapshot tool creates a graphic, the image is not editable.

Steps for Using The Snapshot Tool in Adobe Acrobat Reader:

1. Click on Edit Menu (earlier versions of Adobe Reader might require you to click on the Tools menu and then choose “Select and Zoom;”);
2. Choose “Take a Snapshot” (or “Snapshot Tool” in earlier versions);
3. Click and drag around the text, chart, and/or graphics that you would like to capture: your selection will be copied to the clipboard automatically;
4. Click in the document where you would like the information to appear;*
5. Give Paste command.

If you have an earlier version of Adobe Acrobat and these instructions don’t work for you, contact your tech support person, or NESDEC and we will try to assist you. Telephone (508)481-9444 or ep@nesdec.org. Ask for Carol or Christina.

*You may paste your snapshot onto a PowerPoint slide, onto an Excel sheet, or even into a graphics program to save as a separate graphic file (in .jpg or other format), so that it is available for inserting into future documents.

Hamilton-Wenham RSD Historical Enrollment

School District: Hamilton-Wenham RSD, MA

12/7/2016

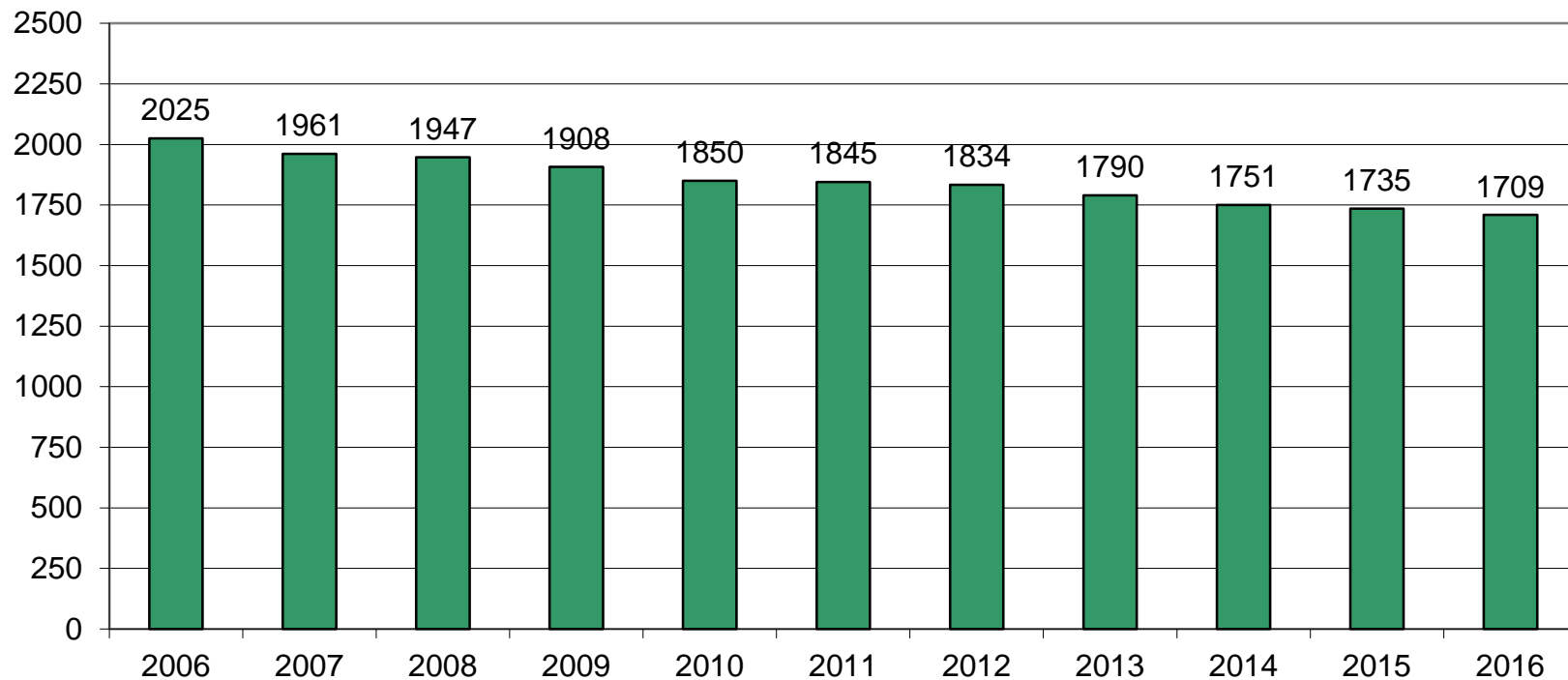
Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2001	146	2006-07	34	143	129	140	141	148	174	170	178	154	161	149	147	157	0	1991	2025
2002	156	2007-08	29	125	141	130	146	144	146	165	166	177	139	163	147	143	0	1932	1961
2003	149	2008-09	33	124	132	145	135	147	144	144	166	158	168	135	167	149	0	1914	1947
2004	127	2009-10	19	127	133	135	151	133	148	142	143	172	144	165	139	157	0	1889	1908
2005	142	2010-11	11	132	125	132	144	155	134	150	144	141	154	138	156	134	0	1839	1850
2006	123	2011-12	20	101	131	127	137	149	148	135	149	142	148	161	143	152	2	1825	1845
2007	133	2012-13	28	120	106	139	134	137	146	156	138	148	134	145	162	141	0	1806	1834
2008	114	2013-14	23	120	121	119	133	135	139	142	154	141	132	129	144	158	0	1767	1790
2009	119	2014-15	18	142	128	123	121	135	135	136	139	153	128	128	129	136	0	1733	1751
2010	112	2015-16	28	119	146	123	129	125	140	132	135	135	143	128	125	127	0	1707	1735
2011	106	2016-17	31	124	121	141	130	126	127	130	134	137	124	142	119	123	0	1678	1709

Historical Enrollment in Grade Combinations									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2006-07	909	875	1045	1377	676	502	332	946	614
2007-08	861	832	997	1340	654	508	343	935	592
2008-09	860	827	971	1295	612	468	324	943	619
2009-10	846	827	969	1284	605	457	315	920	605
2010-11	833	822	972	1257	569	435	285	867	582
2011-12	813	793	928	1219	574	426	291	895	604
2012-13	810	782	938	1224	588	442	286	868	582
2013-14	790	767	909	1204	576	437	295	858	563
2014-15	802	784	920	1212	563	428	292	813	521
2015-16	810	782	914	1184	542	402	270	793	523
2016-17	800	769	899	1170	528	401	271	779	508

Historical Percentage Changes			
Year	K-12	Diff.	%
2006-07	1991	0	0.0%
2007-08	1932	-59	-3.0%
2008-09	1914	-18	-0.9%
2009-10	1889	-25	-1.3%
2010-11	1839	-50	-2.6%
2011-12	1825	-14	-0.8%
2012-13	1806	-19	-1.0%
2013-14	1767	-39	-2.2%
2014-15	1733	-34	-1.9%
2015-16	1707	-26	-1.5%
2016-17	1678	-29	-1.7%
Change		-313	-15.7%

Hamilton-Wenham RSD Historical Enrollment

PK-12, 2006-2016



Hamilton-Wenham RSD Projected Enrollment

School District: Hamilton-Wenham RSD, MA

12/7/2016

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2011	106		2016-17	31	124	121	141	130	126	127	130	134	137	124	142	119	123	0	1678	1709
2012	123		2017-18	31	107	129	119	146	133	129	123	130	134	126	123	138	116	0	1653	1684
2013	110		2018-19	32	95	112	127	124	148	138	124	123	129	124	125	119	134	0	1622	1654
2014	110		2019-20	32	95	99	111	132	126	152	134	124	122	118	123	121	116	0	1573	1605
2015	105	(prov.)	2020-21	33	92	100	98	117	134	130	147	133	123	112	117	119	118	0	1540	1573
2016	111	(est.)	2021-22	33	96	97	99	103	119	138	126	147	134	113	111	114	116	0	1513	1546
2017	112	(est.)	2022-23	34	97	101	96	104	105	123	134	126	147	125	112	108	111	0	1489	1523
2018	110	(est.)	2023-24	34	95	102	100	101	106	109	120	133	127	136	124	109	105	0	1467	1501
2019	109	(est.)	2024-25	35	96	100	101	105	103	110	106	119	134	117	135	120	106	0	1452	1487
2020	109	(est.)	2025-26	35	96	101	99	106	107	107	107	106	120	124	116	131	118	0	1438	1473
2021	110	(est.)	2026-27	36	96	101	100	104	108	111	104	107	107	112	123	112	128	0	1413	1449

*Projections should be updated on an annual basis in order to reflect changes in births, real estate sales, in-/out-migration of families, and housing construction.



Based on an estimate of births



Based on children already born



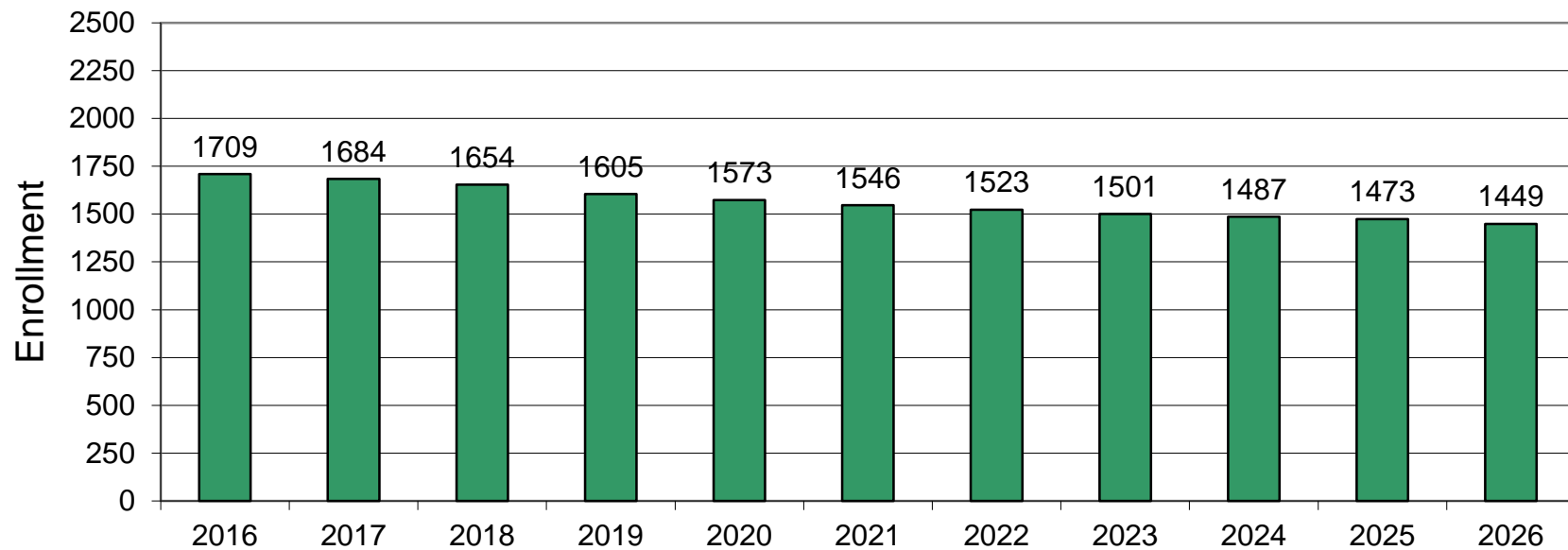
Based on students already enrolled

Projected Enrollment in Grade Combinations*									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2016-17	800	769	899	1170	528	401	271	779	508
2017-18	794	763	886	1150	516	387	264	767	503
2018-19	776	744	868	1120	514	376	252	754	502
2019-20	747	715	849	1095	532	380	246	724	478
2020-21	704	671	818	1074	533	403	256	722	466
2021-22	685	652	778	1059	545	407	281	735	454
2022-23	660	626	760	1033	530	407	273	729	456
2023-24	647	613	733	993	489	380	260	734	474
2024-25	650	615	721	974	469	359	253	731	478
2025-26	651	616	723	949	440	333	226	715	489
2026-27	656	620	724	938	429	318	214	689	475

Projected Percentage Changes			
Year	K-12	Diff.	%
2016-17	1678	0	0.0%
2017-18	1653	-25	-1.5%
2018-19	1622	-31	-1.9%
2019-20	1573	-49	-3.0%
2020-21	1540	-33	-2.1%
2021-22	1513	-27	-1.8%
2022-23	1489	-24	-1.6%
2023-24	1467	-22	-1.5%
2024-25	1452	-15	-1.0%
2025-26	1438	-14	-1.0%
2026-27	1413	-25	-1.7%
Change		-265	-15.8%

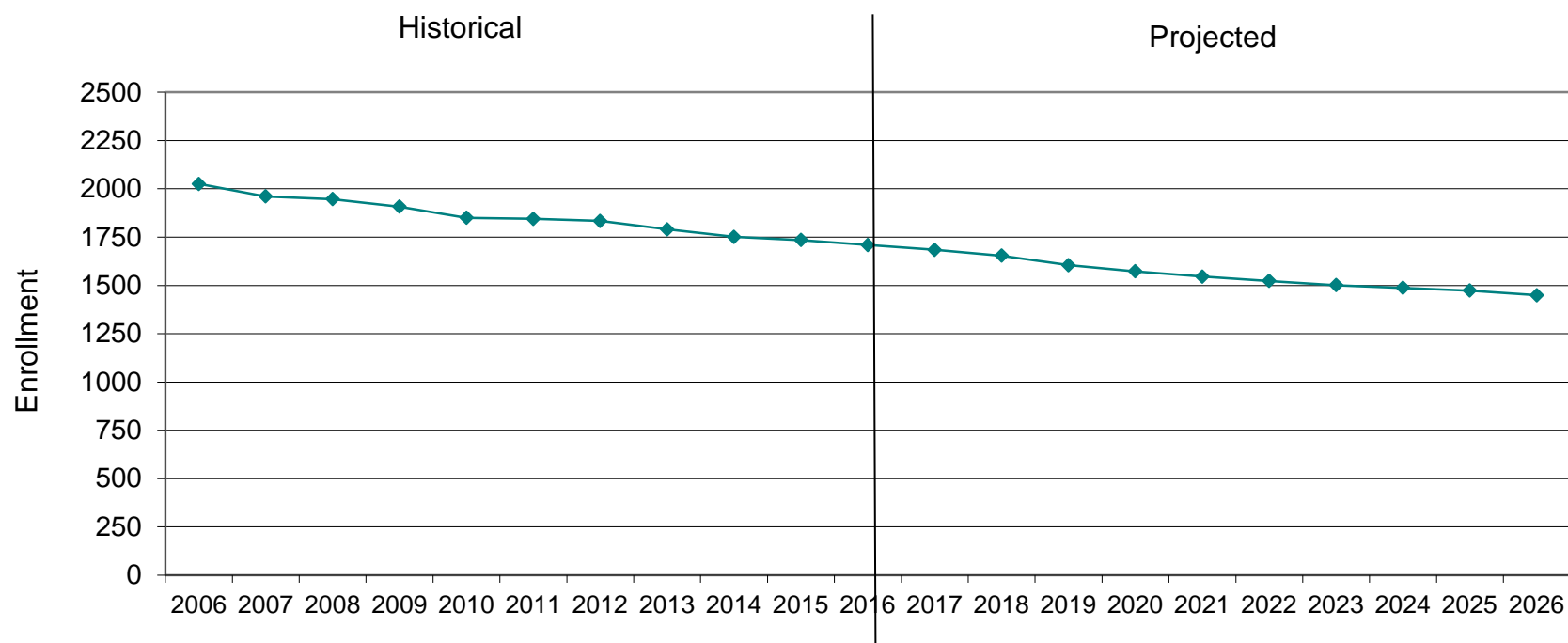
Hamilton-Wenham RSD Projected Enrollment

PK-12 TO 2026 Based On Data Through School Year 2016-17

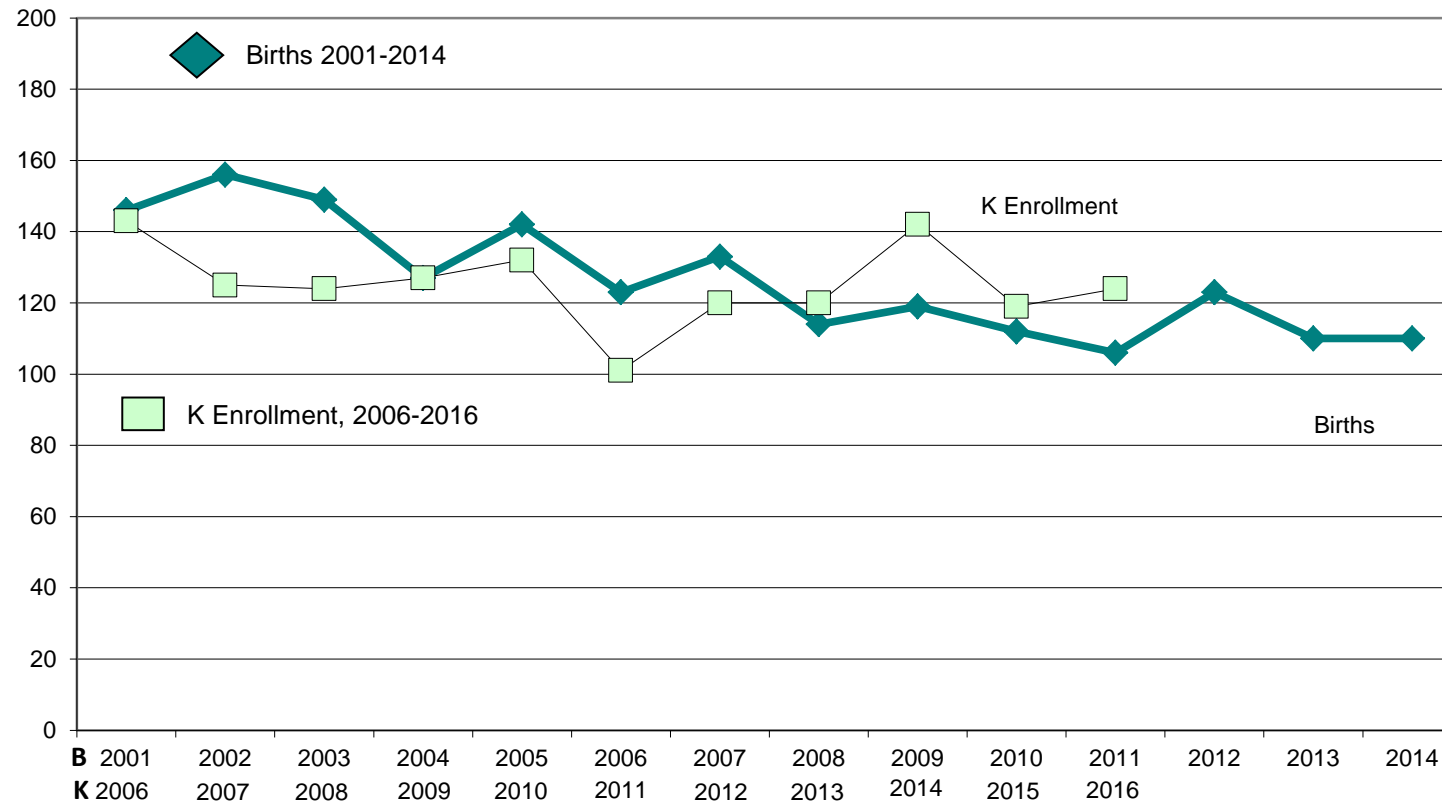


Hamilton-Wenham RSD Historical & Projected Enrollment

PK-12, 2006-2026



Hamilton-Wenham RSD Birth-to-Kindergarten Relationship



Hamilton, MA Historical Enrollment

School District: Hamilton, MA

12/7/2016

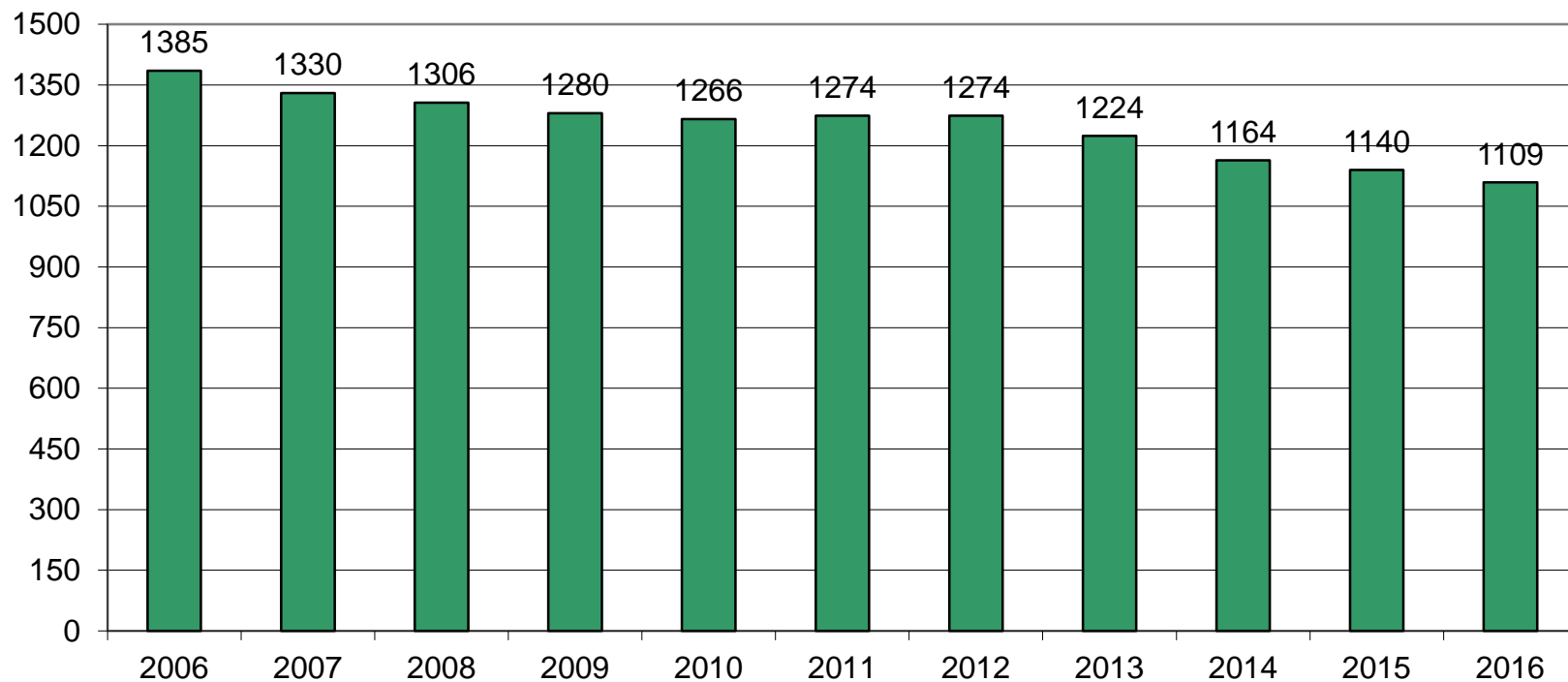
Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2001	103	2006-07	22	103	88	95	86	99	122	121	119	95	112	105	105	113	0	1363	1385
2002	118	2007-08	24	81	100	85	101	88	98	115	116	119	86	112	101	104	0	1306	1330
2003	107	2008-09	25	86	83	102	91	103	90	94	116	110	108	84	114	100	0	1281	1306
2004	86	2009-10	14	80	93	87	107	92	104	87	94	121	100	109	86	106	0	1266	1280
2005	110	2010-11	6	109	79	94	91	110	91	108	89	96	111	98	101	83	0	1260	1266
2006	93	2011-12	14	77	102	80	97	92	105	89	108	90	102	116	101	99	2	1260	1274
2007	100	2012-13	23	90	80	101	83	102	89	106	91	106	86	105	112	100	0	1251	1274
2008	93	2013-14	18	80	89	87	97	84	98	86	107	93	93	79	106	107	0	1206	1224
2009	91	2014-15	15	98	75	86	86	95	84	91	83	104	80	88	80	99	0	1149	1164
2010	89	2015-16	24	81	98	72	89	87	95	81	92	81	98	80	86	76	0	1116	1140
2011	80	2016-17	27	84	79	95	71	86	84	90	82	88	70	98	73	82	0	1082	1109

Historical Enrollment in Grade Combinations									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2006-07	615	593	714	928	457	335	214	649	435
2007-08	577	553	668	903	448	350	235	638	403
2008-09	580	555	649	875	410	320	226	632	406
2009-10	577	563	650	865	406	302	215	616	401
2010-11	580	574	682	867	384	293	185	578	393
2011-12	567	553	642	840	392	287	198	616	418
2012-13	568	545	651	848	392	303	197	600	403
2013-14	553	535	621	821	384	286	200	585	385
2014-15	539	524	615	802	362	278	187	534	347
2015-16	546	522	603	776	349	254	173	513	340
2016-17	526	499	589	759	344	260	170	493	323

Historical Percentage Changes			
Year	K-12	Diff.	%
2006-07	1363	0	0.0%
2007-08	1306	-57	-4.2%
2008-09	1281	-25	-1.9%
2009-10	1266	-15	-1.2%
2010-11	1260	-6	-0.5%
2011-12	1260	0	0.0%
2012-13	1251	-9	-0.7%
2013-14	1206	-45	-3.6%
2014-15	1149	-57	-4.7%
2015-16	1116	-33	-2.9%
2016-17	1082	-34	-3.0%
Change		-281	-20.6%

Hamilton, MA Historical Enrollment

PK-12, 2006-2016



Hamilton, MA Projected Enrollment

School District: Hamilton, MA

12/7/2016

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2011	80		2016-17	27	84	79	95	71	86	84	90	82	88	70	98	73	82	0	1082	1109
2012	96		2017-18	27	64	82	76	95	70	85	80	90	79	78	69	95	69	0	1032	1059
2013	87		2018-19	27	58	62	79	76	94	69	80	80	87	70	77	67	90	0	989	1016
2014	86		2019-20	27	57	56	60	79	75	93	65	80	77	77	69	74	63	0	925	952
2015	82	(prov.)	2020-21	27	54	55	54	60	78	74	88	65	77	68	76	67	70	0	886	913
2016	86	(est.)	2021-22	27	57	52	53	54	59	77	70	88	63	68	67	74	63	0	845	872
2017	87	(est.)	2022-23	27	58	55	50	53	53	58	73	70	85	56	67	65	70	0	813	840
2018	86	(est.)	2023-24	27	57	56	53	50	52	52	55	73	68	76	55	65	61	0	773	800
2019	85	(est.)	2024-25	27	57	55	54	53	49	51	49	55	71	60	75	53	61	0	743	770
2020	85	(est.)	2025-26	27	57	55	53	54	52	48	48	49	53	63	59	73	50	0	714	741
2021	86	(est.)	2026-27	27	57	55	53	53	53	51	45	48	47	47	62	57	69	0	697	724

*Projections should be updated on an annual basis in order to reflect changes in births, real estate sales, in-/out-migration of families, and housing construction.



Based on an estimate of births



Based on children already born



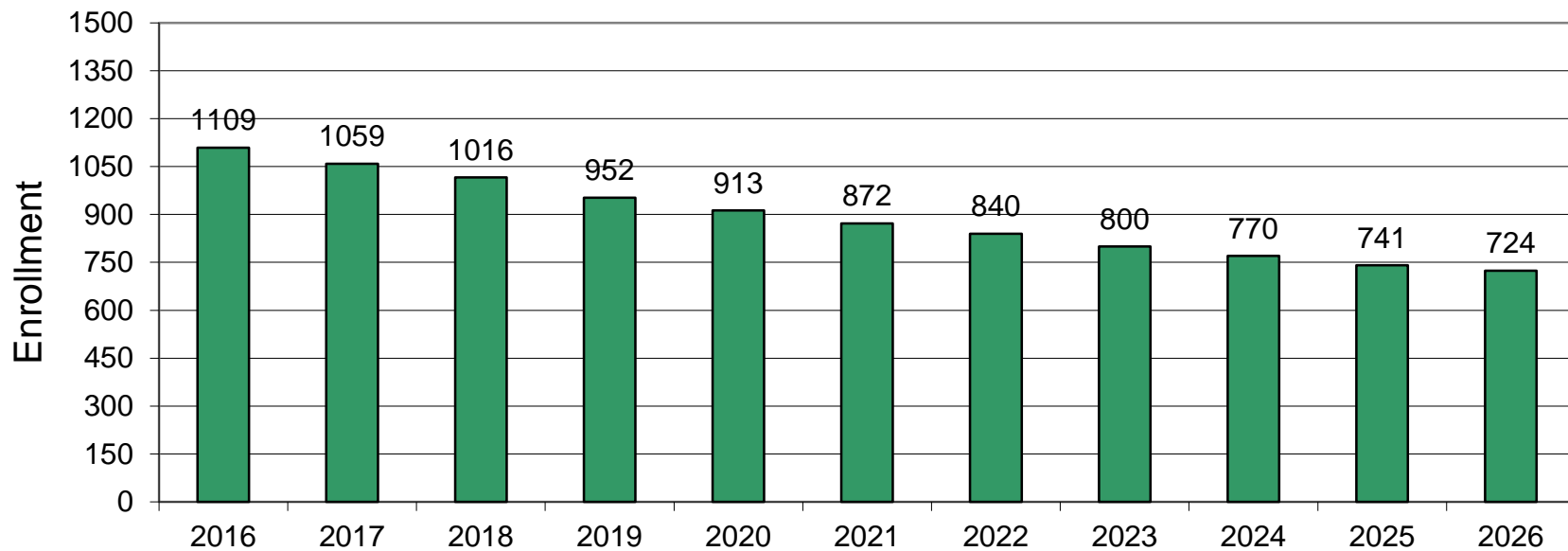
Based on students already enrolled

Projected Enrollment in Grade Combinations*									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2016-17	526	499	589	759	344	260	170	493	323
2017-18	499	472	552	721	334	249	169	480	311
2018-19	465	438	518	685	316	247	167	471	304
2019-20	447	420	485	642	315	222	157	440	283
2020-21	402	375	463	605	304	230	142	423	281
2021-22	379	352	422	573	298	221	151	423	272
2022-23	354	327	400	555	286	228	155	413	258
2023-24	347	320	375	516	248	196	141	398	257
2024-25	346	319	368	494	226	175	126	375	249
2025-26	346	319	367	469	198	150	102	347	245
2026-27	349	322	367	462	191	140	95	330	235

Projected Percentage Changes			
Year	K-12	Diff.	%
2016-17	1082	0	0.0%
2017-18	1032	-50	-4.6%
2018-19	989	-43	-4.2%
2019-20	925	-64	-6.5%
2020-21	886	-39	-4.2%
2021-22	845	-41	-4.6%
2022-23	813	-32	-3.8%
2023-24	773	-40	-4.9%
2024-25	743	-30	-3.9%
2025-26	714	-29	-3.9%
2026-27	697	-17	-2.4%
Change	-385		-35.6%

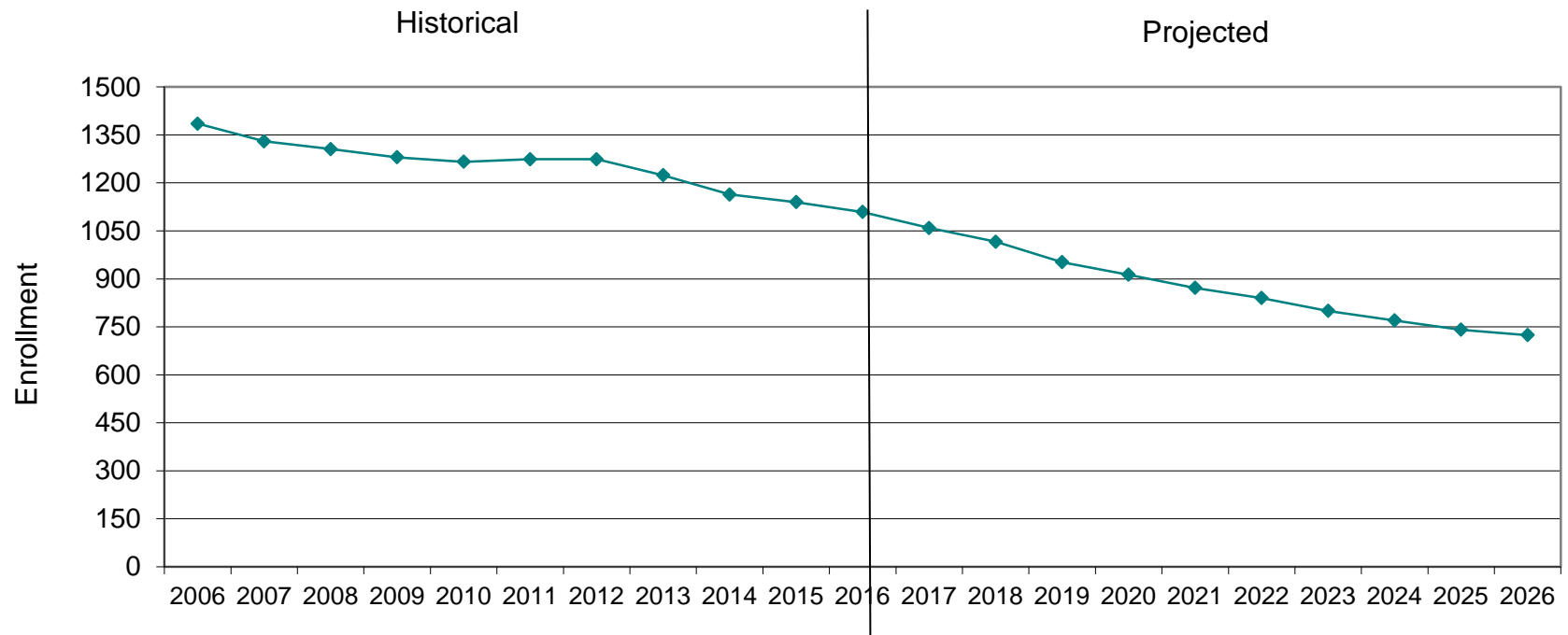
Hamilton, MA Projected Enrollment

PK-12 TO 2026 Based On Data Through School Year 2016-17

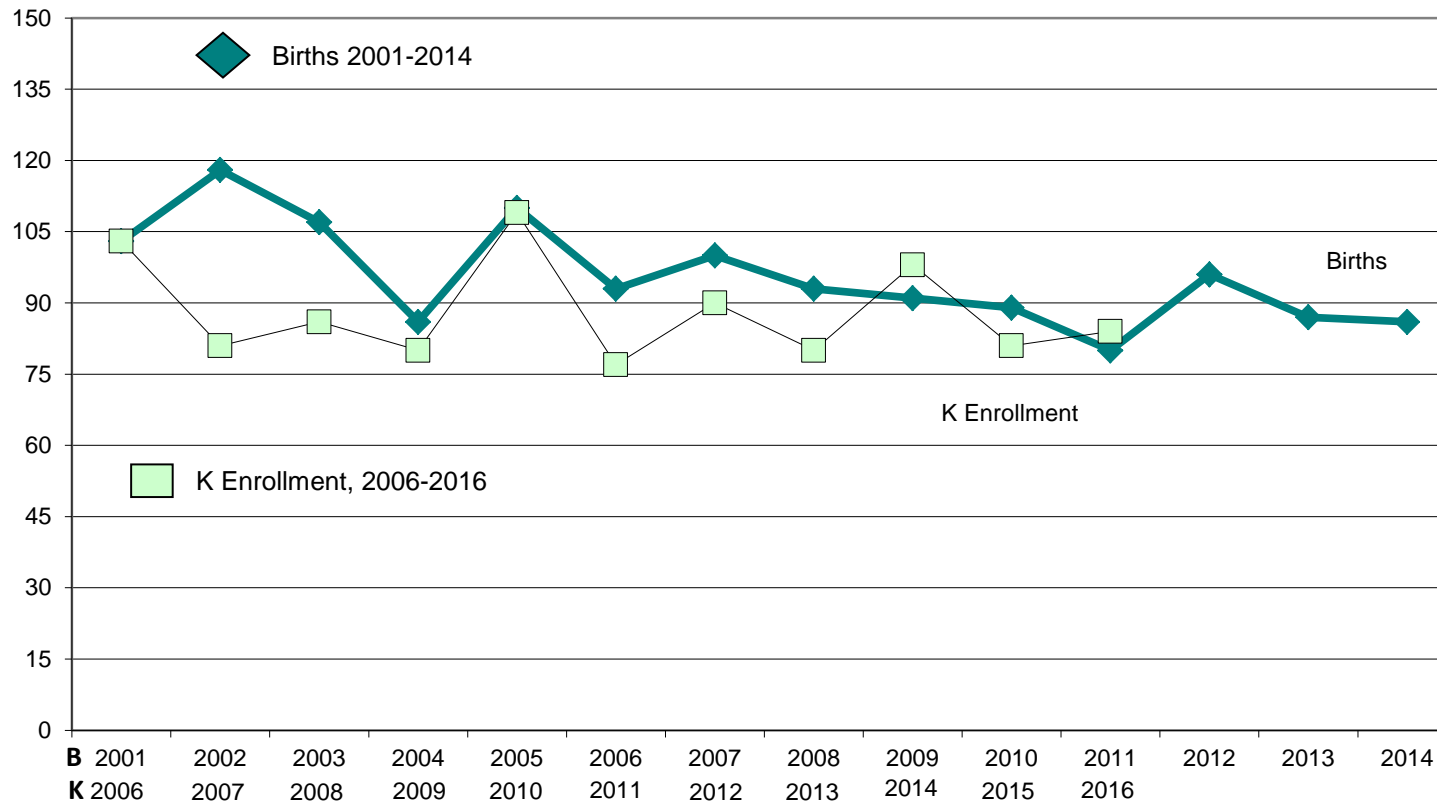


Hamilton, MA Historical & Projected Enrollment

PK-12, 2006-2026



Hamilton, MA Birth-to-Kindergarten Relationship



Hamilton, MA Additional Data

Building Permits Issued		
Year	Single-Family	Multi-Units
2005	3	0
2012	3	0
2013	10	0
2014	5	0
2015	5	0
2016	3 to May 31	0

Source: HUD and Building Department

Enrollment History		
Year	Voc-Tech 9-12 Total	Non-Public K-12 Total
2005-06	3	244
2012-13	6	187
2013-14	9	196
2014-15	12	230
2015-16	15	221
2016-17	14	235

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of Oct. 1	K	1	2	3	4	5	6	7	8	9	10	11	12	K-12 TOTAL
	11	16	17	17	16	22	17	25	16	19	18	18	23	235

K-12 Home-Schooled Students	
2016	42

K-12 Residents "Choiced-out" or in Charter or Magnet Schools	
2016	3

K-12 Special Education Outplaced Students	
2016	21

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2016	72

The above data were used to assist in the preparation of the enrollment projections. If additional demographic work is needed, please contact our office.

Wenham, MA Historical Enrollment

School District: Wenham, MA

12/7/2016

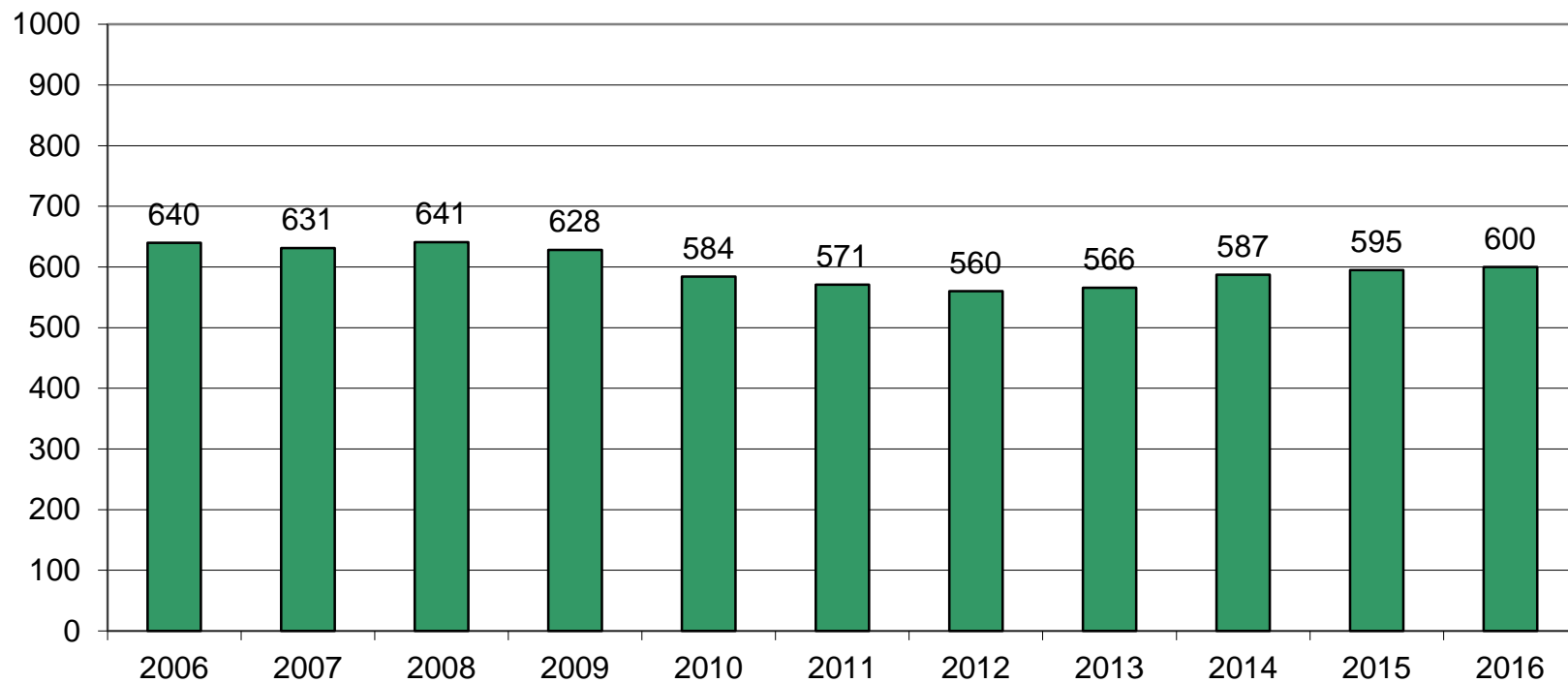
Historical Enrollment By Grade																			
Birth Year	Births	School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2001	43	2006-07	12	40	41	45	55	49	52	49	59	59	49	44	42	44	0	628	640
2002	38	2007-08	5	44	41	45	45	56	48	50	50	58	53	51	46	39	0	626	631
2003	42	2008-09	8	38	49	43	44	44	54	50	50	48	60	51	53	49	0	633	641
2004	41	2009-10	5	47	40	48	44	41	44	55	49	51	44	56	53	51	0	623	628
2005	32	2010-11	5	23	46	38	53	45	43	42	55	45	43	40	55	51	0	579	584
2006	30	2011-12	6	24	29	47	40	57	43	46	41	52	46	45	42	53	0	565	571
2007	33	2012-13	5	30	26	38	51	35	57	50	47	42	48	40	50	41	0	555	560
2008	21	2013-14	5	40	32	32	36	51	41	56	47	48	39	50	38	51	0	561	566
2009	28	2014-15	3	44	53	37	35	40	51	45	56	49	48	40	49	37	0	584	587
2010	23	2015-16	4	38	48	51	40	38	45	51	43	54	45	48	39	51	0	591	595
2011	26	2016-17	4	40	42	46	59	40	43	40	52	49	54	44	46	41	0	596	600

Historical Enrollment in Grade Combinations									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2006-07	294	282	331	449	219	167	118	297	179
2007-08	284	279	329	437	206	158	108	297	189
2008-09	280	272	322	420	202	148	98	311	213
2009-10	269	264	319	419	199	155	100	304	204
2010-11	253	248	290	390	185	142	100	289	189
2011-12	246	240	286	379	182	139	93	279	186
2012-13	242	237	287	376	196	139	89	268	179
2013-14	237	232	288	383	192	151	95	273	178
2014-15	263	260	305	410	201	150	105	279	174
2015-16	264	260	311	408	193	148	97	280	183
2016-17	274	270	310	411	184	141	101	286	185

Historical Percentage Changes			
Year	K-12	Diff.	%
2006-07	628	0	0.0%
2007-08	626	-2	-0.3%
2008-09	633	7	1.1%
2009-10	623	-10	-1.6%
2010-11	579	-44	-7.1%
2011-12	565	-14	-2.4%
2012-13	555	-10	-1.8%
2013-14	561	6	1.1%
2014-15	584	23	4.1%
2015-16	591	7	1.2%
2016-17	596	5	0.8%
Change		-32	-5.1%

Wenham, MA Historical Enrollment

PK-12, 2006-2016



Wenham, MA Projected Enrollment

School District: Wenham, MA

12/7/2016

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2011	26		2016-17	4	40	42	46	59	40	43	40	52	49	54	44	46	41	0	596	600
2012	27		2017-18	4	43	47	43	51	63	44	43	40	55	48	54	43	47	0	621	625
2013	23		2018-19	5	37	50	48	48	54	69	44	43	42	54	48	52	44	0	633	638
2014	24		2019-20	5	38	43	51	53	51	59	69	44	45	41	54	47	53	0	648	653
2015	24	(prov.)	2020-21	6	38	45	44	57	56	56	59	68	46	44	41	52	48	0	654	660
2016	25	(est.)	2021-22	6	39	45	46	49	60	61	56	59	71	45	44	40	53	0	668	674
2017	25	(est.)	2022-23	7	39	46	46	51	52	65	61	56	62	69	45	43	41	0	676	683
2018	24	(est.)	2023-24	7	38	46	47	51	54	57	65	60	59	60	69	44	44	0	694	701
2019	24	(est.)	2024-25	8	39	45	47	52	54	59	57	64	63	57	60	67	45	0	709	717
2020	24	(est.)	2025-26	8	39	46	46	52	55	59	59	57	67	61	57	58	68	0	724	732
2021	24	(est.)	2026-27	9	39	46	47	51	55	60	59	59	60	65	61	55	59	0	716	725

*Projections should be updated on an annual basis in order to reflect changes in births, real estate sales, in-/out-migration of families, and housing construction.



Based on an estimate of births



Based on children already born



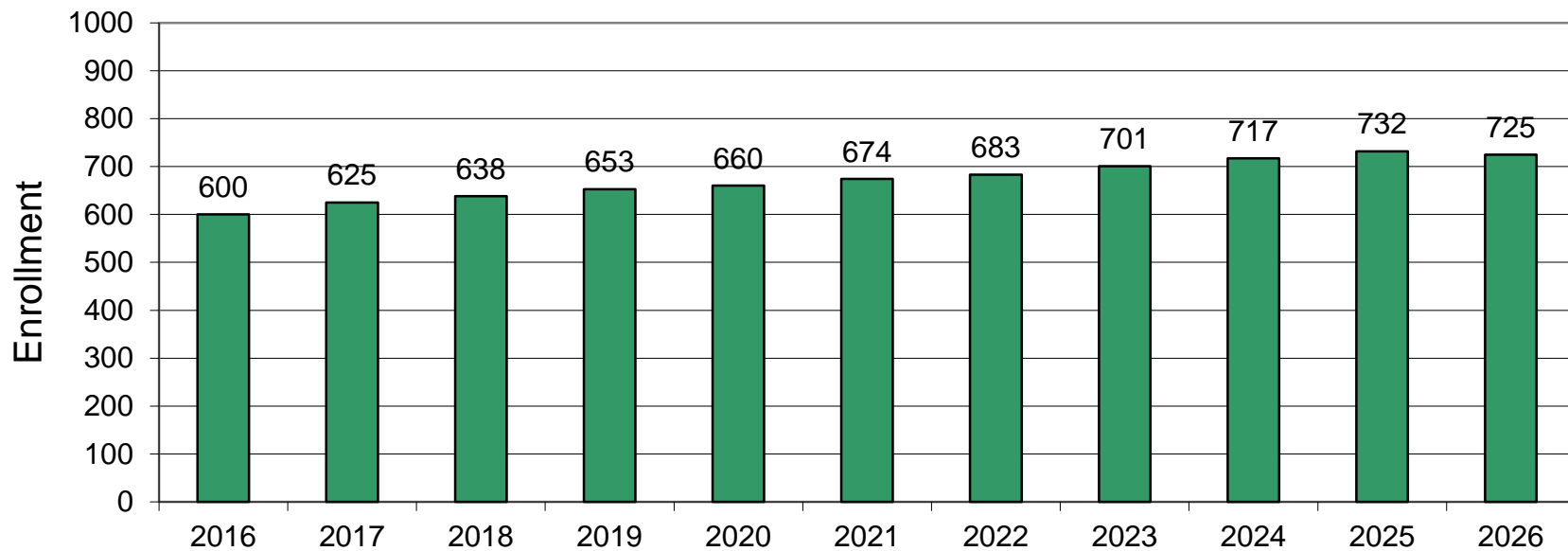
Based on students already enrolled

Projected Enrollment in Grade Combinations*									
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2016-17	274	270	310	411	184	141	101	286	185
2017-18	295	291	334	429	182	138	95	287	192
2018-19	311	306	350	435	198	129	85	283	198
2019-20	300	295	364	453	217	158	89	284	195
2020-21	302	296	355	469	229	173	114	299	185
2021-22	306	300	356	486	247	186	130	312	182
2022-23	306	299	360	478	244	179	118	316	198
2023-24	300	293	358	477	241	184	119	336	217
2024-25	304	296	353	480	243	184	127	356	229
2025-26	305	297	356	480	242	183	124	368	244
2026-27	307	298	357	476	238	178	119	359	240

Projected Percentage Changes			
Year	K-12	Diff.	%
2016-17	596	0	0.0%
2017-18	621	25	4.2%
2018-19	633	12	1.9%
2019-20	648	15	2.4%
2020-21	654	6	0.9%
2021-22	668	14	2.1%
2022-23	676	8	1.2%
2023-24	694	18	2.7%
2024-25	709	15	2.2%
2025-26	724	15	2.1%
2026-27	716	-8	-1.1%
Change	120		20.1%

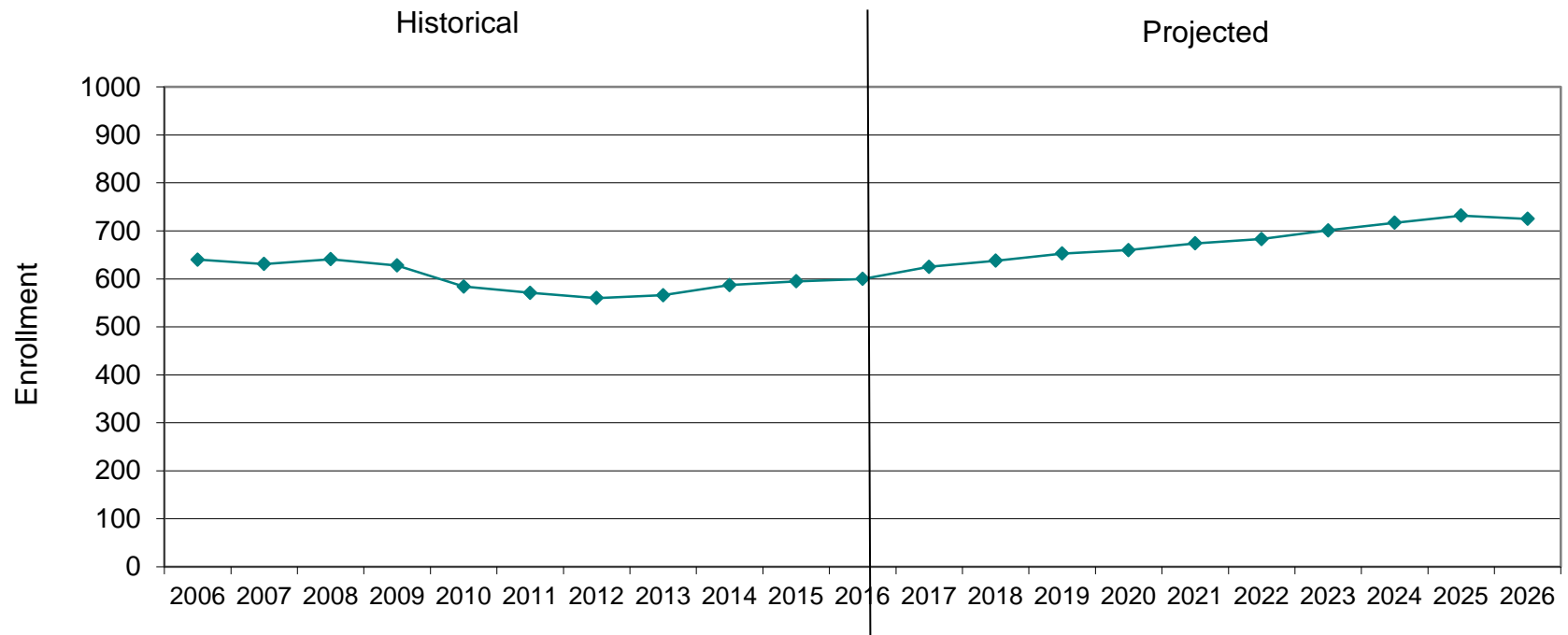
Wenham, MA Projected Enrollment

PK-12 TO 2026 Based On Data Through School Year 2016-17

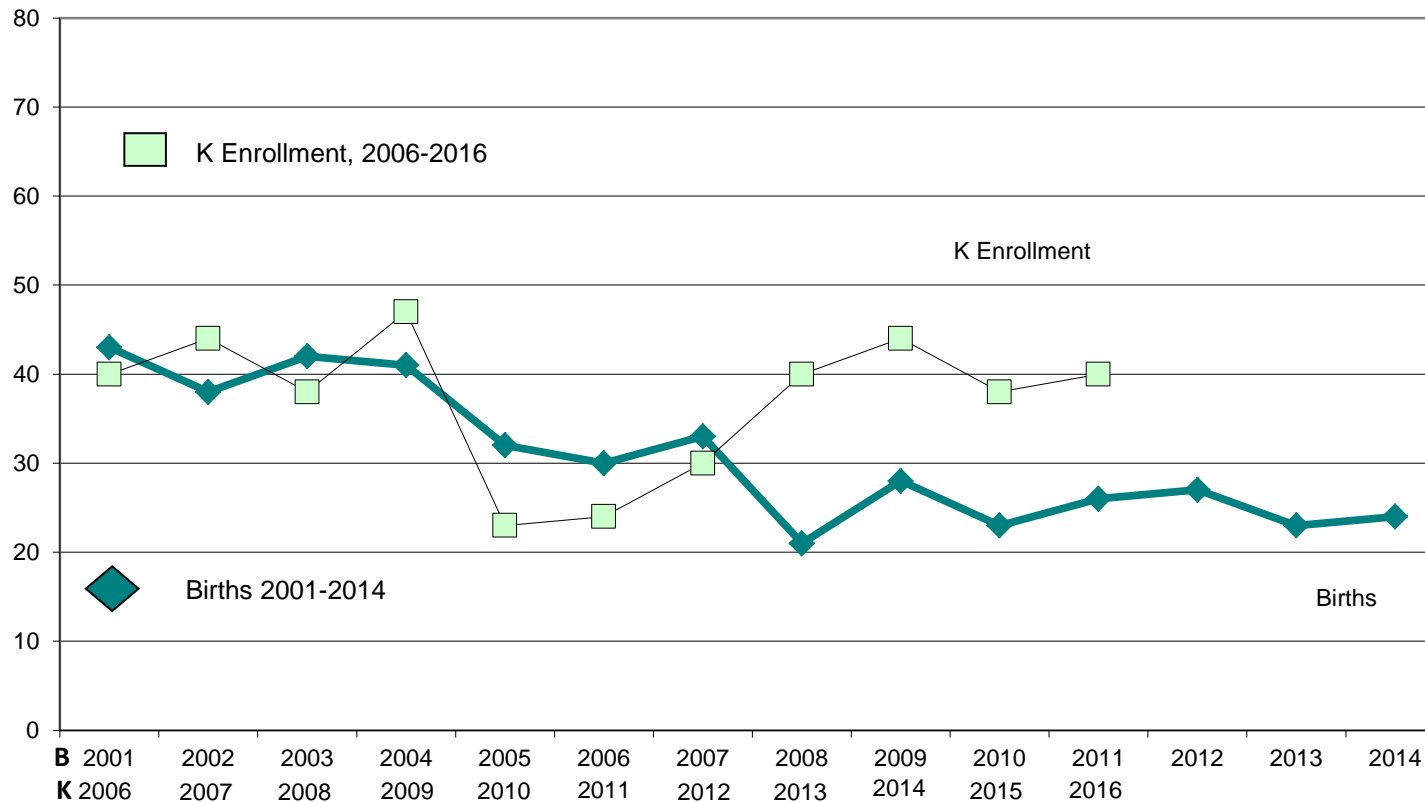


Wenham, MA Historical & Projected Enrollment

PK-12, 2006-2026



Wenham, MA Birth-to-Kindergarten Relationship



Wenham, MA Additional Data

Building Permits Issued		
Year	Single-Family	Multi-Units
2005	3	0
2012	2	0
2013	6	0
2014	6	0
2015	4	4
2016	6 to Oct 31	4 to Oct 31

Source: HUD and Building Department

Enrollment History		
Year	Voc-Tech 9-12 Total	Non-Public K-12 Total
2005-06	n/a	140
2012-13	7	154
2013-14	8	149
2014-15	8	134
2015-16	10	121
2016-17	10	139

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of Oct. 1	K	1	2	3	4	5	6	7	8	9	10	11	12	K-12 TOTAL
	7	3	6	1	13	9	13	19	16	13	10	20	9	139

K-12 Home-Schooled Students	
2016	11

K-12 Residents "Choiced-out" or in Charter or Magnet Schools	
2016	6

K-12 Special Education Outplaced Students	
2016	10

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2016	n/a

The above data were used to assist in the preparation of the enrollment projections. If additional demographic work is needed, please contact our office.



Miles River
Middle School

Hamilton-Wenham
Regional School

Google

MEMORANDUM

From: William Shields

To: Board of Selectmen: Hamilton and Wenham
Town Manager/Town Administrator
Town Moderators

Re: Citizens' Petitions

Date: January 20, 2017

Tuesday morning I will deliver Petitions to Hamilton and Wenham for inclusion in the Warrant of each Town of the following article:

To see if the Town will direct the Selectmen to appoint a joint committee with the Selectmen of the [Town of Hamilton/Town of Wenham] to study the acquisition by purchase, eminent domain, or otherwise of all or a portion of parcels of land in Hamilton designated Lots A, B, C, and D as shown on a Plan of Land entitled Plan of Longmeadow Way dated October 15, 1980 and recorded in Essex Registry of Deeds at Plan Book 161, Plan 31 for school, recreational, and/or other municipal use and to report findings, recommendations, and proposed action, if any, to the 2018 Annual Town Meeting or such earlier town meeting as may be called to consider the issue, said committee to consist of a Selectman from each member Town, a member of the Hamilton Wenham Joint Recreation Board, a member of the Hamilton Wenham Regional School Committee, and one or more residents from each member town, or such other membership structure and membership as the Selectmen from both towns shall mutually agree, or take any other action thereon or relative thereto.

The article has the unanimous support of the Regional School Committee.

Summary.

1. The article proposes **a study** of the acquisition of all or a portion of Longmeadow.
2. The article asks both Towns to consider a once-in-a-lifetime opportunity to add land to the campus of the Regional for school, recreational, or other municipal use.
3. This is the only unrestricted, available land adjacent to the Regional.
4. Longmeadow is available. Developers Miller and Farnham have agreed to sell the land. Developers Miller and Farnham are entitled to fair market value, no more no less.
5. Harborlight no longer has site control. Harborlight, if it had site control, would still propose 108 units of low and affordable income housing (See Basic Report to Hamilton Selectmen of this week) adjacent to the Regional.

6. Miller and Farnham have proposed what amounts to two 40B developments, Farnham: 28; Miller: up to 140 units; for a total of 168 units adjacent to the Regional.

7. The Hamilton Selectmen, AHT, and Planning Board have unanimously ((with one abstention) rejected the 108 unit development of Longmeadow as a “friendly” 40B.

8. Longmeadow has three futures:

Remain as three residential lots (as restricted by 1980 order of the Planning Board).

40B development of a minimum of 108 units adjacent to the Regional.

Be acquired by the Towns or the Regional for school or recreational purposes in perpetuity.

9. Let Hamilton and Wenham decide their own future rather than be force-fed by real estate developers.

Longmeadow Study Committee

I. Motions Passed at 2017 Annual Town Meetings

In HAMILTON: I move that the Town request the Selectmen to appoint a joint committee with the Selectmen of the Town of Wenham to study the acquisition by purchase, eminent domain, or otherwise of all or a portion of parcels of land in Hamilton designated Lots A, B, C, and D as shown on a Plan of Land entitled Plan of Longmeadow Way dated October 15, 1980 and recorded in Essex Registry of Deeds at Plan Book 161, Plan 31 for school, recreational, and/or other municipal use and to report findings, recommendations, and proposed action, if any, to the 2018 Annual Town Meeting or such earlier town meeting as may be called to consider the issue, said committee to consist of a Selectman from each member Town, a member of the Hamilton Wenham Joint Recreation Board, a member of the Hamilton Wenham Regional School Committee, and one or more residents from each member town, or such other membership structure and membership as the Selectmen from both towns shall mutually agree; action under this article does not call for any appropriation of funds.

In WENHAM: I move that the Town request the Selectmen to appoint a joint committee with the Selectmen of the Town of Hamilton to study the acquisition by purchase, eminent domain, or otherwise of all or a portion of parcels of land in Hamilton designated Lots A, B, C, and D as shown on a Plan of Land entitled Plan of Longmeadow Way dated October 15, 1980 and recorded in Essex Registry of Deeds at Plan Book 161, Plan 31 for school, recreational, and/or other municipal use and to report findings, recommendations, and proposed action, if any, to the 2018 Annual Town Meeting or such earlier town meeting as may be called to consider the issue, said committee to consist of a Selectman from each member Town, a member of the Hamilton Wenham Joint Recreation Board, a member of the Hamilton Wenham Regional School Committee, and one or more residents from each member town, or such other membership structure and membership as the Selectmen from both towns shall mutually agree; action under this article does not call for any appropriation of funds.

II. Formation of Joint Committee

Structure, membership, and appointment of Committee as Selectmen from both towns mutually agree.

III. The Parcels of Land

Lots A, B, C, and D on 1980 Plan recorded in Essex Registry of Deeds.

- a. 1980 Plan attached as Exhibit A
- b. History of Ownership attached as Exhibit B
- c. Aerial View of Longmeadow attached as Exhibit C
- d. Two Letters received from Miller lawyer attached as Exhibit D

IV. Assessors Records: Assessed Values Taxable 2017:

Lot A (1 Longmeadow)	\$809,600
Lot B (3 Longmeadow)	\$748,300
Lot C (5 Longmeadow)	\$730,400
Lot D (11,933 sq. ft.)	\$3,900

V. Regional School Committee: Purchase and Eminent Domain

Chapter 71, Section 16: Status; powers and duties

A regional school district established under the provisions of the preceding section shall be a body politic and corporate with all the powers and duties conferred by law upon school committees, and with the following additional powers and duties:

(c) To acquire property within the towns comprising the district under the provisions of chapter seventy-nine [the eminent domain statute] and section fourteen of chapter forty [municipal purchase] for the purposes of the district and to construct, reconstruct, add to, remodel, make extraordinary repairs to, equip, organize and operate a school or schools for the benefit of the towns comprising the district, and to make any necessary contracts in relation thereto; provided, however, that no property shall be acquired unless the town in which such property is located approves such acquisition by a two-thirds vote at a town meeting which shall be called within sixty days after the district committee authorizes the incurring of debt for such purpose.

Chapter 79, Sec. 2

Where no other provision is made by law, a taking of land by eminent domain... by or on behalf of a district [is made] by its prudential committee....

Chapter 40, Sec.14

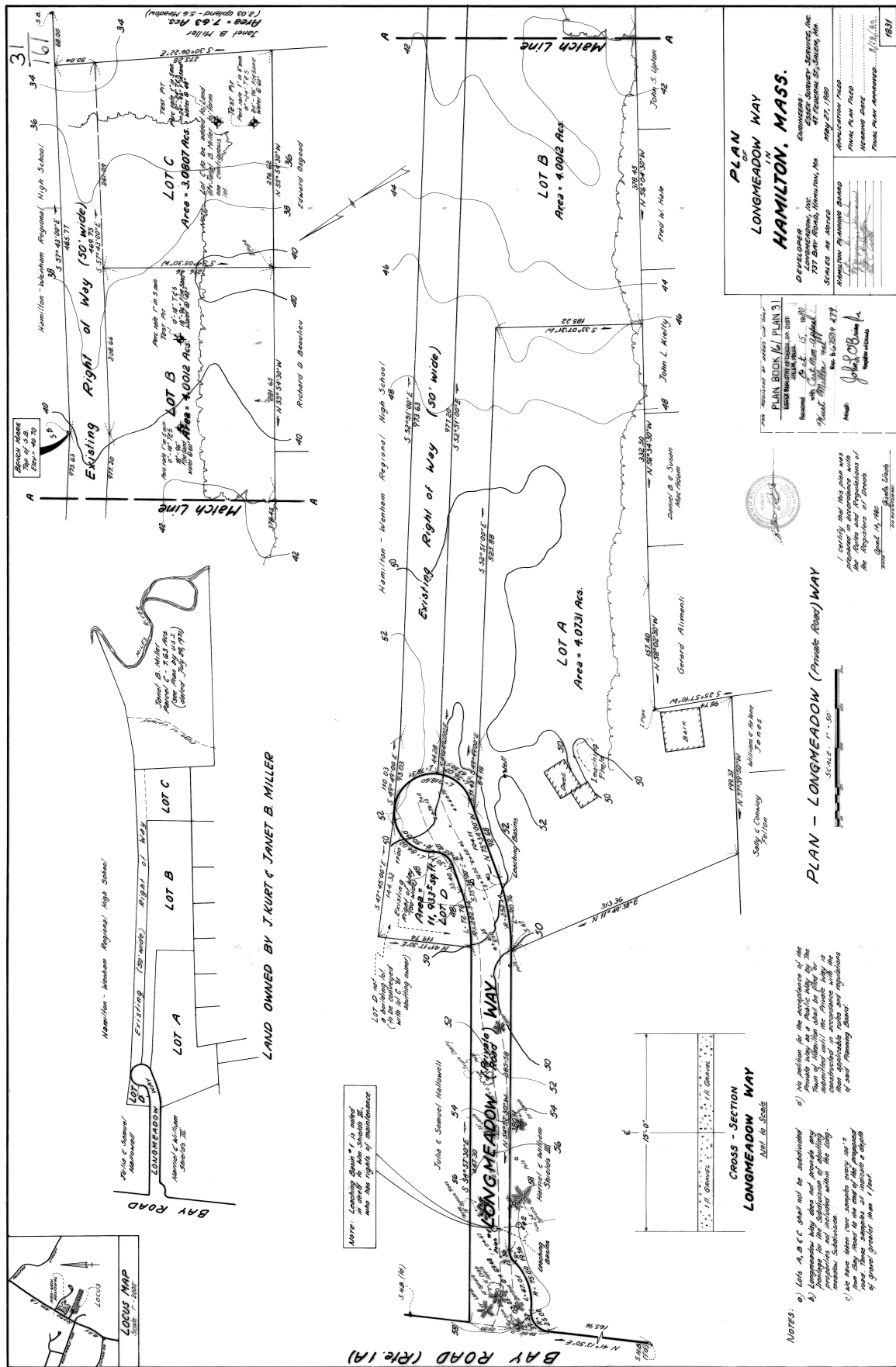
The ... selectmen of a town may purchase, or take by eminent domain under chapter seventy-nine, any land, easement or right therein within the ... town; but no land, easement or right therein shall be taken or purchased under this section unless the taking or purchase thereof has previously been authorized by...vote of the town, nor until an appropriation of money, to be raised by loan or otherwise, has been made for the purpose by a two thirds vote...of the town, and no lot of land shall be purchased for any municipal purpose by any city subject to this section for a price more than twenty-five per cent in excess of its average assessed valuation during the previous three years.

HW District Agreement

Any acquisition would be a “capital cost” under Sec. IV(A)(1) and apportioned pursuant to Sec. IV(B). Any authorization of debt would be governed by Section IX.

Conclusion.

Any acquisition or purchase or the incurring of indebtedness will require 2/3 vote of both towns.



History of Ownership of Lots A, B, C, and D

Exhibit B

- 1980:** J. Kurt Miller and Janet B. Miller, owners of Longmeadow, divide the property into four lots, of which three are buildable (**Lots A, B, C**). See Plan of Land dated May 27, 1980. Plan Book 161, Page 31. Planning Board endorses, “Lots A, B, C, and D shall not be subdivided.”
- 1985:** Millers sell **Lot B** to J. Keating Willcox: 4.0012 acres. Millers retain ownership of Longmeadow Way. Book 7628, Page 261.
- 1987:** J. Kurt Miller transfers to Janet Miller: **Lot A:** 4.0731 acres subject to easements of record. Book 9717, Page 519.
- 1988:** Janet Miller transfers to J. Kurt Miller: **Lots D and C:** 11,933 sq. ft. and 3.0807 acres respectively. Book 9717, Page 515.
- 1991:** Janet Miller sells **Lot A** to Albert Holler. Book 10825, Page 204.
- 1995:** Albert Holler sells **Lot A** to Minot and Sara Frye. Book 12926, Page 253.
- 2003:** Minot Frye transfers his interest in **Lot A** to Sara Frye. Book 20744, Page 4256
- 2008:** Sara Frye sells **Lot A** to James and Linda Farnham. Book 27799, PAGE 143.
- 2009:** J. Keating Willcox sells **Lot B** to J. Miller and Jacqueline C. Miller, as tenants by the entirety. Book 27491, Page 131.
- Today:** J. Kurt Miller owns **Lots C and D** and the road
J. Kurt Miller and Jacqueline C. Miller own **Lot B**
James and Linda Farnham own **Lot A**.



Aerial View



GLOVSKY & GLOVSKY LLC
ATTORNEYS AT LAW

September 13, 2016

Andrew DeFranza, Executive Director
Harborlight Communities Partners, Inc.
P.O. Box 507
Beverly MA 01915

RE: Proposed Development of Property Off Longmeadow Way, Hamilton

Dear Mr. DeFranza:

As you know, this firm represents Mr. Kurt Miller, the owner of 3 and 5 Longmeadow Way. It has been our understanding that Harborlight Community Partners intends to present a development plan to the Town of Hamilton for a 40B project consisting of 108 units to be built upon 1, 3 and 5 Longmeadow Way.

It has come to our attention that on July 19, 2016, you appeared before the Planning Board to propose an alternative design of 24 units to be built only upon the property located at 1 Longmeadow Way. Naturally, this came as a surprise to our client, since it was his belief that your proposed project included the development of all three lots.

In the event that Harborlight decides not to proceed with the development of 3 and 5 Longmeadow Way, it is our client's intent to build a 40B project on his property. His plan is to construct two buildings which would contain a total of up to 140 units. We ask that you take these future development plans into account should you go forward and build only on 1 Longmeadow Way. The road improvements required to support even a scaled down project must be built with the development of 3 and 5 Longmeadow Way kept in mind. Please contact me if you have any questions regarding the foregoing.

Very truly yours,

Philip C. Wysor

PCW:mfs

cc: Mr. J. Kurt Miller

GLOVSKY

Counselors-at-Law

Philip C. Wysor
pwysor@glovskyx2.com
Direct Dial (978) 720-3112

April 27, 2017

HAND DELIVERED

William W. Wilson, Chairman
Hamilton Board of Selectmen
Hamilton Town Hall
Hamilton, MA 01936

RE: J. Kurt Miller
3 and 5 Longmeadow Way

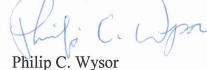
Dear Mr. Wilson:

Please be advised that this office represents Mr. J. Kurt Miller, the owner of the 2 above-referenced properties. He has owned 3 Longmeadow Way for 10 years and 5 Longmeadow Way for over 30 years.

In all of his years of ownership, no one has ever approached him for either property to be used for expansion of the high school. Only after a 40B project was proposed for the property was the possibility raised to take the property for expansion of the high school. This appears to be an effort to block the 40B project.

In the event that the Town determines to take the property by eminent domain rather than by purchase, Mr. Miller would expect compensation based upon the proposed number of dwelling units which could be built under a 40B project. It is estimated that a total of 140 dwelling units could be built at the 3 Longmeadow Way location. At a value of \$40,000.00 per unit, the total compensation being sought by Mr. Miller would be \$5,600,000.00.

Very truly yours,


Philip C. Wysor

PCW:mfs
cc: Mr. J. Kurt Miller

RECEIPT ACKNOWLEDGED:



April __, 2017

RECEIVED
APR 27 2017
BY: 

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