HAMILTON-WENHAM REGIONAL SCHOOL DISTRICT

SCHOOL COMMITTEE MEETING

Buker Elementary School
Multi-Purpose Room

Wednesday, March 28, 2018

7:00 PM

1. **Call to Order** **7:00**
2. **Pledge of Allegiance**
3. **Citizens' Comments**
4. **Chair's Report**
5. **Superintendent's Report**
6. **Consent Agenda**
   a. Warrants
      - February 28, 2018 — Exhibit A
      - March 14, 2018 — Exhibit B
7. **New Business**
   a. Student Enrollment Report Presentation — Exhibit C
   b. Review Administrative Priority List for 2017-2018 — Exhibit D
   c. Vote to submit SOI for Cutler School — Exhibit E
   d. Donations — Exhibit F
      - Firehouse Center for the Arts $200
      - Lacrosse Boosters $2,703
      - EdFund $22,268.25
8. **Other**
   a. Topics for next meeting
9. **Vote to Adjourn** **9:30**

Secretary: Kerry Gertz, HWRSC

DMB

Knowledge • Responsibility • Respect • Excellence

The District does not discriminate in its programs, activities or employment practices based on race, color, national origin, religion, gender, gender identity, sexual orientation, age or disability.

Warrant meeting 2/28/18
6:38 meeting called to order
6:58 end

Attendance: Stacey Metternick, David Polito, Jeanise Bertrand

PR
Voucher 1083, 1084, 84 #45 Voucher Incorrectly Listed as #84 in Submitted minutes

AP
Voucher 2478, 2479

No real questions for current warrants. Noticed warrants for 2/14 were missing a 3rd signature. Josh Liebow had called in for Warrants, but had forgotten to sign.

Respectfully submitted,

Stacey Metternick

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 1083 **Voucher Date:** 02/28/2018 Prepared By: Leslie Davidson

Printed: 02/28/2018 04:13:28 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $346,970.92 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant — Treasurer

Leslie Davidson — Assistant Treasurer

1 — School Committee Member

2 — School Committee Member

3 — School Committee Member

Jeffrey Sands — Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$346,970.92
		$346,970.92

Created By: l.davidson **Posted By:** v.leone **Date:** 02/28/2018 16:07:17 **Page:** 1

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 1084 **Voucher Date:** 03/02/2018 Prepared By: Leslie Davidson

Printed: 02/28/2018 04:23:40 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $731,545.71 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant	Treasurer
Leslie Davidson	Assistant Treasurer
1	School Committee Member
2	School Committee Member
3	School Committee Member
Jeffrey Sands	Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$731,545.71
		$731,545.71

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 45 **Voucher Date:** 03/02/2018 Prepared By: Leslie Davidson

Printed: 02/28/2018 04:32:37 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $33,842.22 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant — Treasurer

Leslie Davidson — Assistant Treasurer

1 School Committee Member

2 School Committee Member

3 School Committee Member

Jeffrey Sands — Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$7,248.46
202	REVOLVING FUNDS	$0.00
205	ATHLETIC/EXTRA CURR REVOLVING	$25,744.10
301	TITLE I	$541.91
302	94-142 IDEA 240	$0.00
304	EARLY CHILDHOOD	$0.00
402	STATE GRANTS FY EVEN YEARS	$0.00
701	CAFETERIA FUNDS	$307.75
		$33,842.22

Created By: c.carberry **Posted By:** c.carberry **Date:** 02/28/2018 15:44:08 **Page:** 1

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 2478 **Voucher Date:** 03/02/2018 Prepared By: Leslie Davidson

Printed: 02/28/2018 03:25:45 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $276,553.01 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant	Treasurer
Leslie Davidson	Assistant Treasurer
1	School Committee Member
2	School Committee Member
3	School Committee Member
Jeffrey Sands	Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$275,978.05
202	REVOLVING FUNDS	$330.00
205	ATHLETIC/EXTRA CURR REVOLVING	$50.06
502	PRIVATE GRANTS & GIFTS	$194.90
		$276,553.01

Created By: capozzid **Posted By:** v.leone **Date:** 02/28/2018 12:38:32 **Page:** 1

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Leslie Davidson

Voucher No: 2479 **Voucher Date:** 03/02/2018 Prepared By:

Printed: 02/28/2018 03:32:13 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $26,500.54 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant — Treasurer

Leslie Davidson — Assistant Treasurer

School Committee Member

2 School Committee Member

3 School Committee Member

Jeffrey Sands — Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$18,407.70
202	REVOLVING FUNDS	$924.66
205	ATHLETIC/EXTRA CURR REVOLVING	$7,115.00
402	STATE GRANTS FY EVEN YEARS	$53.18
		$26,500.54

Created By: capozzid **Posted By:** v.leone **Date:** 02/28/2018 12:39:29 **Page:** 1

March 14, 2018
6:45 pm

Administration Building
5 School Street
Wenham, MA 01984

Attendance:
Michelle Bailey, Gene Lee, David Polito
Don Gallant

The following warrants were presented and approved.

Voucher 1085	$710,866.07
Voucher 46	$8622.47
Voucher 2481	$74.477.98
Voucher 2480	$18,555.21
Voucher 2482	$39,671.57

Minutes approved

Adjourned 6:55pm

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 2482 **Voucher Date:** 03/16/2018 Prepared By:

Printed: 03/12/2018 04:18:15 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $39,671.57 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant — Treasurer

Leslie Davidson — Assistant Treasurer

1 — School Committee Member

2 — School Committee Member

3 — School Committee Member

Jeffrey Sands — Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$33,742.57
202	REVOLVING FUNDS	$690.00
205	ATHLETIC/EXTRA CURR REVOLVING	$554.00
303	TITLE IIA	$1,500.00
309	TITLE IIA: HW/SALEM INTEGRATION TECH	$1,435.00
402	STATE GRANTS FY EVEN YEARS	$1,750.00
		$39,671.57

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 2481 **Voucher Date:** 03/16/2018 Prepared By:

Printed: 03/12/2018 04:13:39 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $74,477.98 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant — Treasurer

Leslie Davidson — Assistant Treasurer

1 — School Committee Member

2 — School Committee Member

3 — School Committee Member

Jeffrey Sands — Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$64,513.98
202	REVOLVING FUNDS	$9,964.00
		$74,477.98

Created By: capozzid **Posted By:** v.leone **Date:** 03/12/2018 15:48:30 **Page:** 1

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 2480 **Voucher Date:** 03/16/2018 Prepared By:

Printed: 03/12/2018 04:09:36 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $18,555.21 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant — Treasurer

Leslie Davidson — Assistant Treasurer

1 — School Committee Member

2 — School Committee Member

3 — School Committee Member

Jeffrey Sands — Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
701	CAFETERIA FUNDS	$18,555.21
		$18,555.21

Created By: capozzid **Posted By:** v.leone **Date:** 03/12/2018 15:48:12 **Page:** 1

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 1085 **Voucher Date:** 03/16/2018 Prepared By: Donald Gallant

Printed: 03/12/2018 04:40:12 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $710,866.07 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant — Treasurer

Leslie Davidson — Assistant Treasurer

1 — School Committee Member

2 — School Committee Member

3 — School Committee Member

Jeffrey Sands — Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$710,866.07
		$710,866.07

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT VOUCHER

Voucher No: 46 **Voucher Date:** 03/16/2018 Prepared By: Donald Gallant

Printed: 03/12/2018 04:44:59 PM

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT is hereby authorized to draw warrants against HAMILTON WENHAM REGIONAL SCHOOL DISTRICT funds for the sum of $8,622.47 on account of obligations incurred for value received in services and for materials as shown below for period July 1, 2017 to June 30, 2018 (period cannot overlap fiscal year end.)

I certify that this claim is just and correct, and the services and/or materials herein represented have been received during the period listed above. All items are properly coded and not in excess of the budget.

Donald E. Gallant — Treasurer

Leslie Davidson — Assistant Treasurer

1 — School Committee Member

2 — School Committee Member

3 — School Committee Member

Jeffrey Sands — Assistant Superintendent for Admin. and Finance

HAMILTON WENHAM REGIONAL SCHOOL DISTRICT

Fund		Amount
001	GENERAL FUND	$7,381.32
202	REVOLVING FUNDS	$0.00
205	ATHLETIC/EXTRA CURR REVOLVING	$0.00
301	TITLE I	$702.84
302	94-142 IDEA 240	$0.00
304	EARLY CHILDHOOD	$0.00
402	STATE GRANTS FY EVEN YEARS	$0.00
701	CAFETERIA FUNDS	$538.31
		$8,622.47

2017-18 Enrollment Projections

TO: Dr. Michael Harvey Superintendent of Schools, Hamilton-Wenham RSD, MA
FROM: Donald G. Kennedy, Ed.D., Demographic Specialist
DATE: March 19, 2018
RE: Enrollment Projections (dated December 14, 2017)

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. Included on the final three pages are school-by-school projections.

NESDEC's enrollment projection totals from fall of 2016 data for **Hamilton-Wenham** fell within 18 students of the actual Grade K-12 enrollment total for fall, 2016 (1,686 projected v. 1,704 actual). In **Hamilton** Grades K-12, 1,065 pupils were projected v. 1,090 enrolled. In **Wenham** Grades K-12, 621 students were forecast v. 614 enrolled.

The two factors now at work which will have the greatest effect upon future enrollments are: a. a slightly smaller number of births to Hamilton-Wenham residents and, b. a buildup to new in-migration - which had slowed, due to the 2008 Recession. The students currently in Grades 2-10 were born during a period when Hamilton-Wenham was averaging 128 births per year. More recently (and expected over the next 6-7 years) are 105-123 births annually… averaging about 17 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 January, 2018 in CT was 4.5%; RI 4.5%; US non-farm unemployment 4.1%; New England average 3.7%; **MA 3.5%;** ME 3.0%; VT 2.9%; and NH 2.6% - other nearby states: PA 4.8%; NJ 4.7 and NY 4.7%. 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. Hamilton-Wenham, over the past seven years, has registered about 106 Kindergarteners for every 100 births (five years previous), a relationship which has been increasing. This fall there were 119 Kindergarteners for every 100 births as opposed to only 83 Kindergarteners for every 100 births in 2008-09. NESDEC's Kindergarten projections for 2017-18 anticipated 140 children v. 146 enrolled. Next year's Grade 1 is expected to be about 2% larger than the previous year's Kindergarten class.

"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 additional fluctuation for reasons (especially Career and Technical High Schools) having little to do with students moving in/out of the community. Regarding the Grade 1-8 stability, if last year the Grade 1-7 total was 900 children, then (if no one moved in or out) this fall's Grades 2-8 again would equal about 900 – 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 "mixed in-/out-migration" of families with school age children the last five years – a decrease in **Hamilton** and an increase in **Wenham**. In 2015-16, **Hamilton's** Grade 1-7 group of 614 children **decreased by 18 children** to 596 in Grades 2-8 in 2016-17. **Hamilton's** Grades 1-7 the 587 children in Grades 1-7 in 2016-17 **decreased by 5 children** to 582 students in Grades 2-8 in 2017-18. This net decrease has averaged about -9 students per year over the last five years (with decreases in four-out-of-five school years). **Wenham**, on the other hand had 316 children in grades Grade 1-7 in 2015-16 **increased by 13 students** to 329 in 2016-17. In 2016-17 the Grades 1-7 group of 322 children **increased by 10 children** to 332 in Grades 2-8 in 2017-18. This net increase in **Wenham** has averaged about +11 students per year over the last five years (with increases in five-out-of-five school years). The presence of a mixed 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 -7 children and an decreasing enrollment of -9 K-5 students in Wenham; In Grades 6-8, Hamilton enrollments are projected to decrease by -4 pupils and for Wenham to grow by +28 students; and at the high school level Hamilton to decrease by -28 students and Wenham to decrease by -14 students (all within the next three years – as classes move up the grades.) After that point these

projections show a decrease in Hamilton enrollment in Grades K-5 of -6 students and Wenham to decrease by -4 students, combined with a decrease in Hamilton of -3 students at Grades 6-8 and a decrease of -10 in Wenham; and n decrease of -7 Hamilton students in Grades 9-12 coupled with an increase of Wenham students of +29 – as classes age their way through the grades. 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 consistently improving real estate conditions. That longer-term future also will be affected by the real estate market and 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 becomes more stable in the region, additional in-migration may occur in Hamilton-Wenham. 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 single-family homes per year "on the bubble" in 2003-07; this pace declined to only 61 homes sold in 2008 (80% of the earlier pace). **Hamilton** sales recovered to 110 s-f homes in 2016 and 111 s-f homes in 2017. In the case of **Wenham**, the town was selling about 41 single-family homes per year "on the bubble" in 2003-07; this pace declined to only 21 homes sold in 2009 (51% of the earlier pace). **Wenham** sales recovered to 60 s-f homes in 2016 and 59 s-f homes in 2017. Both towns have seen a significant increase in single family home sales since the 2008 recession. Building permits also had slowed as well; see the "Additional Data" table below. As additional families move in, forecasted declines may moderate. See the description on Page 4 below regarding "reliability of projections". The birth numbers used in the projections, through 2015, are from the MA Department of Public Health. The "estimated" years, beginning with 2016 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 Kindergarteners in the district.**

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.**

A note about the Pre-Kindergarten Year (PK): Recent research on the critical value of quality educational programs for 3-and-4-year-old children is summarized in *The Most Important Year, Pre-Kindergarten and the Future of Our Children* by Suzanne Bouffard, a Developmental Psychologist, Penguin Random House (2017). A child's brain develops faster during these essential early childhood years than at any other time during the life span. Further, children who attend quality pre-Kindergarten programs develop better language, literacy, problem-solving and math skills, and are more likely to display stronger self-control – qualities that will prepare them for a lifetime of successful learning.

Continuing Declines Expected in New England's PK-12 Enrollments

The US Department of Education, from 2013 to 2025, anticipates changes in PK-12 enrollment of **+7.8%** in the South; **+4.47%** in the West, **-2.7%** in the Midwest; and **-4.8%** in the Northeast.

State	Fall 2013	Fall 2025 Projected	PK-12 Decline	% Change, 2013-2025
CT	546,200	468,600	-77,600	-14.2%
ME	183,995	161,900	-22,095	-12.0%
MA	955,739	910,700	-45,039	-4.7%
NH	186,310	159,100	-52,410	-14.6%
RI	142,008	133,900	-8,108	-5.7%
VT	88,690	79,600	-9,090	-10.3%

Source: USDE, National Center for Education Statistics, *Projections of Education Statistics to 2025*, Table 3, pages 40-41.

Despite overall declines regionwide, NESDEC has found in over 300 sets of enrollment projections during 2016-17 that about 29% of the districts are expected to increase their enrollment by some amount over the next decade – with 71% of the districts forecast to decline below their 2016-17 PK-12 total enrollments.

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, MA Historical Enrollment

School District: **Hamilton, MA** **12/14/2017**

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
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
2012	96	**2017-18**	24	107	83	81	94	70	93	74	92	78	85	68	93	72	0	1090	1114

Historical Enrollment in Grade Combinations

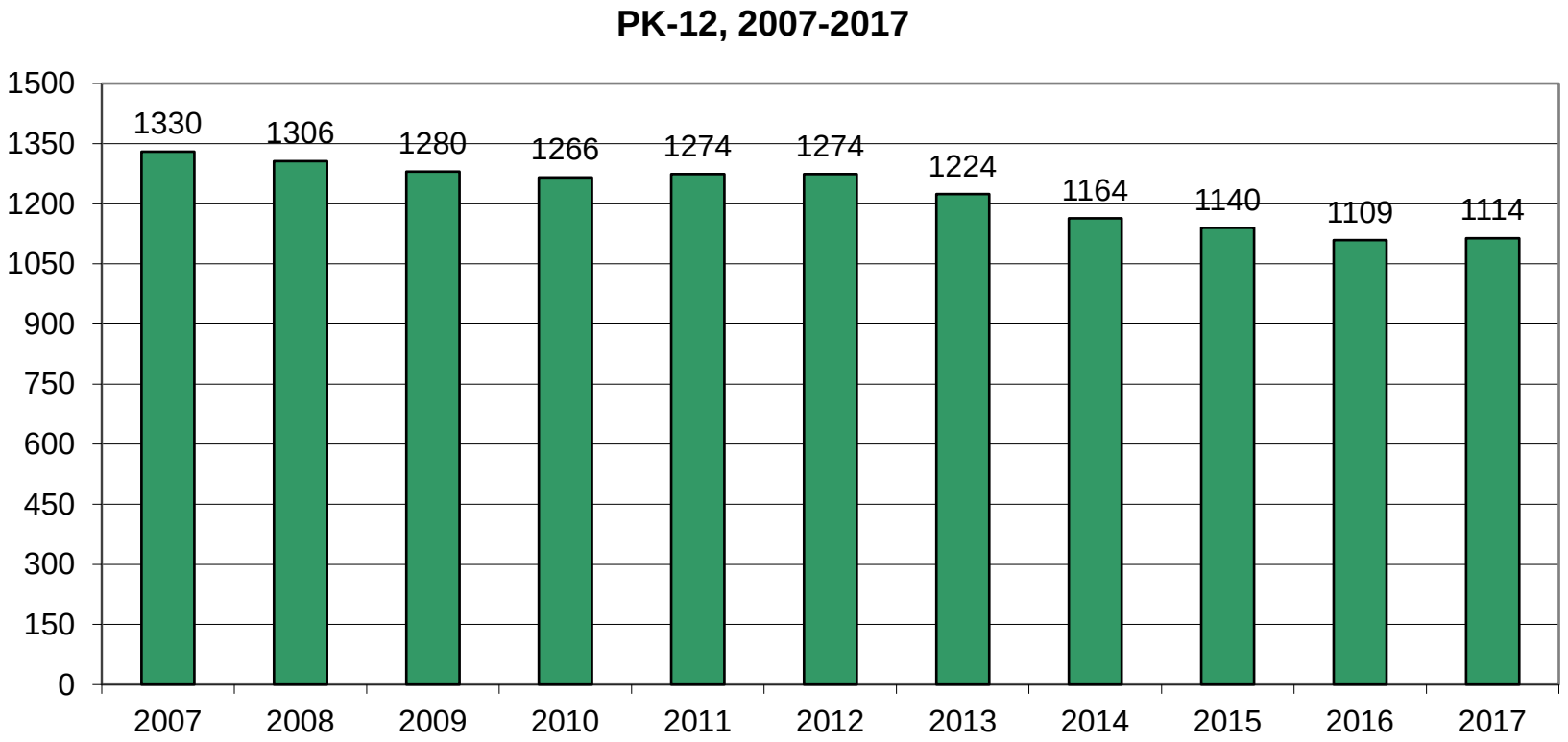
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2007-08	577	553	668	903	448	350	235	638	403
2008-09	580	555	649	875	410	320	226	632	406
2009-10	577	563	650	865	406	302	215	616	401
2010-11	580	574	682	867	384	293	185	578	393
2011-12	567	553	642	840	392	287	198	616	418
2012-13	568	545	651	848	392	303	197	600	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
2017-18	552	528	602	772	337	244	170	488	318

Historical Percentage Changes

Year	K-12	Diff.	%
2007-08	1306	0	0.0%
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%
2017-18	1090	8	0.7%
Change		**-216**	**-16.5%**

©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton, MA Historical Enrollment



©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton, MA Projected Enrollment

School District: **Hamilton, MA** **12/14/2017**

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
2012	96		2017-18	24	107	83	81	94	70	93	74	92	78	85	68	93	72	0	1090	1114
2013	87		2018-19	24	90	105	82	81	93	71	87	75	88	72	84	64	90	0	1082	1106
2014	86		2019-20	25	89	89	103	82	80	94	66	88	72	81	71	79	62	0	1056	1081
2015	82		2020-21	25	84	88	88	103	81	81	88	67	85	67	80	67	76	0	1055	1080
2016	86	(est.)	2021-22	26	89	83	87	88	102	82	75	89	64	79	66	76	65	0	1045	1071
2017	87	(est.)	2022-23	26	90	88	82	87	87	104	76	76	86	59	78	62	73	0	1048	1074
2018	86	(est.)	2023-24	27	88	89	87	82	86	88	97	77	73	79	58	74	60	0	1038	1065
2019	85	(est.)	2024-25	27	88	87	88	87	81	87	82	98	74	67	78	55	71	0	1043	1070
2020	85	(est.)	2025-26	28	88	87	86	88	86	82	81	83	94	68	66	74	53	0	1036	1064
2021	86	(est.)	2026-27	28	89	87	86	86	87	87	76	82	80	87	67	62	71	0	1047	1075
2022	86	(est.)	2027-28	29	89	88	86	86	85	88	81	77	79	74	86	63	60	0	1042	1071

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, and births.

Based on an estimate of births Based on children already born Based on students already enrolled

Projected Enrollment in Grade Combinations*

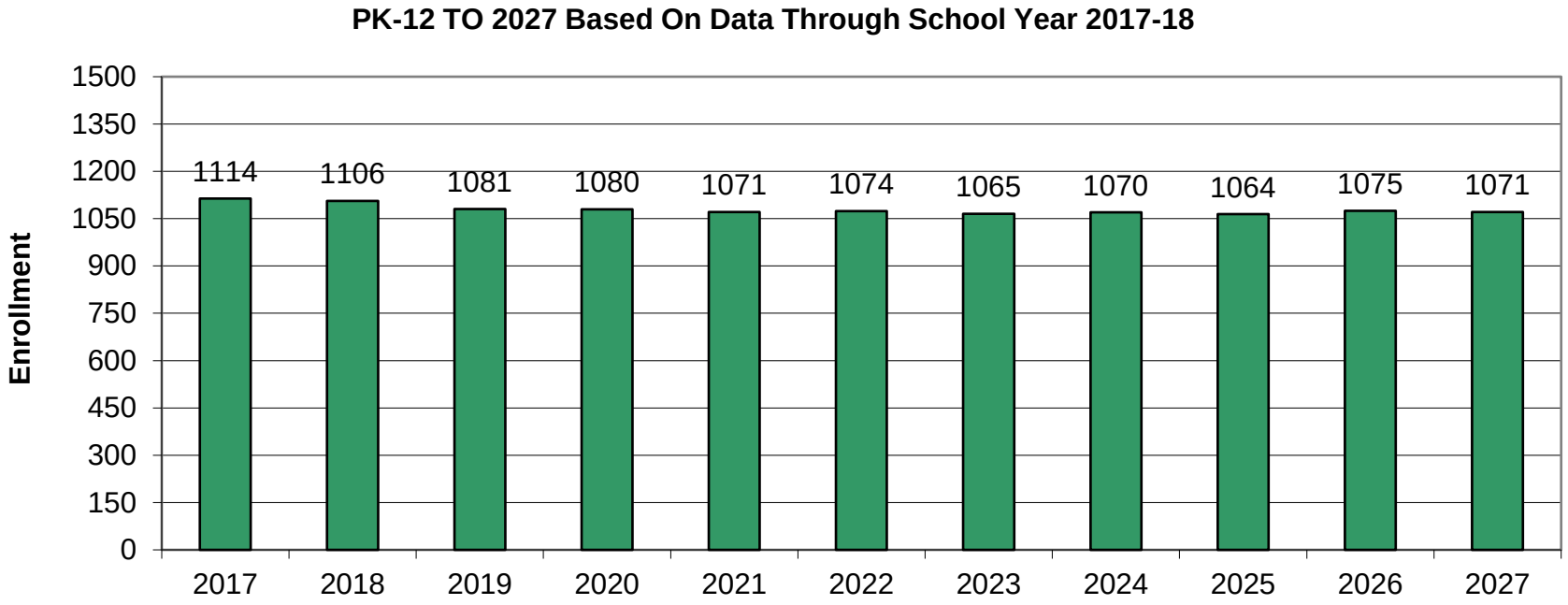
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2017-18	552	528	602	772	337	244	170	488	318
2018-19	546	522	609	772	321	250	163	473	310
2019-20	562	537	603	763	320	226	160	453	293
2020-21	550	525	613	765	321	240	152	442	290
2021-22	557	531	606	759	310	228	153	439	286
2022-23	564	538	614	776	342	238	162	434	272
2023-24	547	520	617	767	335	247	150	421	271
2024-25	545	518	600	772	341	254	172	443	271
2025-26	545	517	598	775	340	258	177	438	261
2026-27	550	522	598	760	325	238	162	449	287
2027-28	551	522	603	759	325	237	156	439	283

Projected Percentage Changes

Year	K-12	Diff.	%
2017-18	1090	0	0.0%
2018-19	1082	-8	-0.7%
2019-20	1056	-26	-2.4%
2020-21	1055	-1	-0.1%
2021-22	1045	-10	-0.9%
2022-23	1048	3	0.3%
2023-24	1038	-10	-1.0%
2024-25	1043	5	0.5%
2025-26	1036	-7	-0.7%
2026-27	1047	11	1.1%
2027-28	1042	-5	-0.5%
Change		-48	-4.4%

©New England School Development Council • 508-481-9444 • www.nesdec.org

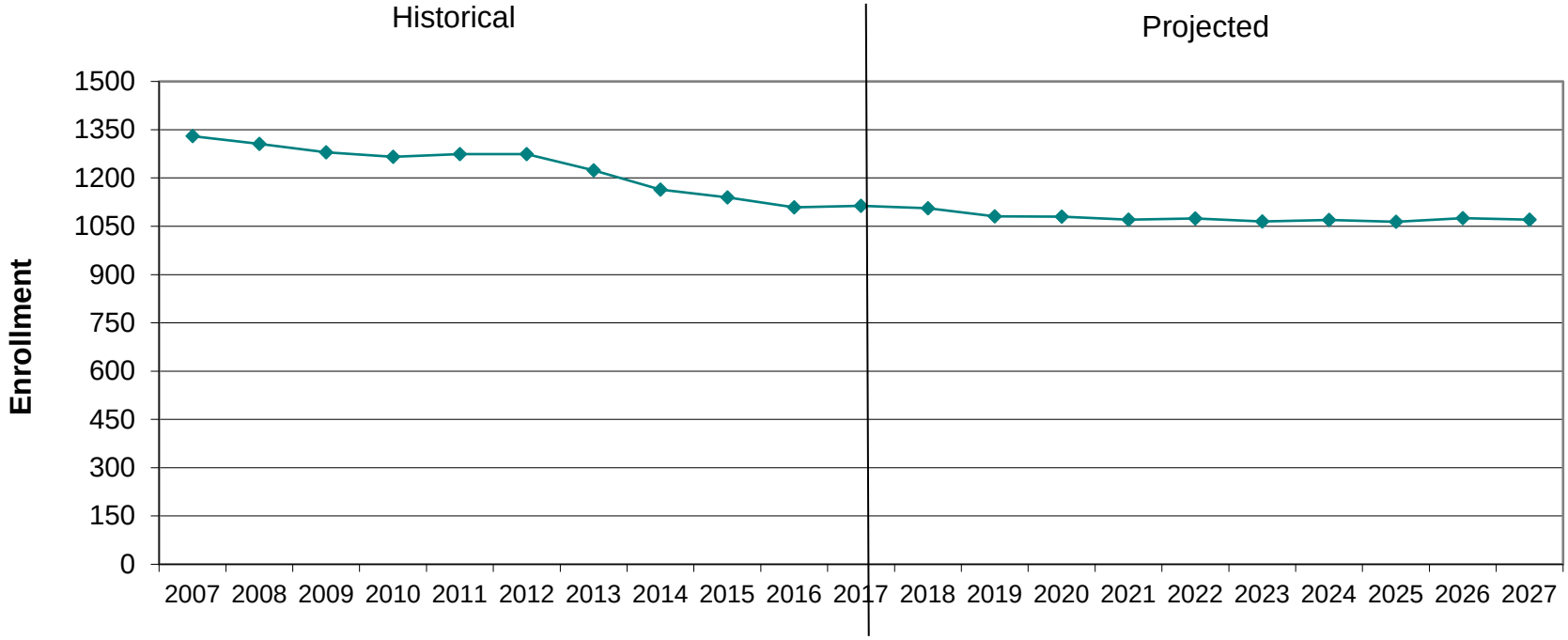
Hamilton, MA Projected Enrollment



©New England School Development Council • 508-481-9444 • www.nesdec.org

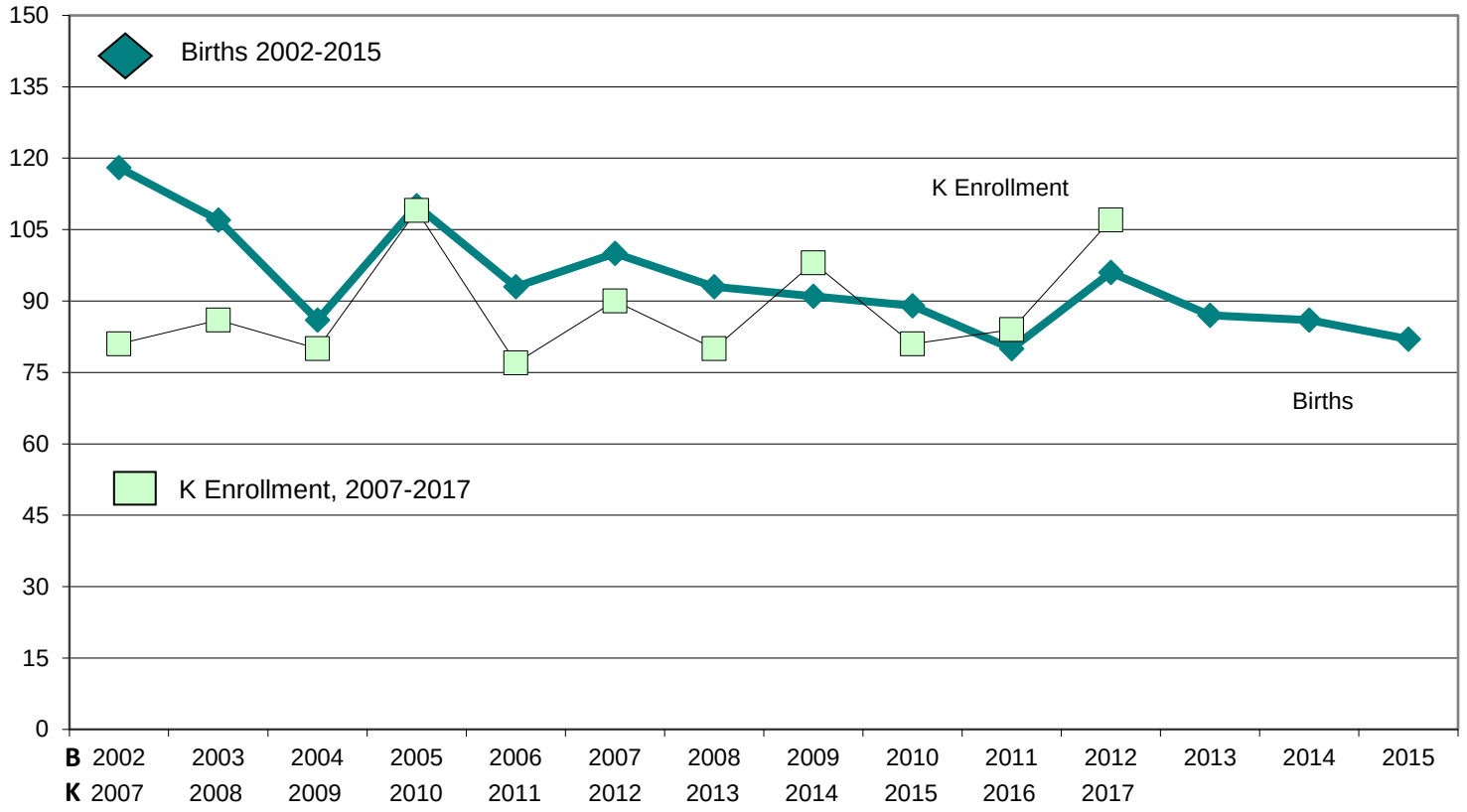
Hamilton, MA Historical & Projected Enrollment

PK-12, 2007-2027



©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton, MA Birth-to-Kindergarten Relationship



©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton, MA Additional Data

Building Permits Issued		
Year	Single-Family	Multi-Units
2005	3	0
2013	10	0
2014	5	0
2015	5	0
2016	3	0
2017	6 to Sep 30	0

Source: HUD and Building Department

Enrollment History		
Year	Career-Tech 9-12 Total	Non-Public K-12 Total
2005-06	3	244
2013-14	9	196
2014-15	12	230
2015-16	15	221
2016-17	14	235
2017-18	n/a	n/a

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of 10/1/16	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	
2017	5

K-12 Special Education Outplaced Students	
2017	22

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2017	46 for District

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

©New England School Development Council • 508-481-9444 • www.nesdec.org

Wenham, MA Historical Enrollment

School District: **Wenham, MA** **12/14/2017**

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
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
2012	27	**2017-18**	6	39	44	43	47	64	42	42	41	53	46	58	47	48	0	614	620

Historical Enrollment in Grade Combinations

Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
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
2017-18	285	279	321	415	178	136	94	293	199

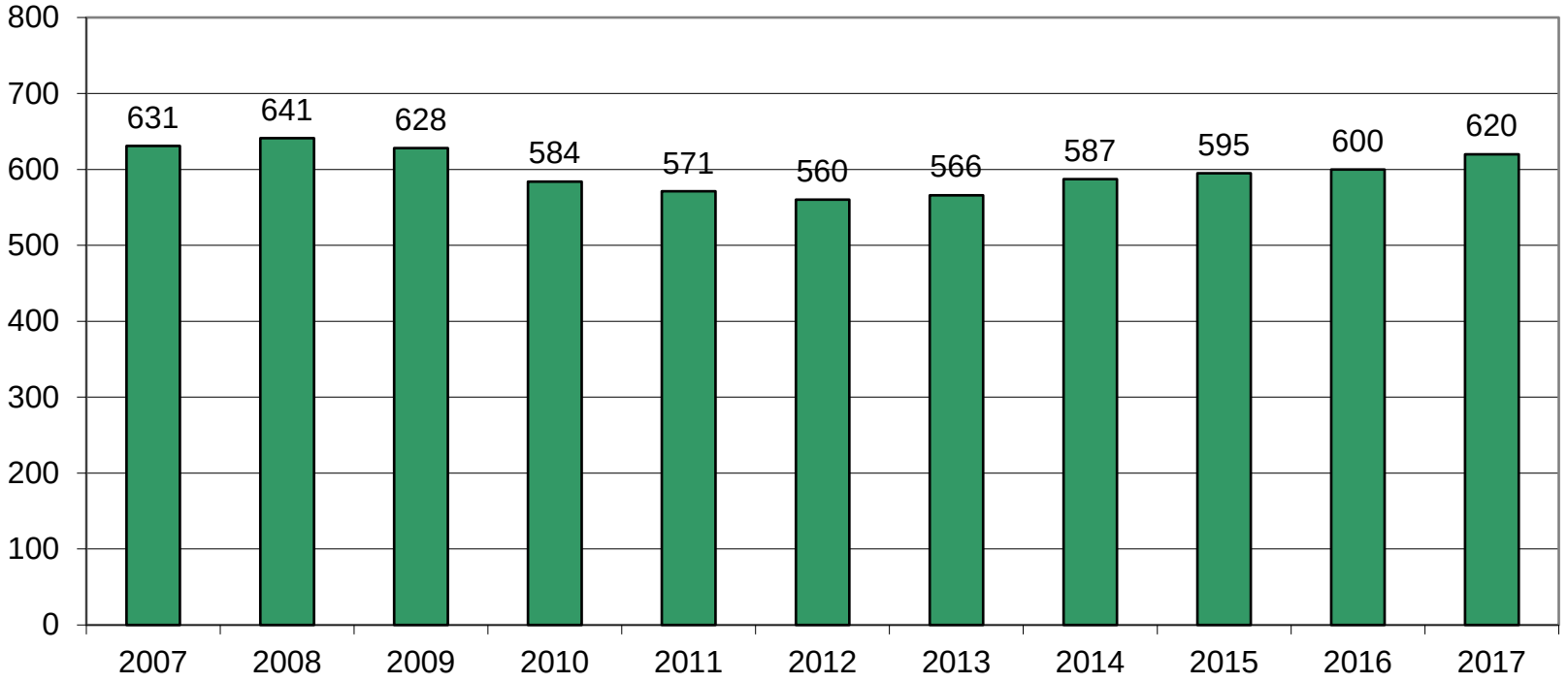
Historical Percentage Changes

Year	K-12	Diff.	%
2007-08	626	0	0.0%
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%
2017-18	614	18	3.0%
Change		**-12**	**-1.9%**

©New England School Development Council • 508-481-9444 • www.nesdec.org

Wenham, MA Historical Enrollment

PK-12, 2007-2017



©New England School Development Council • 508-481-9444 • www.nesdec.org

Wenham, MA Projected Enrollment

School District: **Wenham, MA** **12/14/2017**

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
2012	27		2017-18	6	39	44	43	47	64	42	42	41	53	46	58	47	48	0	614	620
2013	23		2018-19	6	36	43	44	47	50	70	41	42	43	51	47	58	49	0	621	627
2014	24		2019-20	6	37	40	43	48	50	55	68	41	44	41	52	47	61	0	627	633
2015	23		2020-21	7	36	41	40	47	51	55	53	68	43	42	42	52	49	0	619	626
2016	25	(est.)	2021-22	7	38	40	41	43	50	56	53	53	71	41	43	42	54	0	625	632
2017	24	(est.)	2022-23	7	38	42	40	45	46	55	54	53	55	68	42	43	44	0	625	632
2018	24	(est.)	2023-24	8	37	42	42	43	48	51	53	54	55	53	69	42	45	0	634	642
2019	24	(est.)	2024-25	8	37	41	42	46	46	53	49	53	56	53	54	69	44	0	643	651
2020	24	(est.)	2025-26	8	37	41	41	46	49	51	51	49	55	54	54	54	72	0	654	662
2021	24	(est.)	2026-27	9	37	41	41	45	49	54	49	51	51	53	55	54	56	0	636	645
2022	24	(est.)	2027-28	9	37	41	41	45	48	54	52	49	53	49	54	55	56	0	634	643

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, and births.

Based on an estimate of births | Based on children already born | Based on students already enrolled

Projected Enrollment in Grade Combinations*

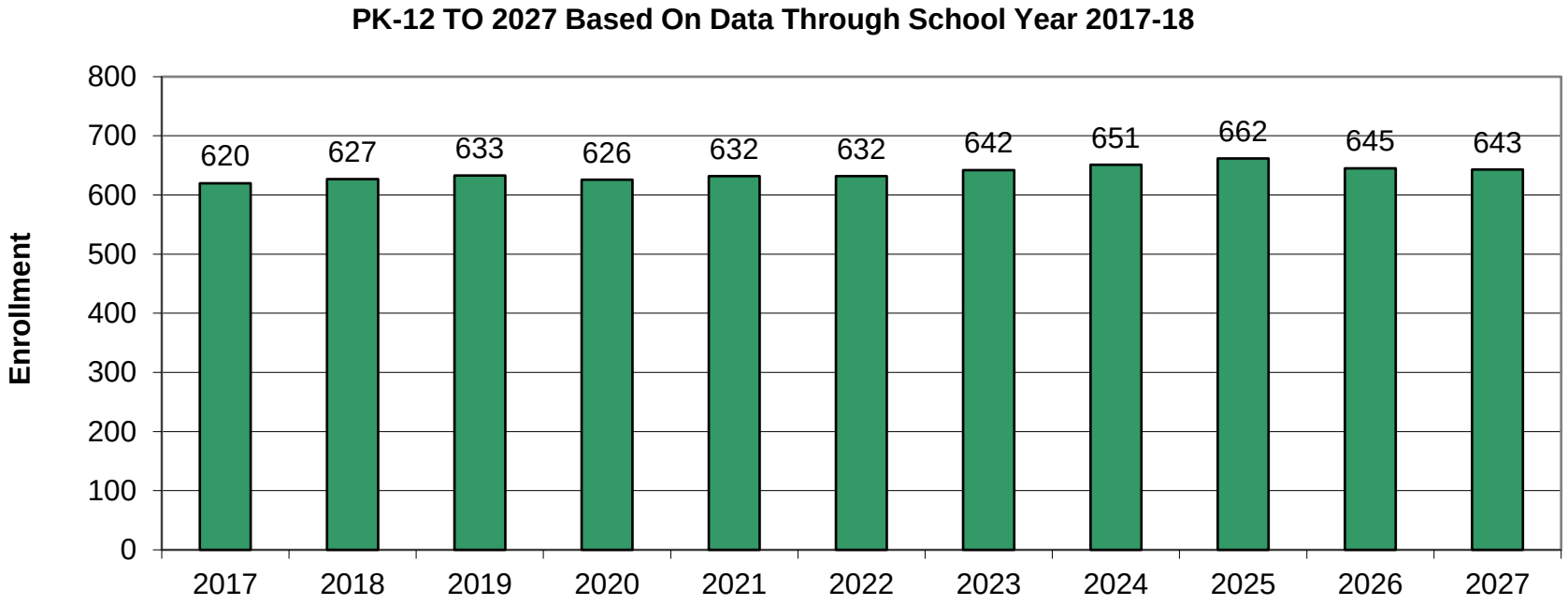
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2017-18	285	279	321	415	178	136	94	293	199
2018-19	296	290	331	416	196	126	85	290	205
2019-20	279	273	341	426	208	153	85	286	201
2020-21	277	270	323	434	219	164	111	296	185
2021-22	275	268	321	445	233	177	124	304	180
2022-23	273	266	320	428	217	162	108	305	197
2023-24	271	263	316	425	213	162	109	318	209
2024-25	273	265	314	423	211	158	109	329	220
2025-26	273	265	316	420	206	155	104	338	234
2026-27	276	267	316	418	205	151	102	320	218
2027-28	275	266	318	420	208	154	102	316	214

Projected Percentage Changes

Year	K-12	Diff.	%
2017-18	614	0	0.0%
2018-19	621	7	1.1%
2019-20	627	6	1.0%
2020-21	619	-8	-1.3%
2021-22	625	6	1.0%
2022-23	625	0	0.0%
2023-24	634	9	1.4%
2024-25	643	9	1.4%
2025-26	654	11	1.7%
2026-27	636	-18	-2.8%
2027-28	634	-2	-0.3%
Change		20	3.3%

©New England School Development Council • 508-481-9444 • www.nesdec.org

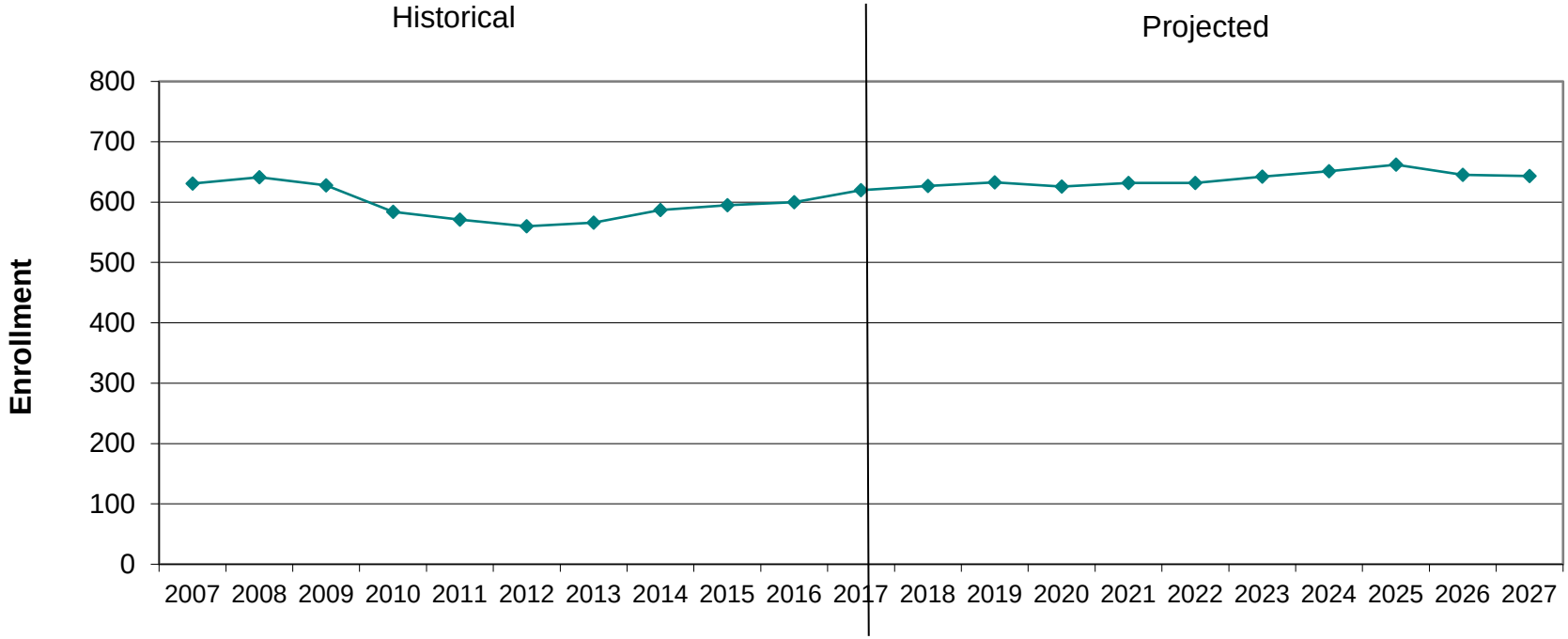
Wenham, MA Projected Enrollment



©New England School Development Council • 508-481-9444 • www.nesdec.org

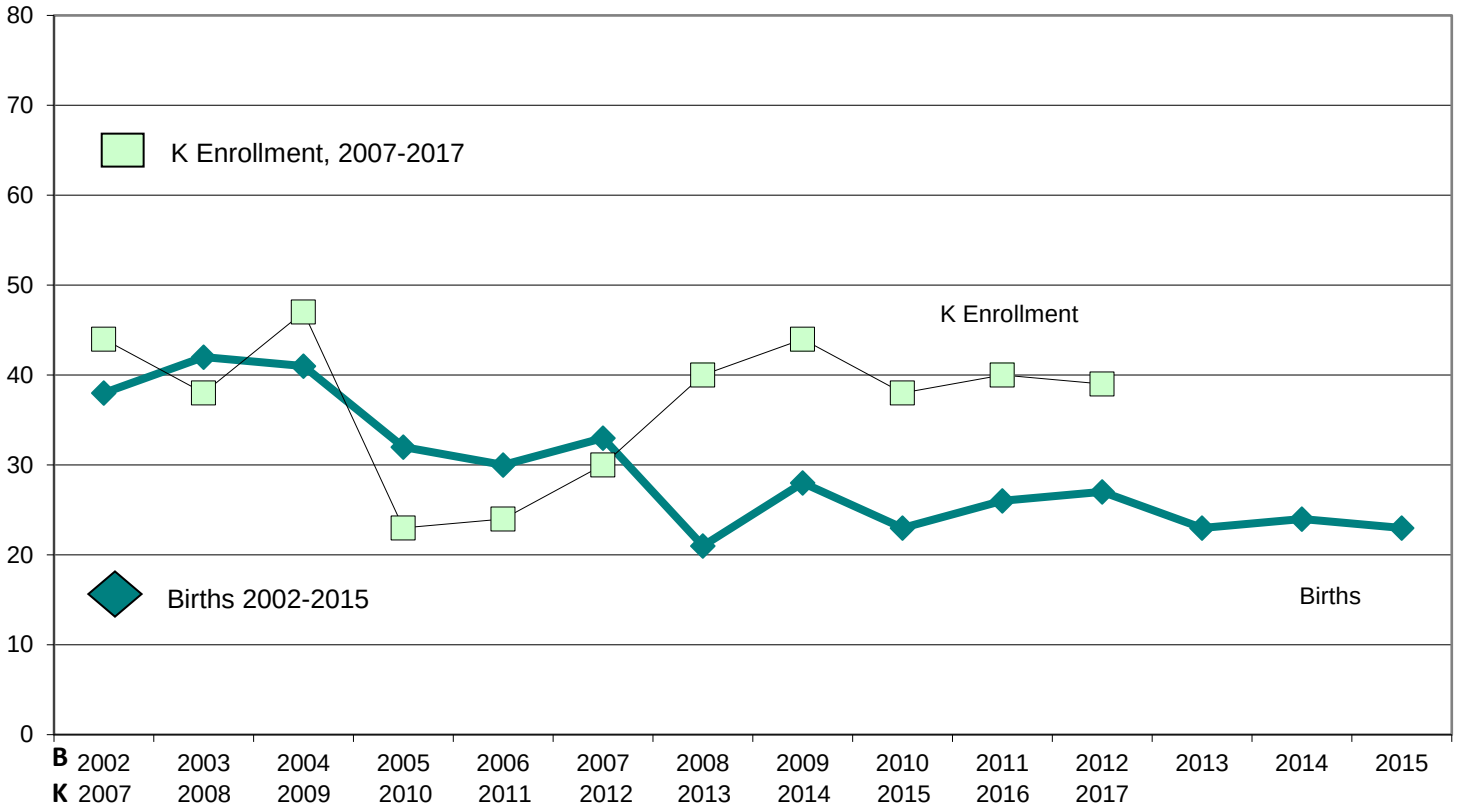
Wenham, MA Historical & Projected Enrollment

PK-12, 2007-2027



©New England School Development Council • 508-481-9444 • www.nesdec.org

Wenham, MA Birth-to-Kindergarten Relationship



©New England School Development Council • 508-481-9444 • www.nesdec.org

Wenham, MA Additional Data

Building Permits Issued		
Year	Single-Family	Multi-Units
2005	3	0
2013	6	0
2014	6	0
2015	4	4
2016	7	8
2017	2 to Oct 31	4 to Oct 31

Source: HUD and Building Department

Enrollment History		
Year	Career-Tech 9-12 Total	Non-Public K-12 Total
2005-06	n/a	140
2013-14	8	149
2014-15	8	134
2015-16	10	121
2016-17	10	139
2017-18	n/a	n/a

Residents in Non-Public Independent and Parochial Schools (General Education)														
Enrollments as of 10/1/16	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	
2017	8

K-12 Special Education Outplaced Students	
2017	16

K-12 Choiced-In, Tuitioned-In, & Other Non-Residents	
2017	46 for District

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

©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton-Wenham, MA Historical Enrollment

School District: **Hamilton-Wenham, MA** **12/14/2017**

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
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
2012	123	**2017-18**	30	146	127	124	141	134	135	116	133	131	131	126	140	120	0	1704	1734

Historical Enrollment in Grade Combinations

Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
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
2017-18	837	807	923	1187	515	380	264	781	517

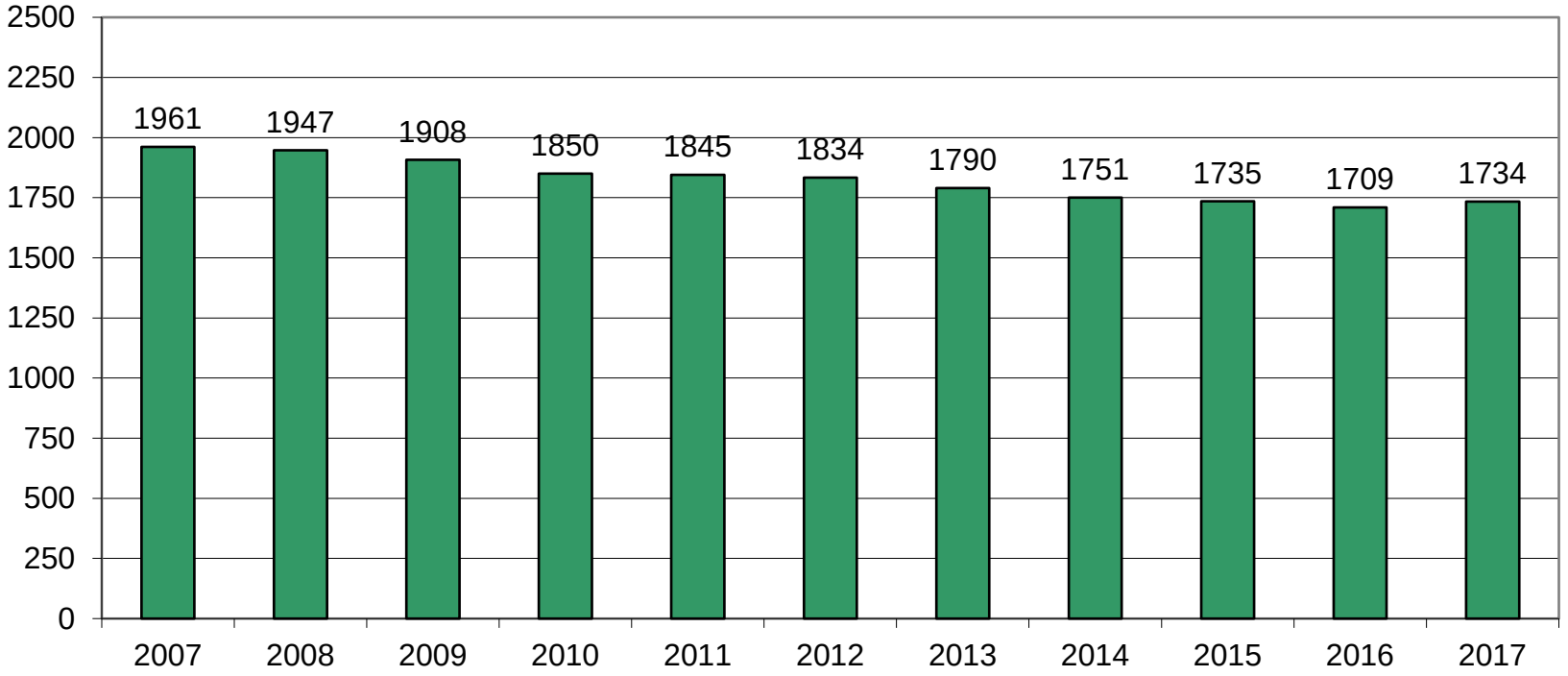
Historical Percentage Changes

Year	K-12	Diff.	%
2007-08	1932	0	0.0%
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%
2017-18	1704	26	1.5%
Change		**-228**	**-11.8%**

©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton-Wenham, MA Historical Enrollment

PK-12, 2007-2017



©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton-Wenham, MA Projected Enrollment

School District: **Hamilton-Wenham, MA** **12/14/2017**

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
2012	123		**2017-18**	30	**146**	**127**	**124**	**141**	**134**	**135**	**116**	**133**	**131**	**131**	**126**	**140**	**120**	**0**	**1704**	**1734**
2013	110		**2018-19**	30	**126**	**148**	**126**	**128**	**143**	**141**	**128**	**117**	**131**	**123**	**131**	**122**	**139**	**0**	**1703**	**1733**
2014	110		**2019-20**	31	**126**	**129**	**146**	**130**	**130**	**149**	**134**	**129**	**116**	**122**	**123**	**126**	**123**	**0**	**1683**	**1714**
2015	105		**2020-21**	32	**120**	**129**	**128**	**150**	**132**	**136**	**141**	**135**	**128**	**109**	**122**	**119**	**125**	**0**	**1674**	**1706**
2016	111	(est.)	**2021-22**	33	**127**	**123**	**128**	**131**	**152**	**138**	**128**	**142**	**135**	**120**	**109**	**118**	**119**	**0**	**1670**	**1703**
2017	112	(est.)	**2022-23**	33	**128**	**130**	**122**	**132**	**133**	**159**	**130**	**129**	**141**	**127**	**120**	**105**	**117**	**0**	**1673**	**1706**
2018	110	(est.)	**2023-24**	35	**125**	**131**	**129**	**125**	**134**	**139**	**150**	**131**	**128**	**132**	**127**	**116**	**105**	**0**	**1672**	**1707**
2019	109	(est.)	**2024-25**	35	**125**	**128**	**130**	**133**	**127**	**140**	**131**	**151**	**130**	**120**	**132**	**124**	**115**	**0**	**1686**	**1721**
2020	109	(est.)	**2025-26**	36	**125**	**128**	**127**	**134**	**135**	**133**	**132**	**132**	**149**	**122**	**120**	**128**	**125**	**0**	**1690**	**1726**
2021	110	(est.)	**2026-27**	37	**126**	**128**	**127**	**131**	**136**	**141**	**125**	**133**	**131**	**140**	**122**	**116**	**127**	**0**	**1683**	**1720**
2022	110	(est.)	**2027-28**	38	**126**	**129**	**127**	**131**	**133**	**142**	**133**	**126**	**132**	**123**	**140**	**118**	**116**	**0**	**1676**	**1714**

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, and births.

Based on an estimate of births | Based on children already born | Based on students already enrolled

Projected Enrollment in Grade Combinations*

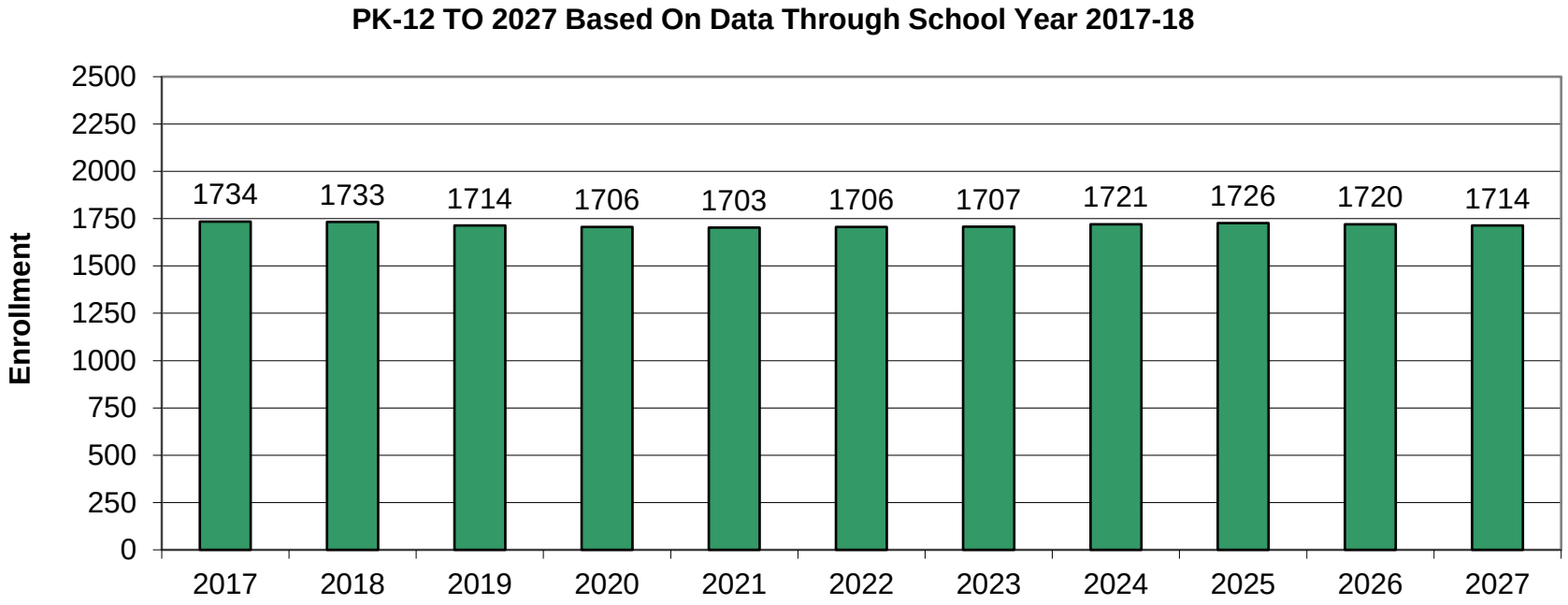
Year	PK-5	K-5	K-6	K-8	5-8	6-8	7-8	7-12	9-12
2017-18	837	807	923	1187	515	380	264	781	517
2018-19	842	812	940	1188	517	376	248	763	515
2019-20	841	810	944	1189	528	379	245	739	494
2020-21	827	795	936	1199	540	404	263	738	475
2021-22	832	799	927	1204	543	405	277	743	466
2022-23	837	804	934	1204	559	400	270	739	469
2023-24	818	783	933	1192	548	409	259	739	480
2024-25	818	783	914	1195	552	412	281	772	491
2025-26	818	782	914	1195	546	413	281	776	495
2026-27	826	789	914	1178	530	389	264	769	505
2027-28	826	788	921	1179	533	391	258	755	497

Projected Percentage Changes

Year	K-12	Diff.	%
2017-18	1704	0	0.0%
2018-19	1703	-1	-0.1%
2019-20	1683	-20	-1.2%
2020-21	1674	-9	-0.5%
2021-22	1670	-4	-0.2%
2022-23	1673	3	0.2%
2023-24	1672	-1	-0.1%
2024-25	1686	14	0.8%
2025-26	1690	4	0.2%
2026-27	1683	-7	-0.4%
2027-28	1676	-7	-0.4%
Change		**-28**	**-1.6%**

©New England School Development Council • 508-481-9444 • www.nesdec.org

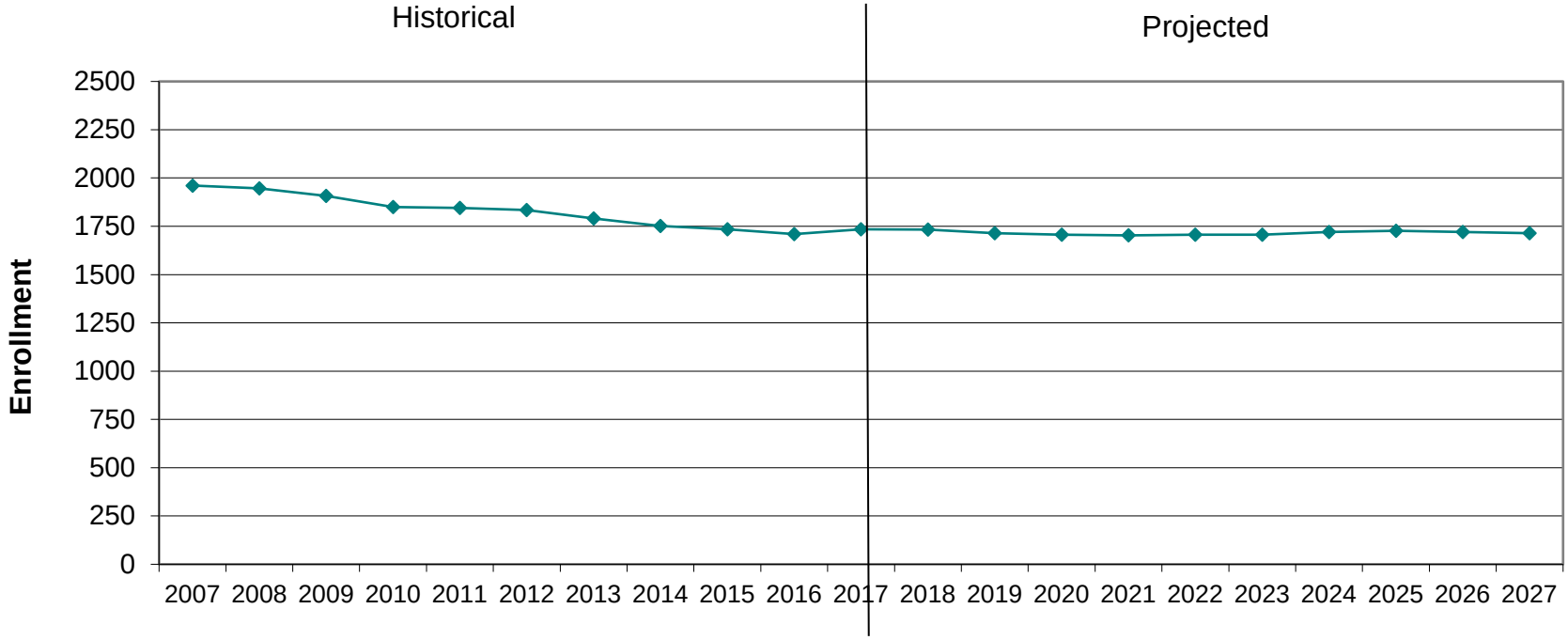
Hamilton-Wenham, MA Projected Enrollment



©New England School Development Council • 508-481-9444 • www.nesdec.org

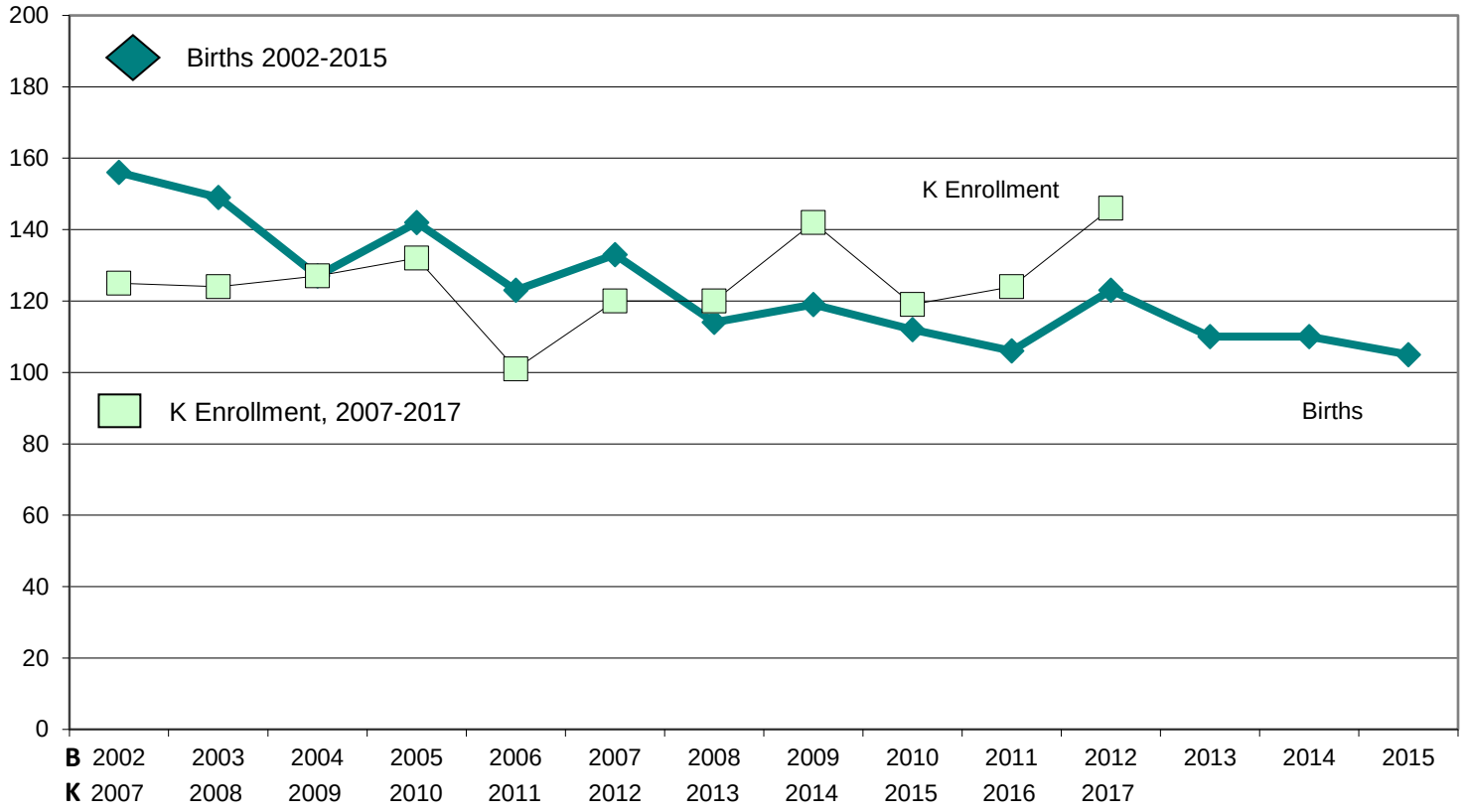
Hamilton-Wenham, MA Historical & Projected Enrollment

PK-12, 2007-2027



©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton-Wenham, MA Birth-to-Kindergarten Relationship



©New England School Development Council • 508-481-9444 • www.nesdec.org

Hamilton-Wenham Regional School District, MA
Demographic Study

January, 2018

McKibben Demographics

Table of Contents

Executive Summary	1
Introduction	2
Data	2
Assumptions	3
Methodology	4
References	5
Appendix A: Supplemental Tables	6
Appendix B: Population Forecasts	11
Appendix C: Population Pyramids	14
Appendix D: Enrollment Forecasts	17

Executive Summary

1. The resident total fertility rate for the town of Hamilton over the life of the forecasts is below replacement level. (1.82 vs. the replacement level of 2.1) The resident total fertility rate for the town of Wenham over the life of the forecasts is also below replacement level at 1.77

2. Most in-migration into both towns continues to occur in the 0-to-9 and 30-to-44 year-old age groups.

3. The local 18-to-24 year-old population continues to leave both towns, going to college or moving to other urbanized areas. This population group accounts for the largest segment of the district's out-migration flow and will increase steadily over the next 10 years. The second largest out migration flow is in households over the age of 70.

4. The primary factors causing the enrollment to decrease over the next 10 years in both towns are the increase in empty nest households, and a low rate of in-migration of young families.

5. Changes in year-to-year enrollment over the next 10 years will primarily be due to small grade cohorts entering and moving through the school system in conjunction with large grade cohorts leaving the system.

6. The elementary enrollment in the town of Wenham will begin a slight decline after the 2018-19 school year. This will be due primarily to the fact that most of the rising 5th grade cohorts will be greater than 50 students in size. Elementary enrollments in the town of Hamilton should stay steady until 2022-23 and decline afterwards.

7. One of the main reasons that the total enrollment in the town of Wenham increases over the last five years is due to the fact that there were relatively small 12th grade classes graduating. (an average of 45 students per year). Conversely in Hamilton, the 12th grade classes over the last five years were relatively large, averaging 87 students per year. Over the next 10 years, this situation will reverse as Wenham will average 50 seniors per year and Hamilton will only average 72.

8. The median age of the population in the town of Hamilton will increase from 40.8 in 2010 to 41.5 in 2025. The median age of the population in the town of Wenham will increase from 27.2 in 2010 to 29.3 in 2025. The fact that Gordon College is located within the boundaries of Wenham is the reason why their median age is so much low than the town of Hamilton.

9. Even if both towns continues to have some level of annual new home construction over the next 10 years, the rate, magnitude, and price of existing home sales will become the increasingly dominant factors affecting the amount of population and enrollment change.

10. Total enrollment in the town of Hamilton is forecasted to decrease by 7 students, or -0.6%, between 2017-18 and 2022-23. Total enrollment will decrease by 25 students, or -2.2%, from 2022-23 to 2027-28. Total enrollment in the town of Wenham is forecasted to increase by 15 students, or 2.4%, between 2017-18 and 2022-23. Total enrollment will decrease by 5 students, or -0.8%, from 2022-23 to 2027-28.

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

To calculate population forecasts of any type, particularly for smaller populations such as a school district or attendance area, 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 the basis of most of these suppositions particularly on key factors such as the age structure of the area. The unique nature of each district's and attendance area's demographic composition and rate of change over time must be assessed and understood to be factors throughout the life of the forecast series. Moreover, no two populations, particularly at the school district and municipality level, have exactly the same characteristics.

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

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

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

DATA

The data used for the forecasts come from a variety of sources. The Hamilton-Wenham Regional School District provided enrollments by grade and for each town for the school years 2013-14 to 2017-18. Birth and death data for the years 2000 through 2016 were obtained from the Massachusetts Department of Health. The net migration values were calculated using Internal Revenue Service migration reports for the years 2000 through 2016. The data used for the calculation of migration models came from the United States Bureau of the Census, 2005 to 2010, and the models were designed using demographic and economic factors. The base age-sex population counts used are from the results of the 2010 Census.

Recently the Census Bureau began releasing annual estimates of demographic variables at the block group and tract level from the American Community Survey (ACS). There has been wide scale reporting of these results in the national, state and local media. However, due to the methodological problems the Census Bureau is experiencing with their estimates derived from ACS data, particularly in areas with a population of less than 60,000, the results of the ACS are not used in these forecasts. For example, given the sampling framework used by the Census Bureau, each year only 80 of the over 2,700 current households in the Hamilton and 50 of the over 1,400 current households in the Wenham would have been included. For comparison, 400 Hamilton and 200 Wenham households were included in the sample for the long form questionnaire in the 2000 Census. As a result of this small sample size, the ACS survey result from the last 5 years must be aggregated to produce the tract and block group estimates.

To develop the population forecast models, past migration patterns, current age specific fertility patterns, the magnitude and dynamics of the gross migration, the age specific mortality trends, the distribution of the population by age and sex, the rate and type of existing housing unit sales,

and future housing unit construction are considered to be primary variables. In addition, the change in household size relative to the age structure of the forecast area was addressed. While there was a slight drop in the average household size in both towns 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 major breakthrough in the treatment of heart disease or cancer, death rates rarely move rapidly in any direction, particularly at the school district or attendance area level. Thus, significant changes are not foreseen in district's mortality rates between now and the year 2027. Any increases forecasted in the number of deaths will be due primarily to the general aging of the population in each of the town and specifically to the increase in the number of residents aged 65 and older.

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

The resident total fertility rate (TFR), the average number of births a woman will have while living in the town of Hamilton during her lifetime, is estimated to be 1.82 for the ten years of the population forecasts. For the town of Wenham the TFR is estimated to be 1.77 for the next 10 years. A TFR of 2.1 births per woman is considered to be the theoretical "replacement level" of fertility necessary for a population to remain constant in the absence of in-migration. Therefore, in the absence of migration, fertility alone would be insufficient to maintain the current level of population and enrollment in either Hamilton or Wenham as well as the district as a whole over the course of the forecast period.

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

As the Essex County area is not currently contemplating any major expansions or contractions, the forecasts also assume that the current economic, political, social, and environmental factors, as well as the transportation and public works infrastructure (with a few notable exceptions) of the town of Hamilton or Wenham will remain the same through the year 2027. Below is a list of assumptions and issues that are specific to the towns of Hamilton and Wenham as well as the Hamilton-Wenham Regional School District. These issues have been used to modify the population forecast models to more accurately predict the impact of these factors on each area's population change. Specifically, the forecasts assume that throughout the study period:

a. The national, state or regional economy does not go into deep recession at any time during the 10 years of the forecasts; (Deep recession is defined as four consecutive quarters where the GDP contracts greater than 1% per quarter)
b. Interest rates have reached a historic low and will not fluctuate more than one percentage point in the short term; the interest rate for a 30 year fixed home mortgage stays below 5.0%;
c. The rate of mortgage approval stays at 1999-2003 levels and lenders do not return to "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 2026. All housing units constructed are occupied by 2027;
g. The unemployment rates for the Essex County will remain below 6.0% for the 10 years of the forecasts;
h. The intra district student transfer policy remains unchanged over the next 10 years;
i. The rate of students transferring out of The Hamilton-Wenham Regional School District will remain at the 2011-12 to 2017-18 average;
j. The inflation rate for gasoline will stay below 5% per year for the 10 years of the forecasts;
k. The state of Massachusetts does not change the current policy on open enrollment or school vouchers anytime in the next 10 years;
l. There will be no building moratorium within the district;
m. Businesses within the district and The Hamilton-

Wenham Regional School District area will remain viable;

n. 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;
o. Housing turnover rates (sale of existing homes in the district) will remain at their current levels. The majority of existing home sales are made by home owners over the age of 60;
p. No new charter schools open in the area any time in the next 10 years
q. Private school and home school attendance rates will remain constant;
r. The rate of foreclosures for commercial property remains at the 2004-2008 average for Essex County;

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

The high proportion of high school graduates from The Hamilton-Wenham Regional 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 extremely high out-migration in the 18-to-24 age group, and was taken into account when calculating these forecasts. The out-migration of graduating high school seniors is expected to continue over the period of the forecasts and the rate of out-migration has been forecasted to remain the same over the life of the forecast series.

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

METHODOLOGY

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

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

1. a base-year population (here, the 2010 Census population for the towns of Hamilton and Wenham);
2. a set of age-specific fertility rates for the towns of Hamilton and Wenham to be used over the forecast period;
3. a set of age-specific survival (mortality) rates for the towns of Hamilton and Wenham;
4. a set of age-specific migration rates for the towns of Hamilton and Wenham; and;
5. the historical enrollment figures by grade for the towns of Hamilton and Wenham.

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

The population forecasts for the towns of Hamilton and Wenham 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 both the towns of Hamilton and Wenham. The impact of the Gordon College population on the demographic dynamics of Wenham is an excellent example of a unique characteristic.

The enrollment forecasts were calculated using a modified average survivorship method (also known as the "Blended Method"). Average survivor rates (i.e., the proportion of students who progress from one grade level to the next given the average amount of net migration for that grade level) over the previous five years of year-to-year enrollment data were calculated for grades two through

twelve. This procedure is used to identify specific grades where there are large numbers of students changing facilities for non-demographic factors, such as private school transfers or enrollment in special programs.

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

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

REFERENCES

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

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

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

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

Appendix A: Supplemental Tables

Table 1: Forecasted Elementary Area Population Change, 2010 to 2020

	2010	2015	*2010-2015 Change*	2020	*2015-2020 Change*	*2010-2020 Change*
Town of Hamilton	7,764	7,730	*-0.4%*	7,700	*-0.4%*	*-0.8%*
Town of Wenham	4,875	4,740	*-2.8%*	4,660	*-1.7%*	*-4.4%*
Total District	**12,639**	**12,470**	***-1.4%***	**12,360**	***-0.9%***	***-2.2%***

Table 2: Household Characteristics by Elementary Area, 2010 Census

	HH w/ Pop Under 18	% HH w/ Pop Under 18	Total Households	Household Population	Persons Per Household
Town of Hamilton	1,125	41.8%	2,692	7,616	2.83
Town of Wenham	508	37.4%	1,358	3,622	2.67
Total District	**1,633**	**40.3%**	**4,050**	**11,238**	**2.77**

Table 3: Householder Characteristics by Elementary Area, 2010 Census

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

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

	Percentage of Single Person Households	Percentage of Single Person Households and are 65+
Town of Hamilton	15.7%	7.3%
Town of Wenham	23.2%	14.2%
Total District	**18.2%**	**9.6%**

Table 5: Elementary Enrollment (PK-5), 2017, 2022, 2027

	2017	2022	2017-2022 Change	2027	2022-2027 Change	2017-2027 Change
Town of Hamilton	552	578	4.7%	518	-10.4%	-6.2%
Town of Wenham	285	281	-1.4%	271	-3.6%	-4.9%
Total District	**837**	**859**	**2.6%**	**789**	**-8.1%**	**-5.7%**

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

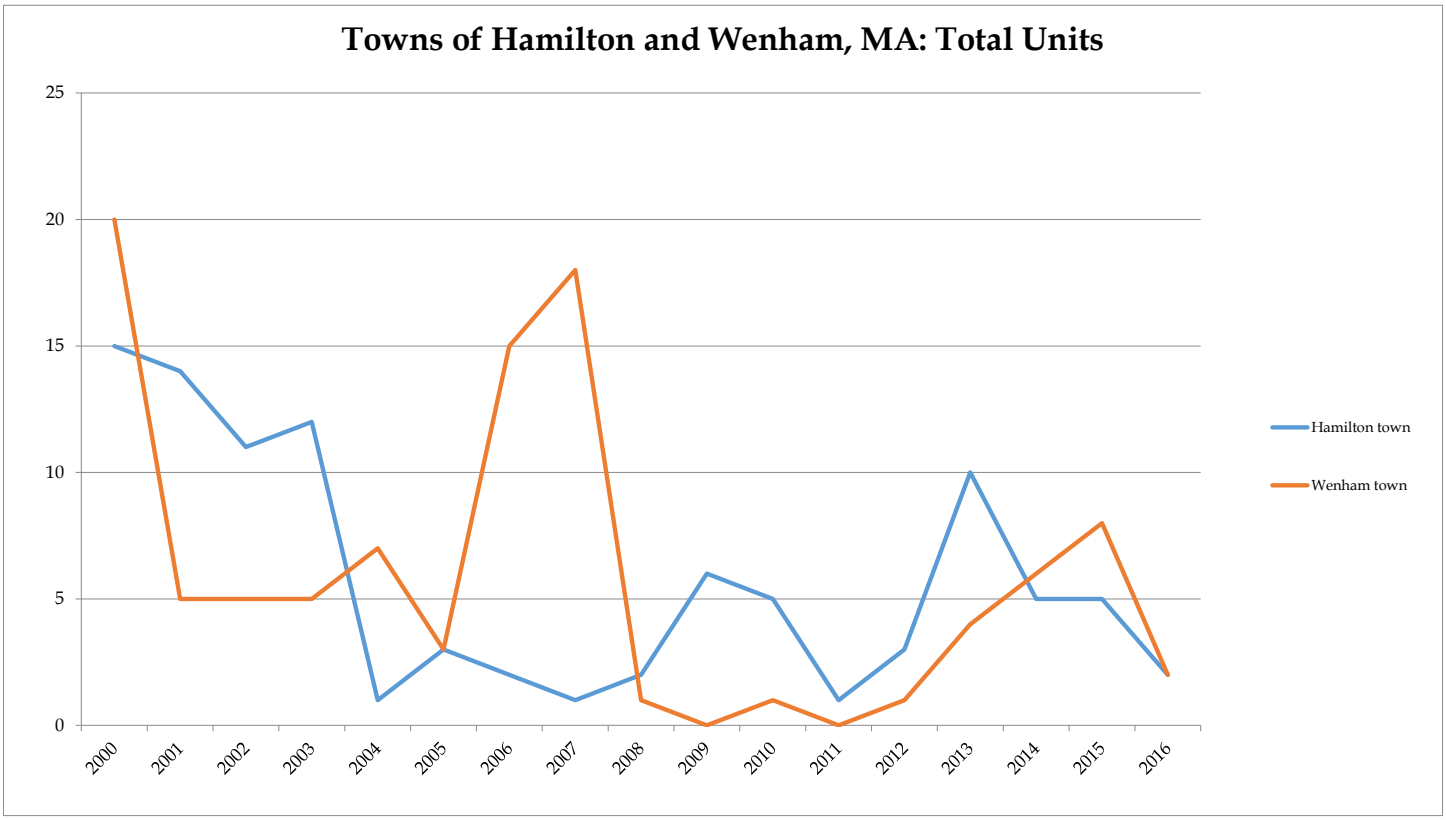
	Under 1 year	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years
Town of Hamilton	109	88	90	101	104	98	134	110	117	119	114
Town of Wenham	18	23	39	28	34	45	53	62	54	51	72
Total District	**127**	**111**	**129**	**129**	**138**	**143**	**187**	**172**	**171**	**170**	**186**

Table 7: Comparison of District Resident Enrollment by Grade with 2010 Census Counts by Age, 2012-2017

2010 Census	Under 1 year	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years	11 years	12 years	13 years
Hamilton-Wenham Regional School District Total	**127**	**111**	**129**	**129**	**138**	**143**	**187**	**172**	**171**	**170**	**186**	**192**	**186**	**215**
2017 Enrollment	130	150	151	134	157	151	160	178	178	172	152			
	102.36%	135.14%	117.05%	103.88%	113.77%	105.59%	85.56%	103.49%	104.09%	101.18%	81.72%			
2016 Enrollment	126	151	149	135	158	138	152	183	172	170	163	135		
	99.21%	136.04%	115.50%	104.65%	114.49%	96.50%	81.28%	106.40%	100.58%	100.00%	87.63%	70.31%		
2015 Enrollment	137	150	156	137	154	139	152	181	180	167	164	148	161	
	107.87%	135.14%	120.93%	106.20%	111.59%	97.20%	81.28%	105.23%	105.26%	98.24%	88.17%	77.08%	86.56%	
2014 Enrollment		152	160	134	162	140	159	183	189	191	168	157	181	166
		136.9%	124.0%	103.9%	117.4%	97.9%	85.0%	106.4%	110.5%	112.4%	90.3%	81.8%	97.3%	77.2%
2013 Enrollment			157	142	156	148	154	179	192	180	176	154	181	162
			121.7%	110.1%	113.0%	103.5%	82.4%	104.1%	112.3%	105.9%	94.6%	80.2%	97.3%	75.3%
2012 Enrollment				142	150	154	150	180	192	172	173	160	192	168
				110.1%	108.7%	107.7%	80.2%	104.7%	112.3%	101.2%	93.0%	83.3%	103.2%	78.1%

United States Census Bureau Building Permits

		Single Family Units		Dual Occupancy Units		Three or Four Units		Five or More Units		Total	
Year	Name	Buildings	Total Units	Buildings	Total Units	Buildings	Total Units	Buildings	Total Units	Buildings	Total Units
2000	Hamilton town	15	15	0	0	0	0	0	0	15	15
2001	Hamilton town	14	14	0	0	0	0	0	0	14	14
2002	Hamilton town	11	11	0	0	0	0	0	0	11	11
2003	Hamilton town	12	12	0	0	0	0	0	0	12	12
2004	Hamilton town	1	1	0	0	0	0	0	0	1	1
2005	Hamilton town	3	3	0	0	0	0	0	0	3	3
2006	Hamilton town	2	2	0	0	0	0	0	0	2	2
2007	Hamilton town	1	1	0	0	0	0	0	0	1	1
2008	Hamilton town	2	2	0	0	0	0	0	0	2	2
2009	Hamilton town	6	6	0	0	0	0	0	0	6	6
2010	Hamilton town	5	5	0	0	0	0	0	0	5	5
2011	Hamilton town	1	1	0	0	0	0	0	0	1	1
2012	Hamilton town	3	3	0	0	0	0	0	0	3	3
2013	Hamilton town	10	10	0	0	0	0	0	0	10	10
2014	Hamilton town	5	5	0	0	0	0	0	0	5	5
2015	Hamilton town	5	5	0	0	0	0	0	0	5	5
2016	Hamilton town	2	2	0	0	0	0	0	0	2	2
2000	Wenham town	20	20	0	0	0	0	0	0	20	20
2001	Wenham town	5	5	0	0	0	0	0	0	5	5
2002	Wenham town	5	5	0	0	0	0	0	0	5	5
2003	Wenham town	5	5	0	0	0	0	0	0	5	5
2004	Wenham town	7	7	0	0	0	0	0	0	7	7
2005	Wenham town	3	3	0	0	0	0	0	0	3	3
2006	Wenham town	15	15	0	0	0	0	0	0	15	15
2007	Wenham town	18	18	0	0	0	0	0	0	18	18
2008	Wenham town	1	1	0	0	0	0	0	0	1	1
2009	Wenham town	0	0	0	0	0	0	0	0	0	0
2010	Wenham town	1	1	0	0	0	0	0	0	1	1
2011	Wenham town	0	0	0	0	0	0	0	0	0	0
2012	Wenham town	1	1	0	0	0	0	0	0	1	1
2013	Wenham town	4	4	0	0	0	0	0	0	4	4
2014	Wenham town	6	6	0	0	0	0	0	0	6	6
2015	Wenham town	4	4	2	4	0	0	0	0	6	8
2016	Wenham town	2	2	0	0	0	0	0	0	2	2


Towns of Hamilton and Wenham, MA: Total Units
25
20
15
10
5
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Hamilton town
Wenham town

Appendix B: Population Forecasts

Hamilton-Wenham Regional School District

Total	2010	2015	2020	2025
0-4	634	600	590	570
5-9	843	770	780	770
10-14	974	850	790	800
15-19	1,401	1,430	1,310	1,240
20-24	1,168	1,190	1,210	1,070
25-29	511	510	540	560
30-34	412	560	570	610
35-39	576	490	660	660
40-44	811	610	520	670
45-49	1,069	800	590	520
50-54	1,081	1,060	790	590
55-59	899	1,050	1,030	770
60-64	671	820	940	910
65-69	485	560	690	810
70-74	307	390	470	580
75-79	298	260	350	400
80-84	274	230	220	290
85+	225	290	310	310
Total	**12,639**	**12,470**	**12,360**	**12,130**
Median Age	**38.3**	**38.3**	**38.0**	**38.4**

	2010 to 2015	2015 to 2020	2020 to 2025
Births	490	480	460
Deaths	460	490	530
Natural Increase	30	-10	-70
Net Migration	-140	-150	-160
Change	-110	-160	-230

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

Town of Hamilton

Total	2010	2015	2020	2025
0-4	492	450	430	410
5-9	578	530	530	510
10-14	631	590	550	550
15-19	559	590	550	500
20-24	371	370	390	330
25-29	399	390	390	410
30-34	332	430	430	440
35-39	436	380	490	490
40-44	525	440	380	480
45-49	694	520	420	380
50-54	754	690	510	420
55-59	595	730	670	500
60-64	458	540	650	580
65-69	318	380	450	550
70-74	180	260	320	380
75-79	179	150	230	270
80-84	144	140	130	190
85+	119	150	180	180
Total	**7,764**	**7,730**	**7,700**	**7,570**
Median Age	**40.8**	**41.5**	**41.2**	**41.5**

	2010 to 2015	2015 to 2020	2020 to 2025
Births	360	350	320
Deaths	270	300	330
Natural Increase	90	50	-10
Net Migration	-90	-100	-110
Change	0	-50	-120

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

Town of Wenham

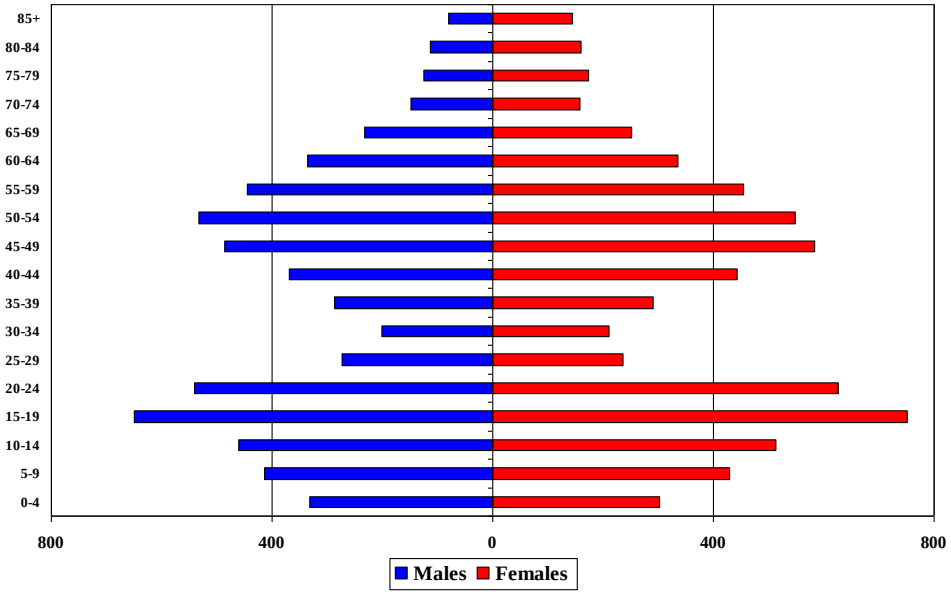
Total	2010	2015	2020	2025
0-4	142	150	160	160
5-9	265	240	250	260
10-14	343	260	240	250
15-19	842	840	760	740
20-24	797	820	820	740
25-29	112	120	150	150
30-34	80	130	140	170
35-39	140	110	170	170
40-44	286	170	140	190
45-49	375	280	170	140
50-54	327	370	280	170
55-59	304	320	360	270
60-64	213	280	290	330
65-69	167	180	240	260
70-74	127	130	150	200
75-79	119	110	120	130
80-84	130	90	90	100
85+	106	140	130	130
Total	**4,875**	**4,740**	**4,660**	**4,560**
Median Age	**27.2**	**27.5**	**28.3**	**29.3**

	2010 to 2015	2015 to 2020	2020 to 2025
Births	130	130	140
Deaths	190	190	200
Natural Increase	-60	-60	-60
Net Migration	-50	-50	-50
Change	-110	-110	-110

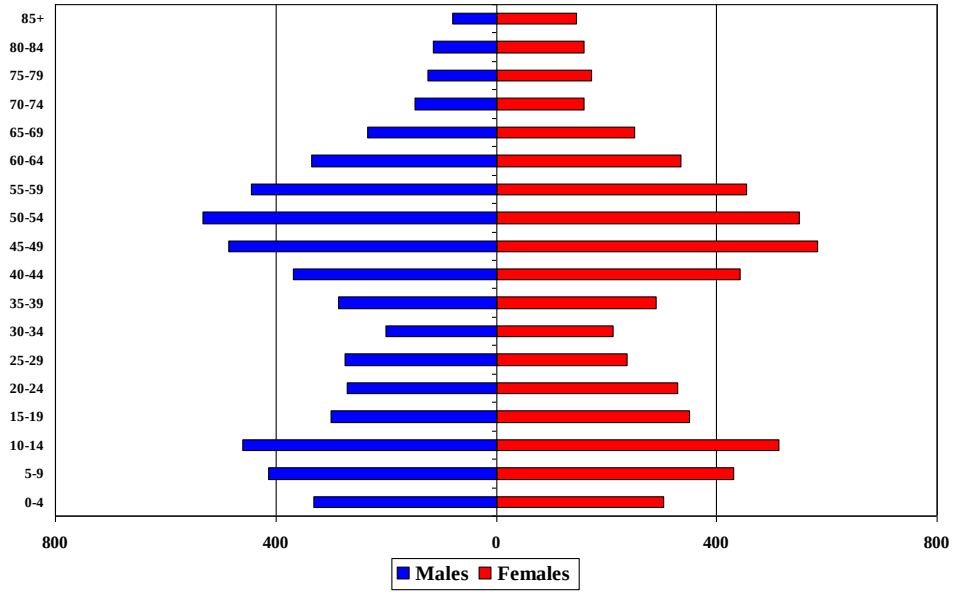
Differences between period Totals may not equal Change due to rounding.

Appendix C: Population Pyramids

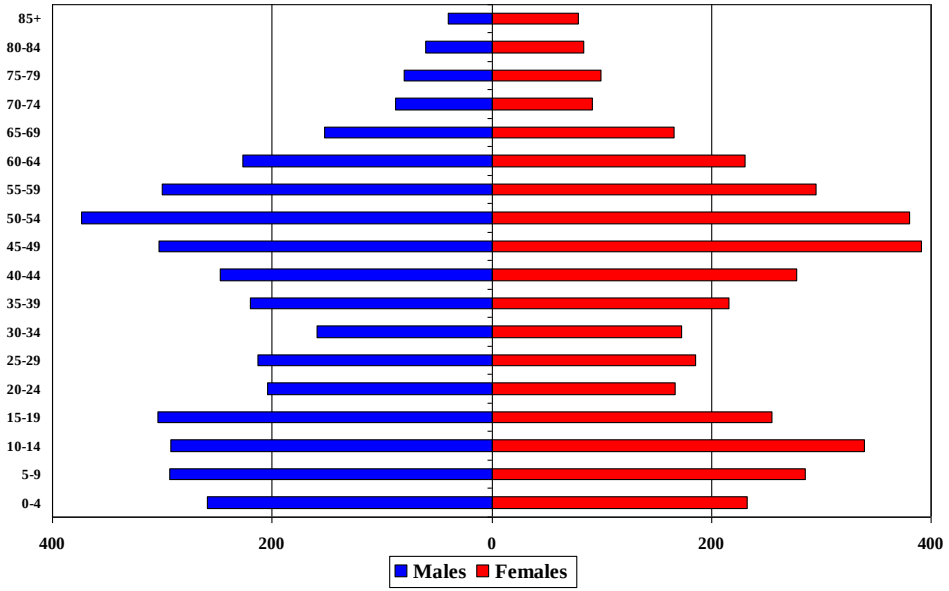
Hamilton-Wenham Regional School District Total Population – 2010 Census



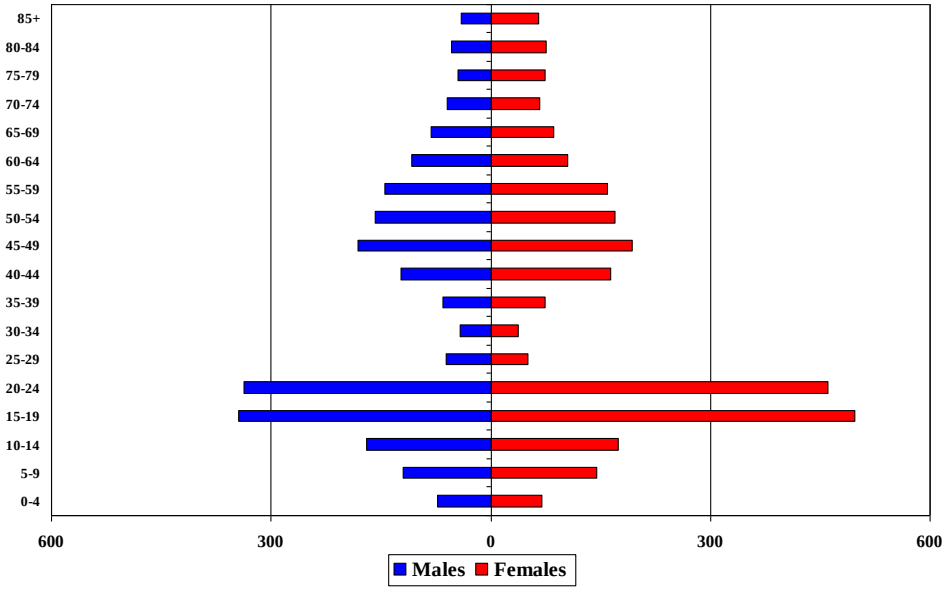
Hamilton-Wenham Regional School District Total Population – 2010 Census Without College Population



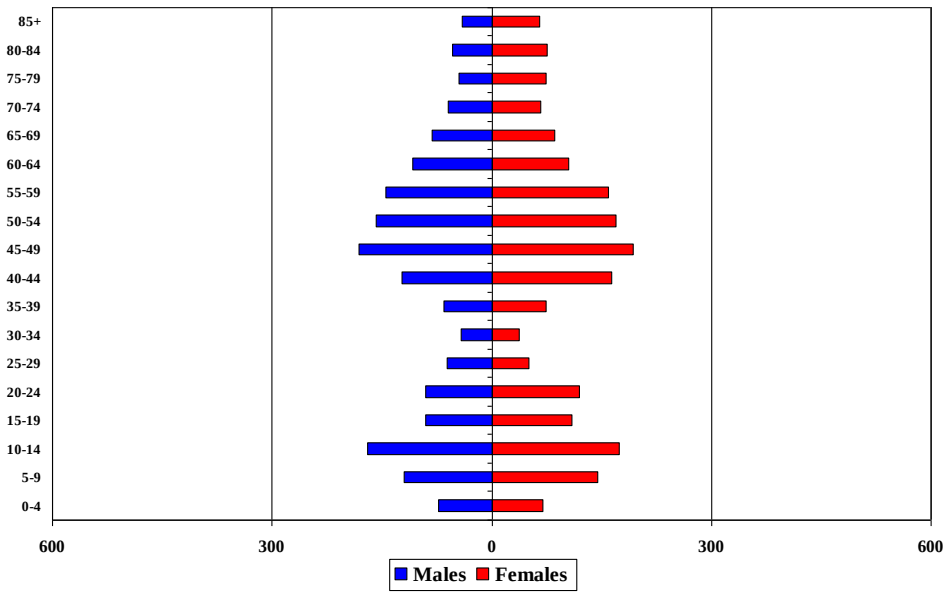
Town of Hamilton Total Population – 2010 Census



Town of Wenham Total Population – 2010 Census



Town of Wenham Total Population – 2010 Census
Without College Population



Appendix D: Enrollment Forecasts

Hamilton-Wenham Regional School District

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
PK	23	18	28	31	30	30	30	30	30	30	30	30	30	30	30
K	117	142	119	124	146	137	136	137	134	133	129	127	125	123	125
1	120	128	146	121	127	148	139	138	136	133	132	129	127	124	122
2	115	123	123	141	124	126	147	139	138	136	133	132	129	127	124
3	133	121	129	130	141	124	126	147	139	138	136	133	132	129	127
4	136	135	125	126	134	142	125	127	148	140	139	137	133	132	129
5	137	135	141	127	135	137	144	126	128	149	141	140	137	133	132
Total: K-5	**781**	**802**	**811**	**800**	**837**	**844**	**847**	**844**	**853**	**859**	**840**	**828**	**813**	**798**	**789**
6	135	136	132	130	116	131	135	141	124	126	146	138	138	135	131
7	145	139	135	134	133	118	133	137	144	126	128	149	141	141	138
8	134	153	135	137	131	132	118	133	137	144	126	128	149	141	141
Total: 6-8	**414**	**428**	**402**	**401**	**380**	**381**	**386**	**411**	**405**	**396**	**400**	**415**	**428**	**417**	**410**
9	131	128	143	124	131	125	126	113	128	133	139	121	124	144	136
10	129	128	128	142	126	128	123	123	111	125	131	136	119	122	141
11	142	129	125	119	140	124	126	121	121	109	123	129	134	117	120
12	158	136	127	123	120	138	123	125	120	120	108	122	128	133	116
Total: 9-12	**560**	**521**	**523**	**508**	**517**	**515**	**498**	**482**	**480**	**487**	**501**	**508**	**505**	**516**	**513**
Out of District Students	22	32	32	33	38	38	38	38	38	38	38	38	38	38	38
Total: K-12	**1,777**	**1,783**	**1,768**	**1,742**	**1,772**	**1,778**	**1,769**	**1,775**	**1,776**	**1,780**	**1,779**	**1,789**	**1,784**	**1,769**	**1,750**
Total: K-12	**1,777**	**1,783**	**1,768**	**1,742**	**1,772**	**1,778**	**1,769**	**1,775**	**1,776**	**1,780**	**1,779**	**1,789**	**1,784**	**1,769**	**1,750**
Change		6	-15	-26	30	6	-9	6	1	4	-1	10	-5	-15	-19
Percent Change		0.3%	-0.8%	-1.5%	1.7%	0.3%	-0.5%	0.3%	0.1%	0.2%	-0.1%	0.6%	-0.3%	-0.8%	-1.1%
Total: K-5	**781**	**802**	**811**	**800**	**837**	**844**	**847**	**844**	**853**	**859**	**840**	**828**	**813**	**798**	**789**
Change		21	9	-11	37	7	3	-3	9	6	-19	-12	-15	-15	-9
Percent Change		2.7%	1.1%	-1.4%	4.6%	0.8%	0.4%	-0.4%	1.1%	0.7%	-2.2%	-1.4%	-1.8%	-1.8%	-1.1%
Total: 6-8	**414**	**428**	**402**	**401**	**380**	**381**	**386**	**411**	**405**	**396**	**400**	**415**	**428**	**417**	**410**
Change		14	-26	-1	-21	1	5	25	-6	-9	4	15	13	-11	-7
Percent Change		3.4%	-6.1%	-0.2%	-5.2%	0.3%	1.3%	6.5%	-1.5%	-2.2%	1.0%	3.8%	3.1%	-2.6%	-1.7%
Total: 7-12	**560**	**521**	**523**	**508**	**517**	**515**	**498**	**482**	**480**	**487**	**501**	**508**	**505**	**516**	**513**
Change		-39	2	-15	9	-2	-17	-16	-2	7	14	7	-3	11	-3
Percent Change		-7.0%	0.4%	-2.9%	1.8%	-0.4%	-3.3%	-3.2%	-0.4%	1.5%	2.9%	1.4%	-0.6%	2.2%	-0.6%

Forecasts Developed December 2017
Green Cells (2017-18 and earlier) are historical data
Blue Cells (2018-19 and later) are forecasted years

Town of Hamilton

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
PK	18	15	24	27	24	24	24	24	24	24	24	24	24	24	24
K	76	98	81	84	107	97	95	95	93	92	89	87	85	83	84
1	88	75	98	79	83	105	95	93	91	89	88	86	84	82	80
2	83	86	72	95	81	81	103	94	92	90	88	87	85	83	81
3	96	86	89	71	94	79	79	102	93	91	89	87	86	84	82
4	84	95	87	86	70	92	77	78	101	92	90	88	86	85	83
5	97	84	95	84	93	69	91	76	77	100	91	89	87	85	84
Total: K-5	**542**	**539**	**546**	**526**	**552**	**547**	**564**	**562**	**571**	**578**	**559**	**548**	**537**	**526**	**518**
6	84	91	81	90	74	88	66	87	73	74	96	87	86	84	82
7	98	83	91	82	92	75	89	67	89	74	75	98	89	88	86
8	89	104	81	88	78	90	74	88	66	88	73	74	97	88	87
Total: 6-8	**271**	**278**	**253**	**260**	**244**	**253**	**229**	**242**	**228**	**236**	**244**	**259**	**272**	**260**	**255**
9	91	80	98	70	85	73	85	70	84	63	84	69	71	93	84
10	79	88	79	97	68	83	72	83	69	82	62	82	68	70	91
11	103	80	86	73	93	67	82	71	82	68	81	61	81	67	69
12	107	99	76	82	72	90	65	80	69	80	66	79	59	79	65
Total: 9-12	**380**	**347**	**339**	**322**	**318**	**313**	**304**	**304**	**304**	**293**	**293**	**291**	**279**	**309**	**309**
Out of District Students	11	16	18	23	22	22	22	22	22	22	22	22	22	22	22
Total: K-12	**1,204**	**1,180**	**1,156**	**1,131**	**1,136**	**1,135**	**1,119**	**1,130**	**1,125**	**1,129**	**1,118**	**1,120**	**1,110**	**1,117**	**1,104**
Total: K-12	**1,204**	**1,180**	**1,156**	**1,131**	**1,136**	**1,135**	**1,119**	**1,130**	**1,125**	**1,129**	**1,118**	**1,120**	**1,110**	**1,117**	**1,104**
Change		-24	-24	-25	5	-1	-16	11	-5	4	-11	2	-10	7	-13
Percent Change		-2.0%	-2.0%	-2.2%	0.4%	-0.1%	-1.4%	1.0%	-0.4%	0.4%	-1.0%	0.2%	-0.9%	0.6%	-1.2%
Total: K-5	**542**	**539**	**546**	**526**	**552**	**547**	**564**	**562**	**571**	**578**	**559**	**548**	**537**	**526**	**518**
Change		-3	7	-20	26	-5	17	-2	9	7	-19	-11	-11	-11	-8
Percent Change		-0.6%	1.3%	-3.7%	4.9%	-0.9%	3.1%	-0.4%	1.6%	1.2%	-3.3%	-2.0%	-2.0%	-2.0%	-1.5%
Total: 6-8	**271**	**278**	**253**	**260**	**244**	**253**	**229**	**242**	**228**	**236**	**244**	**259**	**272**	**260**	**255**
Change		7	-25	7	-16	9	-24	13	-14	8	8	15	13	-12	-5
Percent Change		2.6%	-9.0%	2.8%	-6.2%	3.7%	-9.5%	5.7%	-5.8%	3.5%	3.4%	6.1%	5.0%	-4.4%	-1.9%
Total: 7-12	**380**	**347**	**339**	**322**	**318**	**313**	**304**	**304**	**304**	**293**	**293**	**291**	**279**	**309**	**309**
Change		-33	-8	-17	-4	-5	-9	0	0	-11	0	-2	-12	30	0
Percent Change		-8.7%	-2.3%	-5.0%	-1.2%	-1.6%	-2.9%	0.0%	0.0%	-3.6%	0.0%	-0.7%	-4.1%	10.8%	0.0%

Forecasts Developed December 2017
Green Cells (2017-18 and earlier) are historical data
Blue Cells (2018-19 and later) are forecasted years

Town of Wenham

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
PK	5	3	4	4	6	6	6	6	6	6	6	6	6	6	6
K	41	44	38	40	39	40	41	42	41	41	40	40	40	40	41
1	32	53	48	42	44	43	44	45	45	44	44	43	43	42	42
2	32	37	51	46	43	45	44	45	46	46	45	45	44	44	43
3	37	35	40	59	47	45	47	45	46	47	47	46	46	45	45
4	52	40	38	40	64	50	48	49	47	48	49	49	47	47	46
5	40	51	46	43	42	68	53	50	51	49	50	51	50	48	48
Total: K-5	**239**	**263**	**265**	**274**	**285**	**297**	**283**	**282**	**282**	**281**	**281**	**280**	**276**	**272**	**271**
6	51	45	51	40	42	43	69	54	51	52	50	51	52	51	49
7	47	56	44	52	41	43	44	70	55	52	53	51	52	53	52
8	45	49	54	49	53	42	44	45	71	56	53	54	52	53	54
Total: 6-8	**143**	**150**	**149**	**141**	**136**	**128**	**157**	**169**	**177**	**160**	**156**	**156**	**156**	**157**	**155**
9	40	48	45	54	46	52	41	43	44	70	55	52	53	51	52
10	50	40	49	45	58	45	51	40	42	43	69	54	51	52	50
11	39	49	39	46	47	57	44	50	39	41	42	68	53	50	51
12	51	37	51	41	48	48	58	45	51	40	42	43	69	54	51
Total: 9-12	**180**	**174**	**184**	**186**	**199**	**202**	**194**	**178**	**176**	**194**	**208**	**217**	**226**	**207**	**204**
Out of District Students	11	16	14	10	16	16	16	16	16	16	16	16	16	16	16
Total: K-12	**573**	**603**	**612**	**611**	**636**	**643**	**650**	**645**	**651**	**651**	**661**	**669**	**674**	**652**	**646**
Total: K-12	**573**	**603**	**612**	**611**	**636**	**643**	**650**	**645**	**651**	**651**	**661**	**669**	**674**	**652**	**646**
Change		30	9	-1	25	7	7	-5	6	0	10	8	5	-22	-6
Percent Change		5.2%	1.5%	-0.2%	4.1%	1.1%	1.1%	-0.8%	0.9%	0.0%	1.5%	1.2%	0.7%	-3.3%	-0.9%
Total: K-5	**239**	**263**	**265**	**274**	**285**	**297**	**283**	**282**	**282**	**281**	**281**	**280**	**276**	**272**	**271**
Change		24	2	9	11	12	-14	-1	0	-1	0	-1	-4	-4	-1
Percent Change		10.0%	0.8%	3.4%	4.0%	4.2%	-4.7%	-0.4%	0.0%	-0.4%	0.0%	-0.4%	-1.4%	-1.4%	-0.4%
Total: 6-8	**143**	**150**	**149**	**141**	**136**	**128**	**157**	**169**	**177**	**160**	**156**	**156**	**156**	**157**	**155**
Change		7	-1	-8	-5	-8	29	12	8	-17	-4	0	0	1	-2
Percent Change		4.9%	-0.7%	-5.4%	-3.5%	-5.9%	22.7%	7.6%	4.7%	-9.6%	-2.5%	0.0%	0.0%	0.6%	-1.3%
Total: 7-12	**180**	**174**	**184**	**186**	**199**	**202**	**194**	**178**	**176**	**194**	**208**	**217**	**226**	**207**	**204**
Change		-6	10	2	13	3	-8	-16	-2	18	14	9	9	-19	-3
Percent Change		-3.3%	5.7%	1.1%	7.0%	1.5%	-4.0%	-8.2%	-1.1%	10.2%	7.2%	4.3%	4.1%	-8.4%	-1.4%

Forecasts Developed December 2017
Green Cells (2017-18 and earlier) are historical data
Blue Cells (2018-19 and later) are forecasted years



HAMILTON-WENHAM
REGIONAL SCHOOL DISTRICT

5 School St Wenham, MA 01984

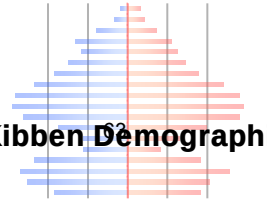
March 28, 2018

McKibben Demographic Research, LLC

Jerome McKibben, Ph.D.
Rock Hill, SC

j.mckibben@mckibbendemographics.com

978-501-7069



Hamilton-Wenham Regional School District Forecast Assumptions

1. 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)

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

3. The rate of mortgage approval stays at 1999-2003 levels and lenders do not return to “sub-prime” mortgage practices;

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

5. The rate of housing foreclosures does not exceed 125% of the 2005-2007 average of Essex County for any year in the forecasts;

Hamilton-Wenham Regional School District Forecast Assumptions

6. All currently planned, platted, and approved housing developments are built out and completed by 2026. All housing units constructed are occupied by 2027;

7. The unemployment rates for the Essex County will remain below 6.0% for the 10 years of the forecasts;

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

9. The rate of students transferring out of the Hamilton-Wenham Regional School District will remain at the 2011-12 to 2017-18 average;

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

11. The state of Massachusetts does not change the current policy on open enrollment or school vouchers anytime in the next 10 years;

Hamilton-Wenham Regional School District Forecast Assumptions

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

13. Businesses within the district and the Hamilton-Wenham Regional School District area will remain viable;

14. 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;

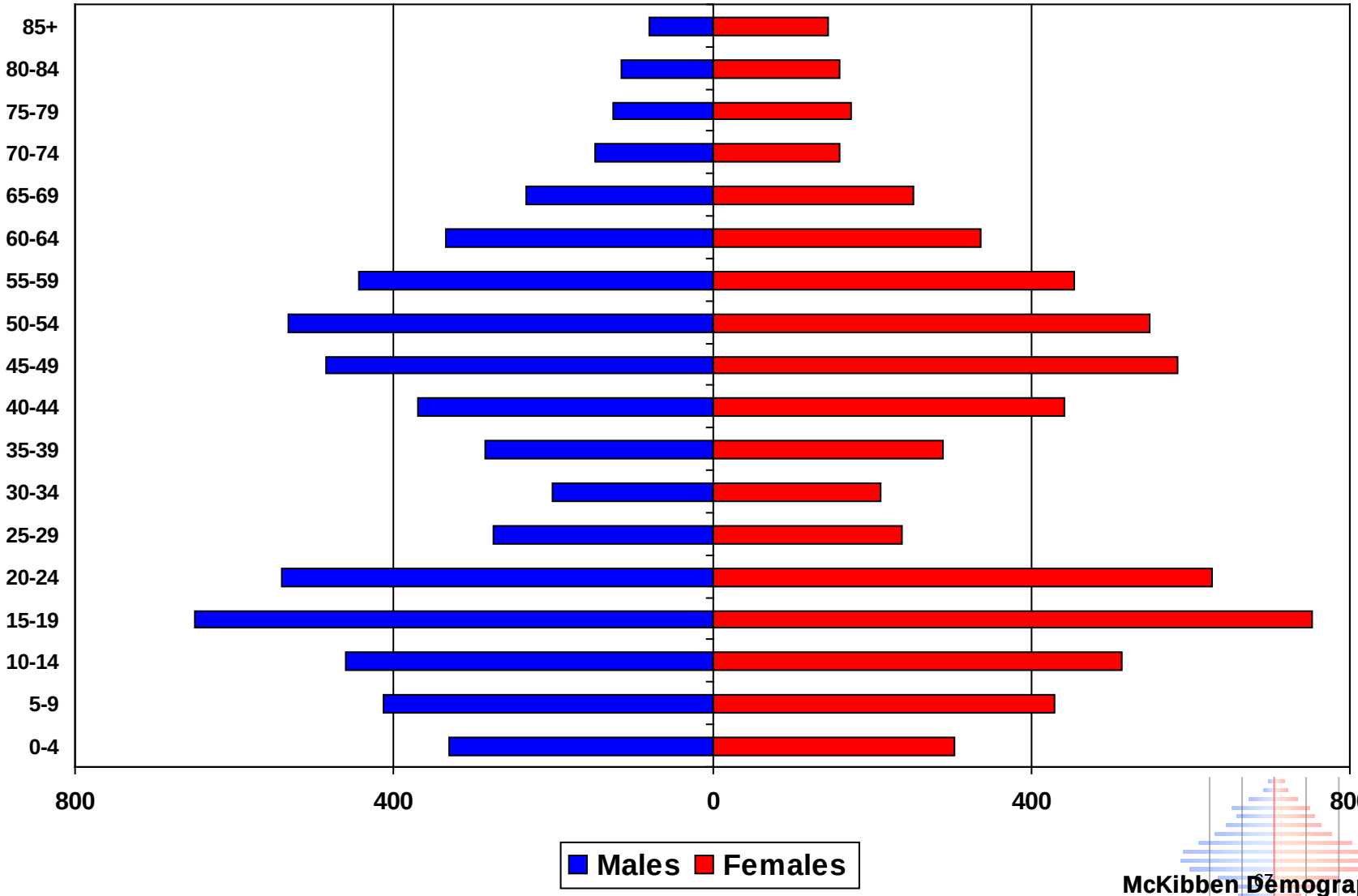
15. Housing turnover rates (sale of existing homes in the district) will remain at their current levels. The majority of existing home sales are made by home owners over the age of 60;

16. No new charter schools open in the area any time in the next 10 years;

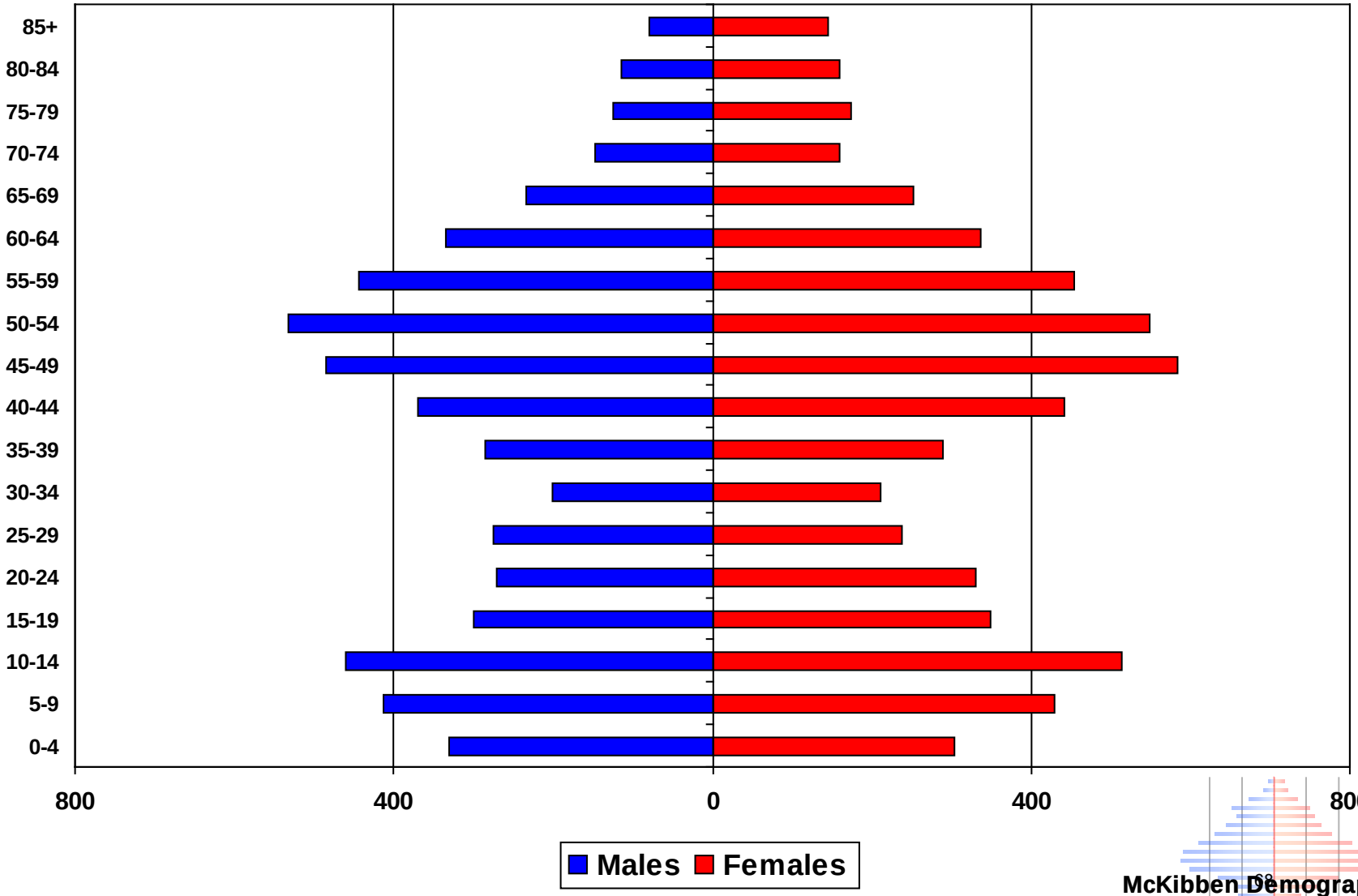
17. Private school and home school attendance rates will remain constant;

18. The rate of foreclosures for commercial property remains at the 2004-2008 average for Essex County;

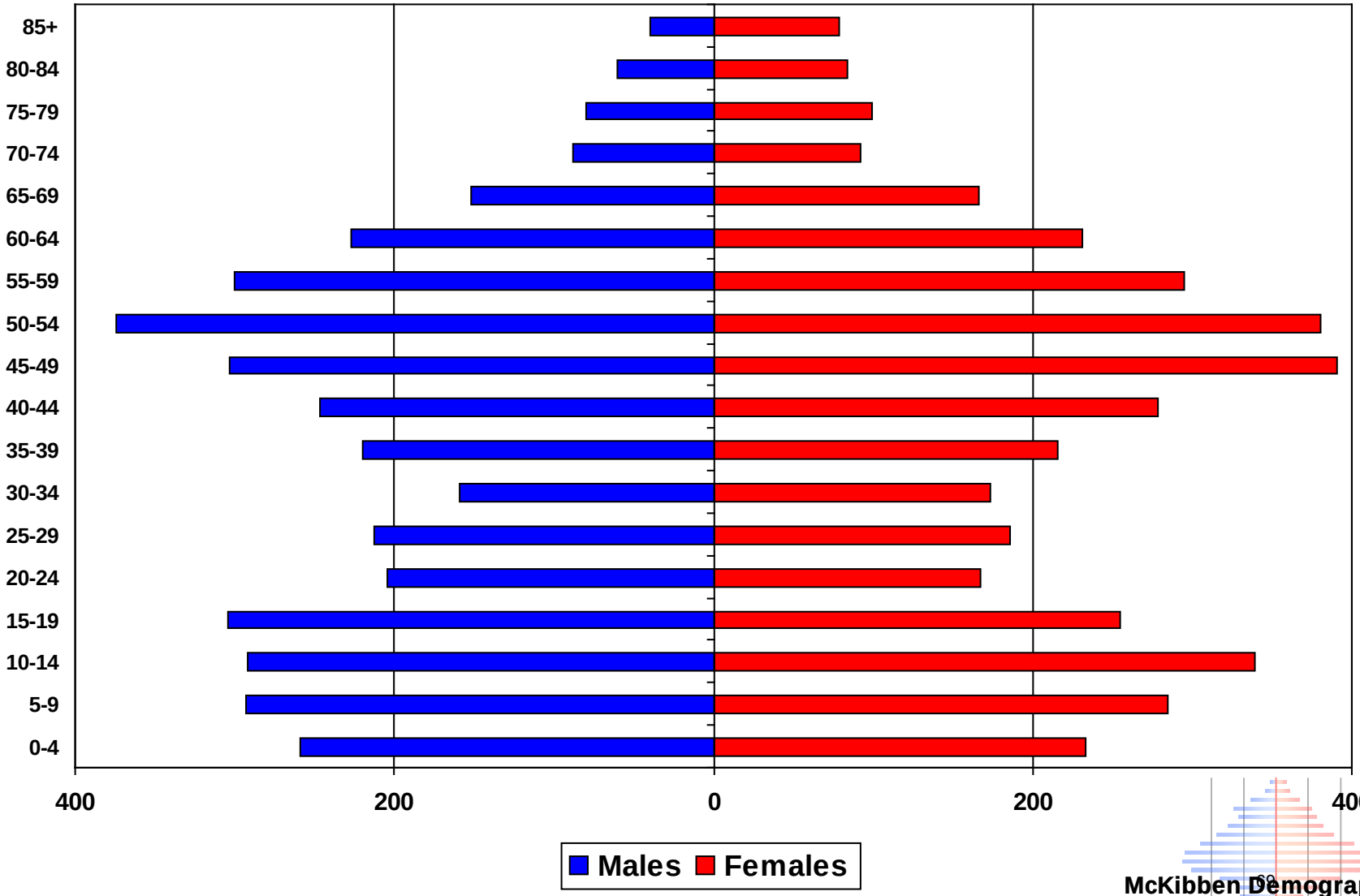
Hamilton and Wenham Total 2010 Census



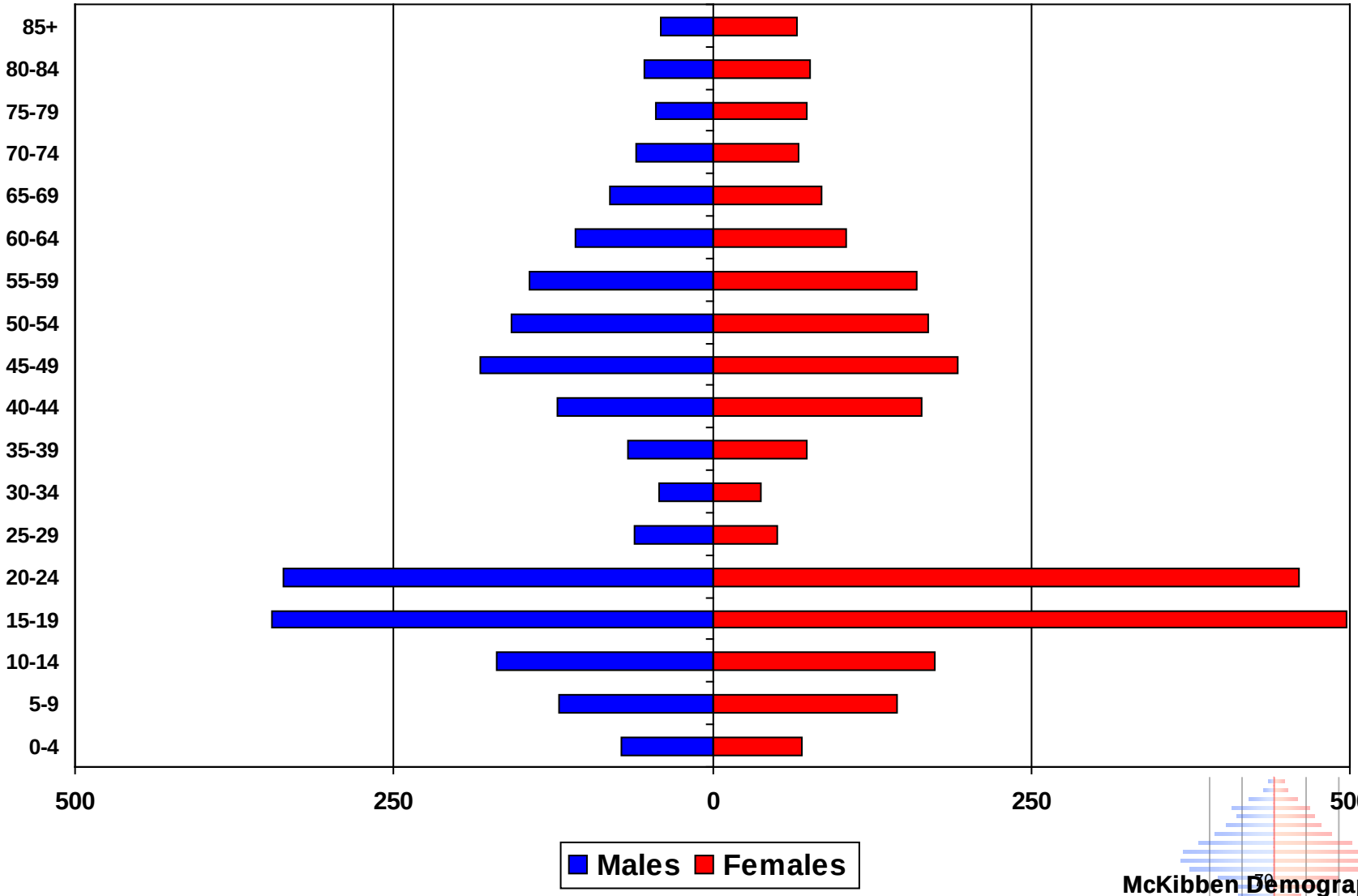
Hamilton and Wenham Total 2010 Census- Without College Population



Town of Hamilton 2010 Census



Town of Wenham 2010 Census



Wenham Town 2010 Census- Without College Population

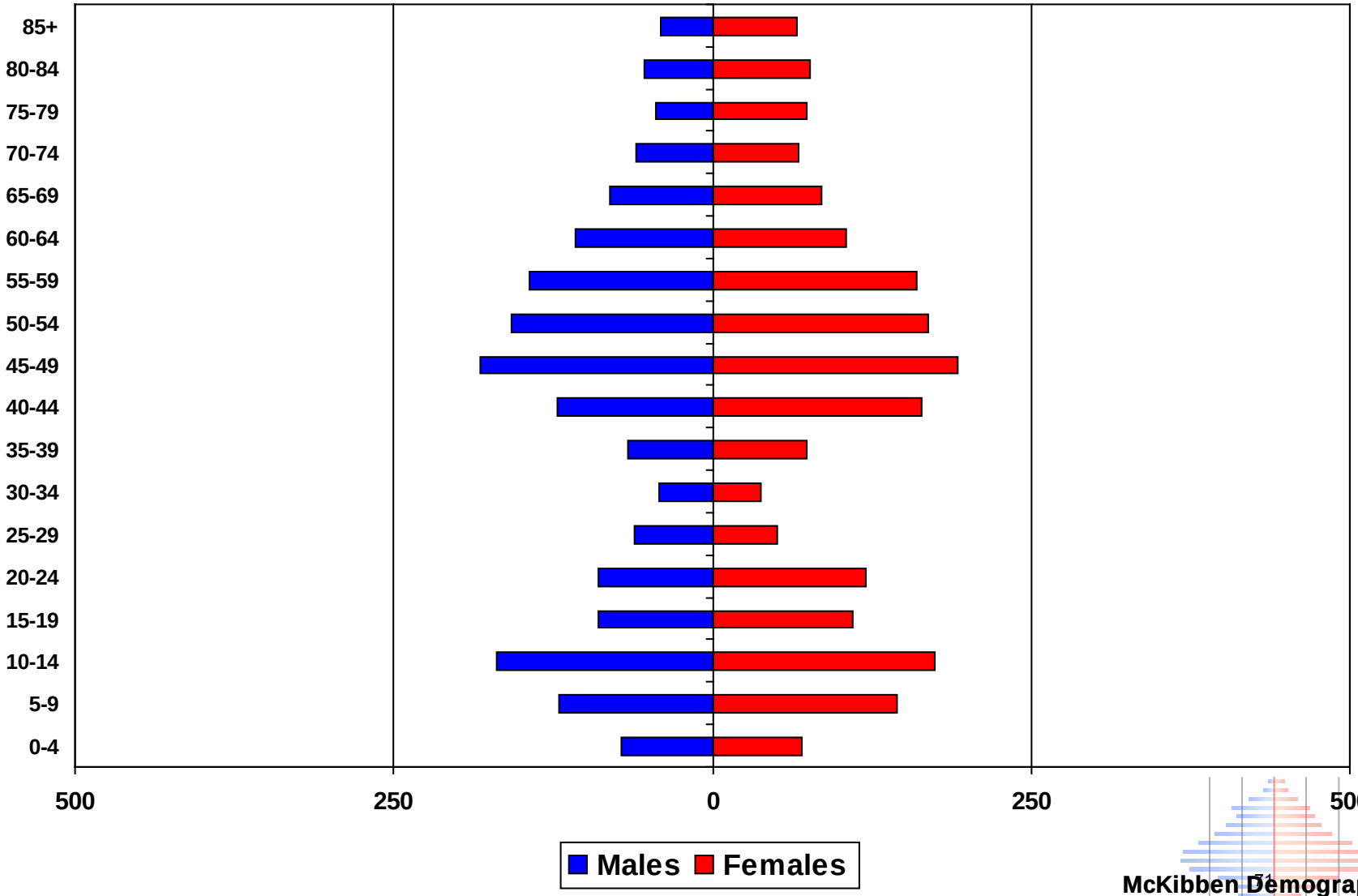


Table 1: Forecasted District Population Change, 2010 to 2020

	2010	2015	*2010-2015 Change*	2020	*2015-2020 Change*	*2010-2020 Change*
Hamilton town	7,764	7,730	*-0.4%*	7,700	*-0.4%*	*-0.8%*
Wenham town	4,875	4,740	*-2.8%*	4,660	*-1.7%*	*-4.4%*
Total District	12,639	12,470	*-1.4%*	12,360	*-0.9%*	*-2.2%*

Table 2: Household Characteristics by Elementary Area, 2010 Census

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

Table 3: Householder Characteristics by Elementary Area, 2010 Census

	Percentage of Householders aged 35-54	Percentage of Householders aged 65+	Percentage of Householders who own homes
Hamilton town	45.7%	21.8%	81.5%
Wenham town	42.1%	32.5%	84.8%
Total District	**44.5%**	**25.4%**	**82.6%**

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

	Percentage of Single Person Households	Percentage of Single Person Households and are 65+
Hamilton town	15.7%	7.3%
Wenham town	23.2%	14.2%
Total District	**18.2%**	**9.6%**

Table 5: Elementary Enrollment (K-4), 2017, 2022, 2027

	2017	2022	*2016-2021 Change*	2027	*2021-2026 Change*	*2016-2026 Change*
Hamilton town	552	578	*4.7%*	518	*-10.4%*	*-6.2%*
Wenham town	285	281	*-1.4%*	271	*-3.6%*	*-4.9%*
Total District	**837**	**859**	***2.6%***	**789**	***-8.1%***	***-5.7%***

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

	Under 1 year	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years
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**

Table 7: Comparison of District Resident Enrollment by Grade with 2010 Census Counts by Age, 2011-2016

2010 Census	Under 1 year	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years	11 years	12 years	13 years
Hamilton Wenham Total	127	111	129	129	138	143	187	172	171	170	186	192	186	215
2017 Enrollment	130	150	151	134	157	151	160	178	178	172	152			
	102.36%	135.14%	117.05%	103.88%	113.77%	105.59%	85.56%	103.49%	104.09%	101.18%	81.72%			
2016 Enrollment	126	151	149	135	158	138	152	183	172	170	163	135		
	99.21%	136.04%	115.50%	104.65%	114.49%	96.50%	81.28%	106.40%	100.58%	100.00%	87.63%	70.31%		
2015 Enrollment	137	150	156	137	154	139	152	181	180	167	164	148	161	
	107.87%	135.14%	120.93%	106.20%	111.59%	97.20%	81.28%	105.23%	105.26%	98.24%	88.17%	77.08%	86.56%	
2014 Enrollment		152	160	134	162	140	159	183	189	191	168	157	181	166
		88.7%	91.1%	95.5%	90.6%	90.1%	93.3%	87.9%	103.3%	81.2%	122.5%	113.5%	117.2%	109.5%
2013 Enrollment			157	142	156	148	154	179	192	180	176	154	181	162
			93.7%	96.6%	91.7%	91.8%	89.9%	89.1%	105.5%	83.8%	98.6%	114.1%	119.4%	107.0%
2012 Enrollment				142	150	154	150	180	192	172	173	160	192	168
				88.8%	86.7%	85.4%	91.6%	82.2%	102.2%	84.3%	95.7%	91.9%	118.3%	107.5%

Hamilton Wenham Regional Schools Population Forecasts

	2010	2015	2020	2025
0-4	634	600	590	570
5-9	843	770	780	770
10-14	974	850	790	800
15-19	1,401	1,430	1,310	1,240
20-24	1,168	1,190	1,210	1,070
25-29	511	510	540	560
30-34	412	560	570	610
35-39	576	490	660	660
40-44	811	610	520	670
45-49	1,069	800	590	520
50-54	1,081	1,060	790	590
55-59	899	1,050	1,030	770
60-64	671	820	940	910
65-69	485	560	690	810
70-74	307	390	470	580
75-79	298	260	350	400
80-84	274	230	220	290
85+	225	290	310	310
Total	12,639	12,470	12,360	12,130
Median Age	38.3	38.3	38.0	38.4
Births		490	480	460
Deaths		460	490	530
Natural Increase		30	-10	-70
Net Migration		-140	-150	-160
Change		-110	-160	-230

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

Town of Hamilton Population Forecasts

	2010	2015	2020	2025
0-4	492	450	430	410
5-9	578	530	530	510
10-14	631	590	550	550
15-19	559	590	550	500
20-24	371	370	390	330
25-29	399	390	390	410
30-34	332	430	430	440
35-39	436	380	490	490
40-44	525	440	380	480
45-49	694	520	420	380
50-54	754	690	510	420
55-59	595	730	670	500
60-64	458	540	650	580
65-69	318	380	450	550
70-74	180	260	320	380
75-79	179	150	230	270
80-84	144	140	130	190
85+	119	150	180	180
Total	7,764	7,730	7,700	7,570
Median Age	40.8	41.5	41.2	41.5

Births	360	350	320
Deaths	270	300	330
Natural Increase	90	50	-10
Net Migration	-90	-100	-110
Change	0	-50	-120

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

Town of Wenham Population Forecasts

	2010	2015	2020	2025
0-4	142	150	160	160
5-9	265	240	250	260
10-14	343	260	240	250
15-19	842	840	760	740
20-24	797	820	820	740
25-29	112	120	150	150
30-34	80	130	140	170
35-39	140	110	170	170
40-44	286	170	140	190
45-49	375	280	170	140
50-54	327	370	280	170
55-59	304	320	360	270
60-64	213	280	290	330
65-69	167	180	240	260
70-74	127	130	150	200
75-79	119	110	120	130
80-84	130	90	90	100
85+	106	140	130	130
Total	4,875	4,740	4,660	4,560
Median Age	27.2	27.5	28.3	29.3

Births	130	130	140
Deaths	190	190	200
Natural Increase	-60	-60	-60
Net Migration	-50	-50	-50
Change			

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

Hamilton Wenham Regional Schools Enrollment Forecasts

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
PK	23	18	28	31	30	30	30	30	30	30	30	30	30	30	30
K	117	142	119	124	146	137	136	137	134	133	129	127	125	123	125
1	120	128	146	121	127	148	139	138	136	133	132	129	127	124	122
2	115	123	123	141	124	126	147	139	138	136	133	132	129	127	124
3	133	121	129	130	141	124	126	147	139	138	136	133	132	129	127
4	136	135	125	126	134	142	125	127	148	140	139	137	133	132	129
5	137	135	141	127	135	137	144	126	128	149	141	140	137	133	132
Total: K-5	781	802	811	800	837	844	847	844	853	859	840	828	813	798	789
6	135	136	132	130	116	131	135	141	124	126	146	138	138	135	131
7	145	139	135	134	133	118	133	137	144	126	128	149	141	141	138
8	134	153	135	137	131	132	118	133	137	144	126	128	149	141	141
Total: 6-8	414	428	402	401	380	381	386	411	405	396	400	415	428	417	410
9	131	128	143	124	131	125	126	113	128	133	139	121	124	144	136
10	129	128	128	142	126	128	123	123	111	125	131	136	119	122	141
11	142	129	125	119	140	124	126	121	121	109	123	129	134	117	120
12	158	136	127	123	120	138	123	125	120	120	108	122	128	133	116
Total: 9-12	560	521	523	508	517	515	498	482	480	487	501	508	505	516	513
OOD	22	32	32	33	38	38	38	38	38	38	38	38	38	38	38
Total: K-12	1777	1783	1768	1742	1772	1778	1769	1775	1776	1780	1779	1789	1784	1769	1750
Total: K-12	1777	1783	1768	1742	1772	1778	1769	1775	1776	1780	1779	1789	1784	1769	1750
Change		6	-15	-26	30	6	-9	6	1	4	-1	10	-5	-15	-19
% Change		0.3%	-0.8%	-1.5%	1.7%	0.3%	-0.5%	0.3%	0.1%	0.2%	-0.1%	0.6%	-0.3%	-0.8%	-1.1%
Total: K-5	781	802	811	800	837	844	847	844	853	859	840	828	813	798	789
Change		21	9	-11	37	7	3	-3	9	6	-19	-12	-15	-15	-9
% Change		2.7%	1.1%	-1.4%	4.6%	0.8%	0.4%	-0.4%	1.1%	0.7%	-2.2%	-1.4%	-1.8%	-1.8%	-1.1%
Total: 6-8	414	428	402	401	380	381	386	411	405	396	400	415	428	417	410
Change		14	-26	-1	-21	1	5	25	-6	-9	4	15	13	-11	-7
% Change		3.4%	-6.1%	-0.2%	-5.2%	0.3%	1.3%	6.5%	-1.5%	-2.2%	1.0%	3.8%	3.1%	-2.6%	-1.7%
Total: 7-12	560	521	523	508	517	515	498	482	480	487	501	508	505	516	513
Change		-39	2	-15	9	-2	-17	-16	-2	7	14	7	-3	11	-3
% Change		-7.0%	0.4%	-2.9%	1.8%	-0.4%	-3.3%	-3.2%	-0.4%	1.5%	2.9%	1.4%	-0.6%	2.2%	-0.6%

Town of Hamilton Enrollment Forecasts

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
PK	18	15	24	27	24	24	24	24	24	24	24	24	24	24	24
K	76	98	81	84	107	97	95	95	93	92	89	87	85	83	84
1	88	75	98	79	83	105	95	93	91	89	88	86	84	82	80
2	83	86	72	95	81	81	103	94	92	90	88	87	85	83	81
3	96	86	89	71	94	79	79	102	93	91	89	87	86	84	82
4	84	95	87	86	70	92	77	78	101	92	90	88	86	85	83
5	97	84	95	84	93	69	91	76	77	100	91	89	87	85	84
Total: K-5	542	539	546	526	552	547	564	562	571	578	559	548	537	526	518
6	84	91	81	90	74	88	66	87	73	74	96	87	86	84	82
7	98	83	91	82	92	75	89	67	89	74	75	98	89	88	86
8	89	104	81	88	78	90	74	88	66	88	73	74	97	88	87
Total: 6-8	271	278	253	260	244	253	229	242	228	236	244	259	272	260	255
9	91	80	98	70	85	73	85	70	84	63	84	69	71	93	84
10	79	88	79	97	68	83	72	83	69	82	62	82	68	70	91
11	103	80	86	73	93	67	82	71	82	68	81	61	81	67	69
12	107	99	76	82	72	90	65	80	69	80	66	79	59	79	65
Total: 9-12	380	347	339	322	318	313	304	304	304	293	293	291	279	309	309
OOD	11	16	18	23	22	22	22	22	22	22	22	22	22	22	22
Total: K-12	1204	1180	1156	1131	1136	1135	1119	1130	1125	1129	1118	1120	1110	1117	1104
Total: K-12	1204	1180	1156	1131	1136	1135	1119	1130	1125	1129	1118	1120	1110	1117	1104
Change		-24	-24	-25	5	-1	-16	11	-5	4	-11	2	-10	7	-13
% Change		-2.0%	-2.0%	-2.2%	0.4%	-0.1%	-1.4%	1.0%	-0.4%	0.4%	-1.0%	0.2%	-0.9%	0.6%	-1.2%
Total: K-5	542	539	546	526	552	547	564	562	571	578	559	548	537	526	518
Change		-3	7	-20	26	-5	17	-2	9	7	-19	-11	-11	-11	-8
% Change		-0.6%	1.3%	-3.7%	4.9%	-0.9%	3.1%	-0.4%	1.6%	1.2%	-3.3%	-2.0%	-2.0%	-2.0%	-1.5%
Total: 6-8	271	278	253	260	244	253	229	242	228	236	244	259	272	260	255
Change		7	-25	7	-16	9	-24	13	-14	8	8	15	13	-12	-5
% Change		2.6%	-9.0%	2.8%	-6.2%	3.7%	-9.5%	5.7%	-5.8%	3.5%	3.4%	6.1%	5.0%	-4.4%	-1.9%
Total: 7-12	380	347	339	322	318	313	304	304	304	293	293	291	279	309	309
Change		-33	-8	-17	-4	-5	-9	0	0	-11	0	-2	-12	30	0
% Change		-8.7%	-2.3%	-5.0%	-1.2%	-1.6%	-2.9%	0.0%	0.0%	-3.6%	0.0%	-0.7%	-4.1%	10.8%	0.0%

Town of Wenham Enrollment Forecasts

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
PK	5	3	4	4	6	6	6	6	6	6	6	6	6	6	6
K	41	44	38	40	39	40	41	42	41	41	40	40	40	40	41
1	32	53	48	42	44	43	44	45	45	44	44	43	43	42	42
2	32	37	51	46	43	45	44	45	46	46	45	45	44	44	43
3	37	35	40	59	47	45	47	45	46	47	47	46	46	45	45
4	52	40	38	40	64	50	48	49	47	48	49	49	47	47	46
5	40	51	46	43	42	68	53	50	51	49	50	51	50	48	48
Total: K-5	239	263	265	274	285	297	283	282	282	281	281	280	276	272	271
6	51	45	51	40	42	43	69	54	51	52	50	51	52	51	49
7	47	56	44	52	41	43	44	70	55	52	53	51	52	53	52
8	45	49	54	49	53	42	44	45	71	56	53	54	52	53	54
Total: 6-8	143	150	149	141	136	128	157	169	177	160	156	156	156	157	155
9	40	48	45	54	46	52	41	43	44	70	55	52	53	51	52
10	50	40	49	45	58	45	51	40	42	43	69	54	51	52	50
11	39	49	39	46	47	57	44	50	39	41	42	68	53	50	51
12	51	37	51	41	48	48	58	45	51	40	42	43	69	54	51
Total: 9-12	180	174	184	186	199	202	194	178	176	194	208	217	226	207	204
OOD	11	16	14	10	16	16	16	16	16	16	16	16	16	16	16
Total: K-12	573	603	612	611	636	643	650	645	651	651	661	669	674	652	646
Total: K-12	573	603	612	611	636	643	650	645	651	651	661	669	674	652	646
Change		30	9	-1	25	7	7	-5	6	0	10	8	5	-22	-6
% Change		5.2%	1.5%	-0.2%	4.1%	1.1%	1.1%	-0.8%	0.9%	0.0%	1.5%	1.2%	0.7%	-3.3%	-0.9%
Total: K-5	239	263	265	274	285	297	283	282	282	281	281	280	276	272	271
Change		24	2	9	11	12	-14	-1	0	-1	0	-1	-4	-4	-1
% Change		10.0%	0.8%	3.4%	4.0%	4.2%	-4.7%	-0.4%	0.0%	-0.4%	0.0%	-0.4%	-1.4%	-1.4%	-0.4%
Total: 6-8	143	150	149	141	136	128	157	169	177	160	156	156	156	157	155
Change		7	-1	-8	-5	-8	29	12	8	-17	-4	0	0	1	-2
% Change		4.9%	-0.7%	-5.4%	-3.5%	-5.9%	22.7%	7.6%	4.7%	-9.6%	-2.5%	0.0%	0.0%	0.6%	-1.3%
Total: 7-12	180	174	184	186	199	202	194	178	176	194	208	217	226	207	204
Change		-6	10	2	13	3	-8	-16	-2	18	14	9	9	-19	-3
% Change		-3.3%	5.7%	1.1%	7.0%	1.5%	-4.0%	-8.2%	-1.1%	10.2%	7.2%	4.3%	4.1%	-8.4%	-1.4%

HAMILTON-WENHAM
REGIONAL SCHOOL DISTRICT

District Operations Team

Special Project Prioritization Discussion

March 28, 2018

Prepared by:

Jeff Sands, Assistant Superintendent for Finance & Administration
Michael Harvey, Superintendent of Schools

Special Projects Prioritization

- We have identified the slate of Projects that will be Prioritized over the course of the next 6+ months
- Considerations in determining this Prioritization:
  - School Committee & District Goals
  - District Policy
  - Existing Staff Resource Limitations
    - Number of Staff
    - Skill Set
    - Special Projects are in addition to the full-time responsibilities of supporting District operations
  - Multiple Similar Project Types exacerbates limitations on certain Resources (e.g. Procurement)
- The attached list of Prioritized Projects puts our Operations Team at 100% capacity during this timeframe. NO new projects can be added.

Projects Prioritized

- FY19 Budget and Debt Authorizations
- HS/MS BAS Construction Project – Green Communities Grant
- Negotiate Districtwide Employee Healthcare Plans for FY19, including Plan Re-Design or RFP
- Collective Bargaining with Teacher, Custodial, & Office Personnel Unions
- Buker Playground Construction Project
- A.L.I.C.E. Implementation
- FY18 Annual Audit
- FY18 Year-end Financial Close & Annual School Staffing Reviews
- Project Adventure Course Restoration Project
- Custodial Union Grievance & Arbitration Hearing
- Districtwide Grounds Maintenance Program

A.L.I.C.E. Implementation

- We are moving forward with a Districtwide implementation of the A.L.I.C.E. active shooter response program.
- The District has engaged the services of the ALICE Training Institute (ATI) to provide Training and Program Implementation Support Services.
- All HW District Staff (~350) will be A.L.I.C.E. trained on August 27-28, 2018
  - ~50 selected Staff will participate in a two-day ATI Instructor Led Train-the-Trainer Program
- We've scheduled a meeting for Monday, April 2nd at 10:00 AM with Wenham and Hamilton PD Leadership to discuss next steps.

Jeff Sands
Assistant Superintendent for Finance and Administration, HWRSD
Operational Projects Prioritized for the next 6+ Months

Priority Projects (next 6+ months):

- FY19 Budget and Debt Authorizations
- HS/MS BAS Construction Project – Green Communities Grant Funded
- Districtwide Employee Healthcare Plans for FY19, including Plan Re-Design or RFP
- Collective Bargaining with Teacher, Custodial, & Office Personnel Unions
- Buker Playground Construction Project
- A.L.I.C.E. Implementation
- FY18 Annual Audit
- FY18 Year-end Financial Close & Annual School Staffing Reviews
- Project Adventure Course Restoration Project
- Custodial Union Grievance & Arbitration Hearing
- Districtwide Grounds Maintenance Program

Other Projects:

- Safety, Accessibility, & Critical Infrastructure Projects (pending ATM Approval)
- Winthrop School Sprinkler Construction Project (pending ATM Approval)
- Winthrop School ADA Ramp Project
- Waste Water Treatment Facility Electrical Service Upgrade Project
- OPEB Trust Fund
- 3 Year Student Transportation IFB and Contract (FY20 – FY23)
- Management Letter Remediation Projects
- HS Student Activities Account Audit Remediation Projects
- MS Student Activities Account Audit Remediation Projects
- Turf Field / Athletic Complex Master Plan Project
- Buker Playground Construction Project – Phase 2 (donor walkway & patio, sitting area, etc.)
- Develop Districtwide Technology Plan
- Renovation of School Libraries Projects
- Districtwide Enrollment Studies
- Longmeadow Study
- Update Regional Agreement w/ Member Towns, including Apportionment Calculation
- Conduct Districtwide review of User Fees, including Athletic and non-Athletic.
- Review and recommend revisions to District Building Use Policies including Fee structure
- Update District-wide Human Resources Practices and Procedures, including Staff Handbook
- Create Districtwide Job Description Repository
- Perform detailed review of Teachers Assistant (TA) roles and responsibilities across District, including compensation and potential restructuring of function in general and special education

NOTE: This list DOES NOT include day-to-day responsibilities of the Assistant Superintendent for F&A and his Operations Team (including Business Office, HR, IT, Facilities & Maintenance, & Food Service)

Massachusetts School Building Authority

Next Steps to Finalize Submission of your FY 2018 Statement of Interest

Thank you for submitting your FY 2018 Statement of Interest (SOI) to the MSBA electronically. **Please note, the District's submission is not yet complete**. The District is required to mail all required supporting documentation, which is described below.

VOTES: Each SOI must be submitted with the proper vote documentation. This means that (1) the required governing bodies have voted to submit each SOI, (2) the specific vote language required by the MSBA has been used, and (3) the District has submitted a record of the vote in the format required by the MSBA.

- **School Committee Vote:** Submittal of all SOIs must be approved by a vote of the School Committee.
  - For documentation of the vote of the School Committee, Minutes of the School Committee meeting at which the vote was taken must be submitted with the original signature of the Committee Chairperson. The Minutes must contain the actual text of the vote taken which should be substantially the same as the MSBA's SOI vote language.
- **Municipal Body Vote:** SOIs that are submitted by cities and towns must be approved by a vote of the appropriate municipal body (e.g., City Council/ Aldermen/Board of Selectmen) in addition to a vote of the School Committee.
  - Regional School Districts do not need to submit a vote of the municipal body.
  - For the vote of the municipal governing body, a copy of the text of the vote, which shall be substantially the same as the MSBA's SOI vote language, must be submitted with a certification of the City/Town Clerk that the vote was taken and duly recorded, and the date of the vote must be provided.

ADDITIONAL DOCUMENTATION FOR SOI PRIORITIES #1 AND #3: If a District selects Priority #1 and/or Priority #3, the District is required to submit additional documentation with its SOI.

- If a District selects Priority #1, Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of the school children, where no alternative exists, the MSBA requires a hard copy of the engineering or other report detailing the nature and severity of the problem and a written professional opinion of how imminent the system failure is likely to manifest itself. The District also must submit photographs of the problematic building area or system to the MSBA.
- If a District selects Priority #3, Prevention of a loss of accreditation, the SOI will not be considered complete unless and until a summary of the accreditation report focused on the deficiency as stated in this SOI is provided.

ADDITIONAL INFORMATION: In addition to the information required above, the District may also provide any reports, pictures, or other information they feel will give the MSBA a better understanding of the issues identified at a facility.

If you have any questions about the SOI process please contact the MSBA at 617-720-4466 or SOI@massschoolbuildings.org.

Massachusetts School Building Authority

School District Hamilton-Wenham

District Contact Michael Harvey TEL: (978) 626-0821

Name of School Cutler School

Submission Date 3/21/2018

SOI CERTIFICATION

To be eligible to submit a Statement of Interest (SOI), a district must certify the following:

- The district hereby acknowledges and agrees that this SOI is NOT an application for funding and that submission of this SOI in no way commits the MSBA to accept an application, approve an application, provide a grant or any other type of funding, or places any other obligation on the MSBA.
- The district hereby acknowledges that no district shall have any entitlement to funds from the MSBA, pursuant to M.G.L. c. 70B or the provisions of 963 CMR 2.00.
- The district hereby acknowledges that the provisions of 963 CMR 2.00 shall apply to the district and all projects for which the district is seeking and/or receiving funds for any portion of a municipally-owned or regionally-owned school facility from the MSBA pursuant to M.G.L. c. 70B.
- The district hereby acknowledges that this SOI is for one existing municipally-owned or regionally-owned public school facility in the district that is currently used or will be used to educate public PreK-12 students and that the facility for which the SOI is being submitted does not serve a solely early childhood or Pre-K student population.
- After the district completes and submits this SOI electronically, the district must mail hard copies of the required documentation described under the "Vote" tab, on or before the deadline.
- The district will schedule and hold a meeting at which the School Committee will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is required for cities, towns, and regional school districts.
- Prior to the submission of the SOI, the district will schedule and hold a meeting at which the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is not required for regional school districts.
- On or before the SOI deadline, the district will submit the minutes of the meeting at which the School Committee votes to authorize the Superintendent to submit this SOI. The District will use the MSBA's vote template and the vote will specifically reference the school and the priorities for which the SOI is being submitted. The minutes will be signed by the School Committee Chair. This is required for cities, towns, and regional school districts.
- The district has arranged with the City/Town Clerk to certify the vote of the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body to authorize the Superintendent to submit this SOI. The district will use the MSBA's vote template and submit the full text of this vote, which will specifically reference the school and the priorities for which the SOI is being submitted, to the MSBA on or before the SOI deadline. This is not required for regional school districts.
- The district hereby acknowledges that this SOI submission will not be complete until the MSBA has received all of the required vote documentation in a format acceptable to the MSBA. If Priority 1 is selected, your SOI will not be considered complete unless and until you provide the required engineering (or other) report, a professional opinion regarding the problem, and photographs of the problematic area or system. If Priority 3 is selected, your SOI will not be considered complete unless and until you provide a summary of the accreditation report focused on the deficiency as stated in this SOI.

LOCAL CHIEF EXECUTIVE OFFICER/DISTRICT SUPERINTENDENT/SCHOOL COMMITTEE CHAIR
(E.g., Mayor, Town Manager, Board of Selectmen)

Chief Executive Officer *	**School Committee Chair**	**Superintendent of Schools**
(signature)	(signature)	(signature)
Date	Date	Date

* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice.

Massachusetts School Building Authority

School District Hamilton-Wenham

District Contact Michael Harvey TEL: (978) 626-0821

Name of School Cutler School

Submission Date 3/21/2018

Note

The following Priorities have been included in the Statement of Interest:

1. ☐ Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
2. ☐ Elimination of existing severe overcrowding.
3. ☐ Prevention of the loss of accreditation.
4. ☐ Prevention of severe overcrowding expected to result from increased enrollments.
5. ☐ Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.
6. ☐ Short term enrollment growth.
7. ☒ Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.
8. ☐ Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

SOI Vote Requirement

☒ I acknowledge that I have reviewed the MSBA's vote requirements for submitting an SOI which are set forth in the Vote Tab of this SOI. I understand that the MSBA requires votes from specific parties/governing bodies, in a specific format using the language provided by the MSBA. Further, I understand that the MSBA requires certified and signed vote documentation to be submitted with the SOI. I acknowledge that my SOI will not be considered complete and, therefore, will not be reviewed by the MSBA unless the required accompanying vote documentation is submitted to the satisfaction of the MSBA.

Potential Project Scope: Potential Consolidation

Is this SOI the District Priority SOI? YES

School name of the District Priority SOI: Cutler School

Is this part of a larger facilities plan? YES

If "YES", please provide the following:

Facilities Plan Date: 6/4/2014

Planning Firm: SMMA Architects

Please provide a brief summary of the plan including its goals and how the school facility that is the subject of this SOI fits into that plan:

The Hamilton-Wenham District Master Plan was completed in June of 2014. The Master Plan had the following goals: 1. Facilitate a visioning process, involving a broad range of community and District stakeholders to identify educational and community goals for the district with a focus on transformation of the HWRSD school system so as to promote the 21st Century learner. 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 consolidation of the Cutler and Winthrop Elementary Schools was presented as one option for modernizing the school facilities of the HWRSD in the Facilities Master Plan. This consolidation would maximize the efficiencies a single school of approximately 600 students would have over two separate schools and would spare the communities from having to extensively renovate two separate buildings.

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 12 students per teacher

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 12 students per teacher

Does the District have a Master Educational Plan that includes facility goals for this building and all school buildings in District? YES

If "YES", please provide the author and date of the District's Master Educational Plan.

SMMA Architects, June 4, 2014

Is there overcrowding at the school facility? NO

If "YES", please describe in detail, including specific examples of the overcrowding.

Has the district had any recent teacher layoffs or reductions? YES

If "YES", how many teaching positions were affected? 5
At which schools in the district? Hamilton-Wenham Regional High School
Please describe the types of teacher positions that were eliminated (e.g., art, math, science, physical education, etc.).

5.0 FTE of teaching positions were eliminated at Hamilton-Wenham Regional High School for the 2017-2018 school year. These FTEs were primarily made up of part time positions at the school in all various areas (English, Social Studies, Language, PE).

Has the district had any recent staff layoffs or reductions? NO

If "YES", how many staff positions were affected? 0
At which schools in the district?
Please describe the types of staff positions that were eliminated (e.g., guidance, administrative, maintenance, etc.).

Please provide a description of the program modifications as a consequence of these teacher and/or staff reductions, including the impact on district class sizes and curriculum.

The reductions to teaching staff were the result of decreased student enrollment at HWRHS. The impact of these reductions was sightly larger class sizes.

Please provide a description of the local budget approval process for a potential capital project with theMSBA. Include schedule information (i.e. Town Meeting dates, city council/town council meetings dates, regional school committee meeting dates). Provide, if applicable, the District's most recent budget approval process that resulted in a budget reduction and the impact of the reduction to the school district (staff reductions, discontinued programs,

consolidation of facilities).

The HWRSD follows the budget approval process for regional school districts. The process begins in November. Building Principals and other budget account holders compile budget requests and submit them to the Asst. Superintendent for Admin. and Finance in late November. The Superintendent reviews these requests and presents a recommended budget to the School Committee in early January. The School Committee reviews the Superintendent's Recommended Budget and makes changes to the budget from early January to mid February. The School Committee then votes a final budget in mid-February. This budget is then sent to Annual Town Meeting for approval. Annual Town Meeting is usually held in early April in both Hamilton and Wenham. The FY18 Budget approved by Hamilton and Wenham Town Meeting was an increase of $1,049,784 or 3.6% over FY17.

General Description

BRIEF BUILDING HISTORY: Please provide a detailed description of when the original building was built, and the date(s) and project scopes(s) of any additions and renovations (maximum of 5000 characters).

The Cutler Elementary School is a 45,800 sf masonry building constructed in 1951 with modular classroom additions in 1952
and 1956. In 1989 the Whittier Wing was added which houses kindergarten classrooms and a gymnasium. The school serves
approximately 300 students in grades K-5.

TOTAL BUILDING SQUARE FOOTAGE: Please provide the original building square footage PLUS the square footage of any additions.

45800

SITE DESCRIPTION: Please provide a detailed description of the current site and any known existing conditions that would impact a potential project at the site. Please note whether there are any other buildings, public or private, that share this current site with the school facility. What is the use(s) of this building(s)? (maximum of 5000 characters).

The Cutler Elementary School is located on 237 Asbury Street, a minor arterial road with one lane in each direction. The school site is located within 1 mile of downtown Hamilton and is surrounded by residential neighborhoods. The school site is approximately 11.5 acres located and is located within Zone X (areas of minimal flooding) within the Flood Insurance Map.

Most of the site appears to be located within Zone II, wellhead protection area. The site is located within an R-1A Zone.

There are no other buildings that share the site with the Cutler School.

ADDRESS OF FACILITY: Please type address, including number, street name and city/town, if available, or describe the location of the site. (Maximum of 300 characters)

237 Asbury St., Hamilton, MA 01928

BUILDING ENVELOPE: Please provide a detailed description of the building envelope, types of construction materials used, and any known problems or existing conditions (maximum of 5000 characters).

Foundations
The foundations for the 1951 building and the 1989 addition are constructed of cast-in-place concrete. The 1952 and 1956 modular additions have a crawl space under the entire floor. The type and extent of foundation for the modular classrooms could not be determined. There is a boiler room below the kitchen with cast-in-place reinforced concrete walls and slab.

The gym/classroom addition, completed in 1989, has a basement storage area consisting of cast in-place reinforced concrete walls, beams and slab. The gymnasium above has steel portal bents supporting wide flange purlins and steel roof deck. The low roof, over the classroom area adjacent to the gym, likely has steel columns supporting either beams or joists and metal deck. There is clerestory glazing at the gym with exterior brick and interior 8 inch CMU’s. The remaining exterior walls have back-up metal studs. There are no designed lateral load resisting elements in the building and wind loads are currently transferred through exterior walls and interior partitions.

Exterior--1951 Building
The exterior walls of the 1951 original building appears to be roughly 12” thick, in full wythe brick and no insulation. Brick has efflorescence and is spalling in a few areas around the building. This efflorescence was primarily noted at a decorative brick piers where the brick is fully exposed to weathering and joints are susceptible to water ingress. Some of the brick is 2” h x 10” l (Roman Brick in a “slipped” Running Bond) while other brick is standard size; most appears to be in good condition with localized areas where cracks, efflorescence and spalling was noted. The cracks appear to be due to a lack of control joints at the corners of the building.

The Multi-purpose Room (MPR) has vinyl siding applied over existing wood siding. The condition of the wood siding underneath is not known. The original wood trim is covered by aluminum panels with exposed fasteners, which are rusting. The MPR has a sloped roof with queen post rafters consisting of structural wood beams and steel rods. These are supported on wood columns at 5’-0” on center at the exterior curtain walls and load bearing wall at the stage. The rafters support wood plank. The classroom areas have sloped wood beams at 5’-0” on center supporting wood plank. The beams typically cantilever out beyond the curtain wall which has wood columns at each roof beam. There is exterior brick up to the sill level with full height panels at various locations.

Exterior--1952 and 1956 Modular classrooms
The modular classrooms are constructed of non-thermal metal store-front window systems The building adjacent to the classrooms has a concrete parged coating on one side and wood panels on another. The steel behind the parged coating is rusting, which is causing the parged coating to peel off the building. Significant cracking and deterioration of the parge coating was noted. The presence of insulation in the exterior wall is not known. Significant deterioration/rotting of the wood panels was evident.

Exterior--1989 Building
The exterior wall is constructed of brick veneer, with precast concrete window sills and panels above windows. The gym has concrete block back-up, with 1” of rigid insulation in the cavity between block and brick. The classroom areas have light gauge metal framing back-up with 6” fiberglass batt insulation in between the studs. Six inches of fiberglass batt insulation should have R-19 thermal value if it was installed continuously. However, because it is installed in between metal framing, the thermal value of the wall is significantly reduced; the metal framing acts as a conductor allows for thermal transfer of cold air in, and warm air out. In addition, after a review of the drawings, there is some concern over the potential lack of a continuous thermal envelope at the gym, particularly at the top of wall transition to the roof. The base of the brick at the northeast corner of the building has some fungal growth. Several sealant joints have failed around openings, giving a direct pathway for water to enter the wall system. Joints in precast sills are in need of repointing/sealing.

Has there been a Major Repair or Replacement of the EXTERIOR WALLS? NO
Year of Last Major Repair or Replacement:(YYYY) 1951
Description of Last Major Repair or Replacement:
none

Roof Section A
Is the District seeking replacement of the Roof Section? NO
Area of Section (square feet) 10000
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Shingle
Age of Section (number of years since the Roof was installed or replaced) 19
Description of repairs, if applicable, in the last three years. Include year of repair:
None

Roof Section B
Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)

Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Roof Section C
Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Roof Section D
Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Roof Section E
Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Roof Section F
Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Roof Section G
Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Roof Section H
Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Roof Section I
Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Roof Section J

Is the District seeking replacement of the Roof Section?
Area of Section (square feet)
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
Age of Section (number of years since the Roof was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section A
Is the District seeking replacement of the Windows Section? NO
Windows in Section (count) 50
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
single pane wood
Age of Section (number of years since the Windows were installed or replaced) 62
Description of repairs, if applicable, in the last three years. Include year of repair:
None

Window Section B
Is the District seeking replacement of the Windows Section?
Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section C
Is the District seeking replacement of the Windows Section?
Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section D
Is the District seeking replacement of the Windows Section?
Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section E
Is the District seeking replacement of the Windows Section?
Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section F
Is the District seeking replacement of the Windows Section?
Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section G
Is the District seeking replacement of the Windows Section?

Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section H
Is the District seeking replacement of the Windows Section?
Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section I
Is the District seeking replacement of the Windows Section?
Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Window Section J
Is the District seeking replacement of the Windows Section?
Windows in Section (count)
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Age of Section (number of years since the Windows were installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems and any known problems or existing conditions (maximum of 5000 characters).

MECHANICAL SYSTEM
The original 1952 building heating system consisted of steam boilers, below floor steam distribution pipe and steam terminal units. The terminal units were unit ventilators, unit heaters, radiators and steam coils within several air handlers. The original ventilation system consisted of unit ventilator fresh air intakes and roof mounted exhaust fans. The original control system was pneumatic; with air compressor, copper tubing, actuators, central control station and wall thermostats.

In 1990 a kindergarten section was added to the building along with replacement of the boilers, the kitchen exhaust system and gymnasium heating and ventilation unit. Only several office areas are air conditioned. These spaces primarily utilize through–the-window units. In the spring/summer of 2010 a major upgrade to the HVAC system occurred, in part with funding from the MSBA's Green Repair Program. The upgrades include new energy efficient condensing boilers, the conversion of the steam heating system to hot water, the conversion of the pneumatic control system to a Direct Digital Control (DDC) system, the addition of several rooftop air conditioners and the replacement of older unit ventilators and roof exhaust fans with radiators and energy recovery ventilators.

ELECTRICAL SYSTEM
The buildings electrical service is rated 400 Ampere, 208Y/120 volt, three phase, four wire and is provided by National Grid Electric. Based upon a usable square footage of totals 42,050 sf the total watts per square foot available are 3.4. This total is below the industry standard for an Elementary school which if designed today would have no less than 10 watts per sq. foot available to accommodate lighting, power, mechanical and miscellaneous loads. The electrical distribution equipment installed throughout the building varies by manufacturer and renovation date. Some would appear to date back to original building construction.

• Main electric/boiler room: Wadsworth and Federal Electric distribution gear appears to be the oldest distribution

equipment still utilized. It is in poor condition.
• Common corridors: Trumbel Electric panelboards appear to date back many years. They are in poor condition
• 1991 Addition: a new main distribution panel by Siemens Electric was installed when the addition was built. It is in fair condition
• Kitchen: General Electric panels installed within the kitchen appear to be in fair condition.

Boiler Section 1
Is the District seeking replacement of the Boiler? NO
Is there more than one boiler room in the School? NO
What percentage of the School is heated by the Boiler? 100
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Natural Gas
Age of Boiler (number of years since the Boiler was installed or replaced) 8
Description of repairs, if applicable, in the last three years. Include year of repair:
n/a

Boiler Section 2
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Boiler Section 3
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Boiler Section 4
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Boiler Section 5
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Boiler Section 6
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?

Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Boiler Section 7
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Boiler Section 8
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Boiler Section 9
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Boiler Section 10
Is the District seeking replacement of the Boiler?
Is there more than one boiler room in the School?
What percentage of the School is heated by the Boiler?
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Age of Boiler (number of years since the Boiler was installed or replaced)
Description of repairs, if applicable, in the last three years. Include year of repair:

Has there been a Major Repair or Replacement of the HVAC SYSTEM? YES
Year of Last Major Repair or Replacement:(YYYY) 2010
Description of Last Major Repair or Replacement:
The steam heating system was converted to hot water, a Direct Digital Control (DDC) system control system replaced the pneumatic one, there was the addition of several rooftop air conditioners and the replacement of older unit ventilators and roof exhaust fans with radiators and energy recovery ventilators.

Has there been a Major Repair or Replacement of the ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM? YES
Year of Last Major Repair or Replacement:(YYYY) 1991
Description of Last Major Repair or Replacement:
A new main distribution panel (MDP), manufactured by Siemens Electric, was installed in 1991 when the new addition was built.

BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters).

Floors
1951 Building and 1952 and 1956 Modular Classrooms
• Classrooms: 9”x9” Vinyl Asbestos Tile (VAT)
• MPR: Vinyl Composition Tile (VCT) has been patched in numerous areas, is cupping in some areas, with some signs of moisture issues. The platform has VCT but is in poor condition as well. The wood edge of the platform is also in poor condition.
• Corridors: VCT and carpeting over VAT, and VCT over VAT.
• Most areas around the school appear to have VCT installed directly over VAT. Some corridors have exposed concrete floor.
• Modular classroom wing has carpeting in the corridors with VCT in the classrooms.
• Kitchen: 2” x 2” ceramic mosaic tile
• Stairs: Raised Rubber Tile (RRT)

1991 Addition
• Gym: Wood flooring, still in good condition.
• Toilet Rooms: 2” x 2” CMT in good condition
• Classrooms: VCT in good condition
• Lobby: Porcelain tile in good condition
• Corridors: VCT is generally in good condition however there is a very large crack where the corridor meets the lobby.

WALLS
1951 Building and 1952 and 1956 Modular Classrooms
• Interior wall construction and finish vary throughout the school:
• Classrooms: wood siding, wood panels and wired glass clerestories (some have brick and plaster)
• MPR: Horizontal wood, flush; appears to be original to the school
• Kitchen: Structural Glazed Facing Tile SGFT in good condition
• Storage room off of MPR: Concrete block on the inside is the same as that on the outside. There is significant efflorescence on the inside, which is a sign that there is a large amount of moisture passing through the block
• Toilet rooms: SGFT and metal partitions appear to be in good condition.
• The main office and misc. office areas: plaster lathe walls on wood framing.
• The corridors: thin, long brick on one side and standard brick on the opposite side

CEILINGS
1951 Building
Classrooms and MPR rooms have what appears to be painted Medium Density Overlay (MDO) boards fastened to the underside of the roof deck. There are a number of the boards/panels that are warped, damaged/stained due to leaks and moisture over the last 60 years. Acoustical panels have been suspended in the MPR in an effort to reduce the noise and/or minimize reverberation. It is not known how effective these panels are but usually, a space of this size requires significantly more panels to have a noticeable impact. The kitchen has plaster that appears to be in good condition. The main office, administrative areas and corridors have plaster lathe; damage and staining is evident from roof leaks.

1952 and 1956 Modular Classrooms
These rooms have exposed tectum roof planks and steel structure. The planks appear to be generally in good condition.

1991 Addition
The majority of these areas have suspended acoustical ceiling tile in an aluminum grid, with the exception of the Gym which has exposed structure and metal deck. The ceiling in the addition is in good condition.

LIGHTING
Lighting within classrooms is primarily surface mounted, multi-lamp fluorescent and is controlled via a single switch zone. Fixtures appear to be in fair condition. Lighting within hallways, offices, the cafeteria and mechanical/electrical rooms is

generally linear fluorescent. Fixtures appear
to be in fair condition.
Gymnasium lighting consists of 2'x4' multi-lamp fluorescent fixtures. Fixtures appear to be in fair condition.
Lighting within the Boiler room consists of bare lamp fluorescent strips with single switch zone.
Interior lighting is currently not equipped with a means for automatic shut-off (ie: occupancy sensors)

PROGRAMS and OPERATIONS: Please provide a detailed description of the current grade structure and programs offered and indicate whether there are program components that cannot be offered due to facility constraints, operational constraints, etc. (maximum of 5000 characters).

The Cutler School currently serves students in grades K-5. The as the building was primarily designed and built before the implementation of modern special education programming and the Americans with Disabilities Act, there are several issues that impact the education of students at the school.

1. Handrails are missing from stairs to the MPR and at other stairs in the building.
2. There has been significantly high humidity in the modular classrooms, as well as inadequate heating, ventilation and temperature control. The school is providing new heating and ventilation and has added dehumidifiers as a part of the renovation project, however the existing thermal envelope construction (exterior walls, floor and roof) is very poor. The improvements made may not address all the issues with these classrooms.
3. Many doors throughout the building do not have closers, are not fire-rated where they should be, have inadequate hardware and are held open with foot-stops. The boiler room door in the 1951 building is original and in poor condition; the door and hardware should be replaced.
4. The faculty/conference room is located in a space that has electrical distribution panels. An 8' high partition was constructed to provide separation but the wall does not extend to the ceiling and does not meet code.
5. There is a lack of ventilation in the main office and Nurse's room. There is a single window A/C unit in most office spaces.
6. The administrative offices along the corridor of the 1951 building have large plate glass borrowed lites. One has tempered glass, while the others are not. They also do
not have a fire rating.
7. Corridor doors in the 1951 building have a steep ramp directly in front of them, with no landing. These doors are held open with stones. The doors have no closers, have push-pull hardware (no latch), and are not fire rated.
8. Exterior guardrail over 1989 boiler room/storage room should be 42" high.

Handicap Accessibility
Requirements for handicap accessibility were non-existent when this school was originally constructed. In 1990, the Americans with Disabilities Act (ADA) was enacted into law by the Federal Government to provide civil rights protections and nondiscrimination on the basis of disability. Since 1990, the original regulations have been updated and new requirements and clarifications have been added. In addition, the Commonwealth of Massachusetts has developed their own regulations (521 CMR Architectural Access Board) that are in many instances more stringent than the ADA. Regulations are updated and added almost every year. Based on the most current regulations, we have found the following items to be in non-compliance or can be considered as barriers for the disabled:
• Knob hardware should be replaced with lever style hardware.
• Ramp in main corridor of 1951 building leading to classroom wing is very steep and has inadequate handrails; handrails do not extend and are the improper slope and height per code. As such, the entire classroom wing is not accessible to the disabled.
• The set of stairs in the main corridor between the entry door and the admin office has an inclined chair lift that appears to be 20+ years old. The lift is in poor condition, does not function well and is not used.
• Ramp at the MPR: railing stops ¾ of the way up the ramp; the handrail should be continuous.
• The nurse's office is not accessible by the disabled.

Because of the accessibility issues at the Cutler School, the HWRSD is precluded from housing the integrated preschool program and substantially separate special education programming at the school.

EDUCATIONAL SPACES: Please provide a detailed description of the Educational Spaces within the facility, a description of the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, a description of the cafeteria, gym and/or auditorium and a description of the media center/library (maximum of 5000 characters).

Typical classrooms are generally adequate in size ranging from 940 sf to 1000 sf.

There appears to be adequate space for supporting subject areas: art, music, SPED, gym but the other support areas is short on space and cramped. These include: main office, teacher work room, toilet rooms etc. The library / technology lab when combined are under size and the division of spaces is disruptive to its purpose.

CAPACITY and UTILIZATION: Please provide the original design capacity and a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters).

The school is not currently overcrowded.

MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district's current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the past, including any override or debt exclusion votes that were necessary (maximum of 5000 characters).

The Hamilton-Wenham Regional School District currently provides adequate annual maintenance on all school facilities. The District employs a full-time Director of Facilities, who works with the Assistant Superintendent for Administration and Finance to develop and implement an annual preventative maintenance program. Additionally, the Director of Facilities works in conjunction with building principals to address any unforeseen but necessary repairs. Both preventative and emergent maintenance work is coordinated through the use of the "School Dude" work order system. The District employs a team of three full-time maintenance workers to complete maintenance assignments as they are identified though the work-order system.

The HWRSD has also developed a Five-Year Capital Plan to identify and prioritize more extensive capital repairs and enhancements. The Hamilton-Wenham Regional School Committee has developed a plan to fund this list of approximately $7 million in projects over the next five years. This plan includes funding the first $3.5 million through debt exclusions and the remaining items through the District's Annual Operating Budget. The $3.5 million in debt exclusion items will be put before Hamilton and Wenham Town Meetings in April of 2018 for approval.

Over the past 8 years, the Hamilton-Wenham Regional School District has completed several large-scale repair projects to school facilities:

Year Project School Cost
2011 HVAC System Cutler $1,349,000
2014 Roof Winthrop $587,000
2014 Roof Cutler $546,000
2015 HVAC System Buker $579,000
2015 HVAC System and Exterior Walls Winthrop $1,959,000

All of these projects were financed through debt exclusions that were approved by the Towns of Hamilton and Wenham. The Cutler HVAC (2011), Cutler Roof (2014), Buker HVAC (2015), and Winthrop HVAC and Exterior Walls (2015) were all part of the MSBA's Accelerated Repair Program.

Priority 7

Question 1: Please provide a detailed description of the programs not currently available due to facility constraints, the state or local requirement for such programs, and the facility limitations precluding the programs from being offered.

Because of the physical limitations of the Cutler School, the Hamilton-Wenham Regional School District avoids placing students with severe special needs at the school. Both the District's integrated preschool program and substantially separate special education programs are housed at another school in the District partly because of the physical limitations of the Cutler School Facility. Students with mobility issues can only access all spaces in the school with great difficulty. Younger students have difficulty reaching bathroom sinks and faucets. Ramps were built at too steep an angle. Handrails at ramps are not reachable. Doorknobs are not easily turned by a child's hands.

Not having a second school facility that would be able to house these programs severely limits the District in terms of being able to expand programming in these areas. Additionally, only housing these programs in one of our elementary schools limits the ability of the District to integrate a larger number of our "typically" developing students with our special needs programs. Students at the Cutler School are ultimately deprived of the ability to learn the skills of compassion, respect for differences and tolerance that comes as a result of daily living and learning with their peers who have diverse learning needs.

Priority 7

Question 2: Please describe the measures the district has taken or is planning to take in the immediate future to mitigate the problem(s) described above.

The District has taken several measures to address some of the identified issues at the Cutler School. The school's HVAC system was totally renovated in 2010. As part of this project, new high-efficiency condensing boilers were installed, the steam heating system was converted to hot water, a Direct Digital Control (DDC) system control system replaced the pneumatic one, several rooftop air conditioners were added and older unit ventilators and roof exhaust fans were replaced with radiators and energy recovery ventilators. Additionally, the roof over the original and modular sections of the building was replaced in 2013. Renovations have also been completed so that there is at least one handicap accessible restroom on each level of the school. While the District is committed to maintaining the school through regular maintenance and repair projects, many of the existing shortcomings of the building cannot be fully remedied without replacing the entire building.

Priority 7

Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

The Mission of the Hamilton-Wenham Regional School District is to "Educate our students to become young adults who demonstrate mastery of the knowledge and skills needed to be successful members of our global economy and engaged citizens of the 21st Century." As we strive to prepare all students to be "future-ready," we are constantly hindered by a facility that was designed and built 67 years ago. The educational program of today and the future requires programs that develop students' abilities to work cooperatively, using a myriad of technologies, in a setting where students can be fully integrated with their peers. School facilities need to be flexible to allow for multiple forms of teaching and learning. While the Cutler School has received several improvements to its physical systems in the past few years, most notably a new HVAC system in 2010 and a new roof in 2013, the original 1951 design of the school does not meet the standards for education required in 2018.

As mentioned in the review of the school's physical condition, the school is comprised of an original 1951 structure, two modular wings built in 1952 and 1956, and a 1989 addition. A 2011 review of the physical conditions of the School by the architectural firm of Dore and Whittier recommended both modular additions be demolished and rebuilt. "While considering all the issues observed at these classrooms as a whole, we believe it would be more cost effective to eliminate these modular classrooms entirely and build new. It is evident by their type of construction, that they were never intended to be permanent classroom structures, or at least not for the Northeastern United States." (Dore and Whitter, 2011) The architects expressed concerns regarding adequate drainage around these structures, inefficient insulation and window systems, and numerous other code violations that would not be acceptable in school construction today.

The "piecemeal" design of the Cutler School also creates problems. The school is sited on an uneven grade, which has created different levels within a single story structure. As the 1952 and 1956 additions were added to the building, stairs were used to connect the different wings. Later efforts to retrofit the school with ramps fall far short of meeting modern ADA Accessibility and building code requirements. The corridor leading to the classroom areas is at the top of a ramp that is too steep to meet modern code requirements. This means none of the classrooms in the school are handicap accessible. In another case, a ramp was constructed to cut through an existing classroom to allow access to one of the modular wings. The addition of the 1989 gymnasium and classroom addition also caused accessibility problems. This addition created a new main entry space for the school. The entry is located at the top of a slope that is also too steep to meet ADA requirements. Finally, the only corridor leading to the school cafeteria contains several stairs. An wheel chair accessible lift was retrofitted to these stairs, but the advanced age of the unit has led to periods where it is out of service for repairs.

In addition to the difficulties for those with mobility issues posed by the Cutler School, there are many other accessibility issues in the school. Most classrooms and the school nurse's office in the building are equipped with individual restrooms, none of which are sized to meet ADA requirements. A retrofit of restrooms located in public areas of the building has been done to provide the school with several accessible restrooms. One set of undersized restrooms located in the modular addition is not equipped with a sink, making proper hand washing impossible. Other fixtures in the building, including door handles and sinks are also not handicap accessible.

The design of the Cutler School also makes it difficult to ensure the safety of students from outside intruders. The entry space created in 1989 is not adjacent to the main offices of the school. Visitors to the school are identified and granted access to the building by the school secretary through means of a closed circuit camera and electronic door lock system. Once the visitor has been granted access to the building, however, they have direct access to the kindergarten classrooms that are located adjacent to the gymnasium and have relatively unrestricted access to the entire building without needing to enter the main office.

The design of the Cutler School also does not account for many of the educational spaces necessary for delivery of education in 2018. While inclusion is our primary method for delivering Special Education Services, there is still a need to deliver pullout

services. In order to accommodate this need, full size classrooms have been subdivided with temporary partitions. These spaces are less than ideal as they do not provide the privacy necessary to deliver specialized instruction to students. They also do not provide the soundproofing necessary for the administration of special education assessments, which calls the results of these assessments into question. In an effort to create spaces for students to work in small groups, school administration has turned any and all available space into learning areas. To this end, small group meeting areas have been created in hallways and in the front entry foyer of the building.

In addition to the lack of small group instructional spaces, the school lacks sufficient space for meetings. The one conference room that exists in the school is a section of the school's media center that has been divided off by a temporary wall. In order to access this room, meeting participants must first cross through the school's library and into the adjoining computer lab. This meeting space violates the privacy of meeting attendees.

The school's library and media center are currently housed in separate, adjoining classrooms. The physical layout of these spaces makes it impossible for the school's library media specialist to adequately supervise students working in both spaces. This supervisory issue limits the delivery of the Library Media Curriculum in the school.

REQUIRED FORM OF VOTE TO SUBMIT AN SOI

REQUIRED VOTES

If the SOI is being submitted by a City or Town, a vote in the following form is required from both the City Council/Board of Aldermen **OR** the Board of Selectmen/equivalent governing body **AND** the School Committee.

If the SOI is being submitted by a regional school district, a vote in the following form is required from the Regional School Committee only. FORM OF VOTE Please use the text below to prepare your City's, Town's or District's required vote(s).

FORM OF VOTE

Please use the text below to prepare your City's, Town's or District's required vote(s).

Resolved: Having convened in an open meeting on _____, prior to the closing date, the _____*[City Council/Board of Aldermen, Board of Selectmen/Equivalent Governing Body/School Committee]* of _____*[City/Town]*, in accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent to submit to the Massachusetts School Building Authority the Statement of Interest dated _____ for the _____*[Name of School]* located at _____*[Address]* which describes and explains the following deficiencies and the priority category(s) for which an application may be submitted to the Massachusetts School Building Authority in the future

_____

_____

_____

_____

_____

_____; *[Insert a description of the priority(s) checked off on the Statement of Interest Form and a brief description of the deficiency described therein for each priority];* and hereby further specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the City/Town/Regional School District to filing an application for funding with the Massachusetts School Building Authority.

CERTIFICATIONS

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

Chief Executive Officer *	**School Committee Chair**	**Superintendent of Schools**
_____	_____	_____
(signature)	(signature)	(signature)
Date	Date	Date

* Local Chief Executive Officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice.

For of Vote Cutler School SOI

Resolved: Having convened in an open meeting on March 28, 2018, prior to the SOI submission closing date, the School Committee of the Hamilton-Wenham Regional School District, in accordance with its charter, by-laws, and ordinances, has voted to authorize the Superintendent to submit to the Massachusetts School Building Authority the Statement of Interest Form dated April 6, 2018 for the Cutler School located at 237 Asbury St., South Hamilton, MA 01982 which describes and explains the following deficiencies and the priority category(s) for which an application may be submitted to the Massachusetts School Building Authority in the future:
Priority 7. Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements. The physical deficiencies of the Cutler School as outlined in the SOI demonstrate that the building does not meet the HWRSD's minimum standards for accessibility, and security. Furthermore, the physical design of the Cutler School does not support the District's Mission of providing an education that prepares all students for future success;
and hereby further specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the City/Town/Regional School District to filing an application for funding with the Massachusetts School Building Authority.

DOCUMENTATION OF VOTE

Documentation of each vote must be submitted **in hard copy** to the MSBA as follows:

1) For the vote of the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body, a copy of the text of the vote must be submitted **with a certification** of the City/Town Clerk that

the vote was duly recorded and the date of the vote must be provided.

2) For the vote of the School Committee, Minutes of the School Committee meeting at which the vote was taken must be submitted **with the original signature** of the Committee Chairperson.

HAMILTON-WENHAM
REGIONAL SCHOOL DISTRICT

To: Josh Liebow, HWRSC

From: Michael Harvey, Superintendent

CC: Jeff Sands, Members of the School Committee

Date: March 21, 2018

Re: Statement of Interest for the Winthrop School

The School Committee asked me to complete Statements of Interest for the replacement of the Cutler and Winthrop Schools. I have completed the statement of interest for the Cutler School and believe that the shortcomings in the overall design of the school, construction issues in the modular wings, and the identified deficiencies with handicap accessibility throughout the Cutler School make a compelling argument for the replacement of the entire facility. I have included the Statement of Interest for the Cutler School in the packet for the March 28th School Committee Meeting and have prepared the Form of Vote Document necessary for the School Committee to approve the submittal of the Statement of Interest.

While I feel the Cutler School is worthy of a submission to the MSBA as a candidate for replacement, I cannot reach the same conclusion about the Winthrop School. Over the past five years, the Winthrop School has received the largest amount of funding for major repairs of all of the District's schools. In 2013, the building's entire roof was replaced and structural issues that resulted from roof leaks were repaired at a cost of $587,438. In 2014-2015, the heating system was replaced and all of the original storefront window-walls in the school were replaced at a total cost of $1,959,818. Additionally, the District is asking for an additional $850,000 to install automated sprinklers and upgrade the fire alarm system in the Winthrop School at 2018 Annual Town Meeting. These projects will bring the total of work completed at the Winthrop School to $3.35 million. This figured does not include other projects that have been completed at the school intended to improve the day-to-day air quality and climate conditions for students and staff that have been paid out of the operating budget. For a comparison, the Cutler School has undergone $1.89 million in repairs from 2010 to the present. The repairs to the Winthrop School have addressed identified issues with the school's building envelope (roof and curtain wall replacement), HVAC system (boiler replacement), fire safety (alarm and sprinkler project), and have modernized the school's systems.

The only possible rationale for submitting the Statement of Interest for the Winthrop School is "Priority 7: Replacement of, or addition to, obsolete buildings in order to provide for a full range of programs

consistent with state and approved local requirements." Under this Priority, the MSBA asks the District to demonstrate the school is obsolete by describing, in detail, the programs that cannot be housed at the school due to facility constraints and the impact of identified problems of the facility on delivering the District's educational program. As the Winthrop School currently houses two of the District's most specialized programs, the Integrated Preschool, and the Intensive Learning Program (ILP), I cannot say the limitations of the Winthrop School prevent the District from providing a "full range" of programs. While there are relatively minor issues around accessibility at the Winthrop School, such as the entryway to the school's playground and the stage in the multi-purpose room, these issues can be remedied without demolishing the building. Furthermore, I cannot say that the hindrances to delivering the District's educational program that do exist at the Winthrop School are so pronounced that they require a replacement of the entire building. Many identified issues, such as the lack of continuity between the school's library and computer lab space, can be remedied through small-scale renovation projects. Because of this, I do not believe it is appropriate or necessary to submit a Statement of Interest to replace the Winthrop Elementary School.

Donations

SC Meeting: March 28, 2018

Firehouse Center for the Arts $200.

- Transportation

Lacrosse Boosters $2,703.

- Funding for Coaching Position

EdFund $22,268.25

- CNC Plasma Cutting system

HW Lacrosse Boosters, Inc.

Dear Hamilton-Wenham School Committee Members, March 1, 2018

The HW Lacrosse Boosters would like to fund a coaching position for the 2018 Boys Lacrosse spring season at Step 0 for $2703.00.

Please let me know how to proceed.

Sincerely,

Lindsey Strong

President
HW Lacrosse Boosters, Inc.

Edfund
Hamilton Wenham

Grant Acknowledgement and Acceptance of Terms

PLEASE COMPLETE AND RETURN BY EMAIL TO THE FOLLOWING:

1. **Edfund-Amy DeSimone at amydesimone12@gmail.com and**
2. **Hamilton Wenham Administration-Vincent Leone at v.leone@hwschools.net**

We accept this grant from the **Hamilton Wenham Education Foundation** and agree to abide by the following associated provisions and obligations:

1) The purpose of the grant is to be accomplished as proposed. The project's current budget, as previously submitted to the Edfund with the grant proposal, accurately reflects the grantee's intentions to expend the amount of this grant. Expenses not included in the project budget must be approved in advance by the Edfund.
2) Any photos and student feedback will be provided to the Edfund within 30 days of the grant's implementation. If applicable, student feedback can be a handwritten paragraph reviewing their experience.
3) Funds not used for the express purposes described in the grant proposal that are not used by the end of the 2018-2019 school year (or a mutually agreed upon date) are to be returned to the Edfund.
4) It is not necessary to issue a tax receipt for this donation as the Edfund is a 501 (c) (3) public charity. Also, please keep in mind that public schools do not have to pay a sales tax.

The Grantee's deposit or endorsement of the enclosed check will also constitute its agreement to the terms and conditions set forth above.

School Name: HWRHS

Name of Contact on the Edfund Grants Subcommittee: Dana Allara

Title of Grant Application: CNC Plasma Cutting System

Grant Amount Approved: $22268.25 Date Requested:

Grant Requestor's Name: Jeff Walsh Title: Technology and Engineering Teacher

Email Address and Phone Number: j.walsh@hwschools.net

Please attach a detailed budget with payment instructions below for District payment
Check should be payable to:

Please remit check to (contact name):

Address of where check should be sent:

Date by which check should be sent:

Date District requested funds of Edfund for reimbursement:

Signature of grant recipient _____

Edfund
Hamilton Wenham

HAMILTON WENHAM EDFUND PROJECT GRANT APPLICATION FORM

Project grants are for projects of $1,000 or more, and should be designed to influence or advance the school system's interest in areas such as curriculum, technology, teaching methods, special school projects or specific innovative interdisciplinary projects.

Name(s) of Application Contact(s): Jeffrey Walsh

Submission date: 2/28/18 Date approval needed: ASAP

Contact(s) phone number: 978-473-6881 Email: J.walsh@hwschools.net

Position or Title of Application Contact(s): Technology & Engineering teacher

Grant Title: CNC plasma cutting system

School(s): HWRHS Grade(s): 9-12

Amount requested: 22,268.25 Recurring costs: To be assumed by the school

Please address the following topics:

1. Has this grant been funded in the past? If yes, from what source?

- No, a grant for a CNC plasma cutter has never been applied for or funded in the past.

2. Description of project and purpose.

- This Grant will bring in a fully enclosed 21" x 36" CNC plasma cutting system, which includes the CNC table, the plasma cutter, all necessary software, on-site training, V-carve software for 40 seats (program to create the cut file), and all necessary set-up equipment.

- A CNC plasma cutter is a computer numerically controlled robot, which moves an arm that holds a plasma cutter on the X, Y, and Z-axis. As the arm moves, it cuts designated shapes out of metal (typically steel). Using the software V-Carve student can design a particular shape that they want cut out, save the shape to a flash drive, then upload the shape to the CNC cutter. The CNC cutter then cuts out one or multiples of the desired shape out of steel sheet metal, using the plasma cutter.

- The designs that can be created and cut using this system can be used in many

classes. The classes that I see the immediate effects on are the Fabrication Technology class, Manufacturing class, Intro to Engineering, Sculpture, and Theater, with the potential of spreading throughout the high school and even the middle school. This technology assists students in advancing design, engineering, and creating different projects such as the human powered amphibious vehicles in ways that were previously not possible. For example, parts such as gears, brackets, washers, templates, and more can be designed and created by the students, just as an engineer and manufacturer would. Previously these parts would have to be ordered from a distributor.

- Outside of all the Engineering and Technology classes, the CNC plasma cutter would be used by the arts in both Sculpture and Theater Tech.

    - Metal sculpture is something that Bill Melville and I have been talking about for a while. This would open up the doors for us to move forward with this, just as so many of the art colleges around here have.

    - In theater, it could be used to create props or lighting patterns. In the past we have made metal parts, but not with the precision and efficiency that would accompany a CNC plasma cutting system.

    - It also has endless opportunities to be used by the Science, Math, and potentially even the History and English departments.

- The potential to use a CNC plasma cutter in every class is there, teachers just have to be creative with it. To help spark teachers creativity, I would be more than willing to teach them how to use the machine and brainstorm ideas with them.

3. Describe how this grant meets the goals of the Edfund Grants Program (see Edfund Grant Guidelines and Criteria at http://hwedfund.org/applications-criteria.htm)

I believe that brining in a CNC plasma cutter to the HWRHS would fulfill all of the Edfund's goals for the program. To demonstrate this, listed below are examples of how the grant attends to each of the following goals.

A. To encourage and support innovative projects in teaching and learning that are consistent with Hamilton Wenham's district-wide goals and priorities beyond the scope of the regular school budget

I. Bringing in a CNC plasma cutter would open up doors for students to create and advance innovative projects within the school. It would also allow and encourage cross-curricular and inter-department collaboration. For example, perhaps theater needs a prop made. They could either submit a design to one of the engineering students or they could collaborate together to design and create the product. This would be the same for sculpture and other classes as well.

II. In addition to collaboration activities, this grant would give students a real-life opportunity to create, just as an engineer, designer, sculptor, or machinist would. They would be using the latest design programs and working with same robotic technology that is seen in colleges such as MIT and many engineering companies, preparing students to "demonstrate mastery of the knowledge and skills needed to be successful members of our global economy and engaging citizens of the 21st century", which is quoted from the schools mission statement.

B. To encourage leadership and creativity from teachers and administrators

I. The possibility of being creative with the CNC plasma cutter is really endless. Teachers from all subjects could design a creative lesson that directly relates to what they are doing in class. A lesson that involved the CNC plasma cutter would get students excited to learn. I'm really excited to see what types of projects could arise around the school and community.

II. The possibility of students working alongside administration to improve the school is always a possibility. Administrators may have something that they need done in the school, and rather than hiring someone to create something such as a sign, they could rely on the help of students to work through the real-world problem and accomplish a goal.

C. To support grants that impact a significant number of students

I. This grant would impacts both a large number of students and teachers. The students get to apply math, science, design, visual, art, technology, and engineering skills previously learned to design and create a tangible object that can actually be used. They get to see the importance of all of these skills they have been working on throughout their school career and how their skills can be applied. This will immediately impact the five engineering classes, sculpture, and theater class. Which means the grant will impact about 150 +/- students immediately with an opportunity to

grow drastically and potentially impact every student as they make their way through their high school career.

II. Collaboration among students and classes would allow students with different leaning styles and backgrounds to work and learn with one another as they create a product. I see this as being a great grant that could reach a number of students through their high school and possibly even middle school careers. Anytime you have an opportunity to bring collaboration and creativity into a project I feel as though a students interests get sparked, and with that the hope would be that more teachers would find a way to implement this grant into their classes.

D. To support grants that have a lasting benefit to Hamilton Wenham regional school system

I. This grant will likely benefit the Hamilton-Wenham regional schools system for many years to come. CNC technology has been around for many years and is still evolving to become better and more intuitive. The technology that comes with this CNC machine is the most up to date to this point and comes with the most up to date software. Like anything, there will be a newer, possibly better model in the future, but overall the outcome will still be the same. The benefits that the students can get by working with a piece of equipment/technology like this are something they can take with them as they make their way out of high school and into their career path. It gives the students an opportunity to use software, math, engineering, design, and art skills all together. Even as the technology may change these aspects won't which is why I see it lasting for a very long time and impacting students of all learning styles for many years going forward.

E. To encourage cross-school, cross-grade, and cross-curricular collaboration

I. I believe this grant has a huge opportunity to encourage cross-school, cross-grade, and cross-curricular collaboration. For example, I can see a geometry, or engineering class working along side an art class or Theater Tech. class, with the math students applying what they are learning about geometry to the designs of sculpture or props that the art/theater students are trying to create. Once a person learns how to use the CNC software and understands how to operate the device, sharing that knowledge cross-curricular, cross-school, or even cross grade could open up so many opportunities for students in different subjects to work together.

II. Once a class has learned how to use the CNC machine, I could see that class sharing their knowledge with possibly middle school students, introducing them to entry level metal sculpting, or applying simple

engineering design. Not only would they be collaborating on the project, but the students will also be teaching other students valuable skills, and real-life applications of math, design, technology, and engineering. Where STEM or STEAM is such a huge initiative right now, determining how to work the CNC machine into a class should not be difficult.

F. To encourage collaboration among teachers, administrators, parents, and community groups to benefit the Hamilton Wenham Regional School District. Edfund grants are not intended to replace or relieve existing responsibility for public funding or programs for the public school system, nor are they intended to substitute for normal budget growth and maintenance

I. *Please see comments above.

4. Number of students and/or teachers to benefit.

- In the very first year, I know between Engineering and Technology classes, and Sculpture that minimally 150 students will be using the machine. However, this grant has the potential to benefit all of the students in the high school throughout their career. Of course this will depend upon which teachers choose to adapt this into their curriculum and what courses the students choose to use. Immediately, I see this being used by the Science/Technology & Engineering department, the art department, and then expanding to the other department just as the 3D printers have. (Just last week the 3D printer were used for a humanities project)

5. Budget Detail (Please list or attach itemized sheet of all costs for speaker, guest performer, training, consultant, equipment, materials, etc. and include when appropriate, photocopy of catalog page, price list or other documentation of cost). The estimated ratio of dollars spent per student is taken into consideration.

CNC MACHINE ETC. *(See details attached)*

1. Techno CNC - HDII-2136 Table top CNC Plasma cutter - **$11,500**
    - Table on which the cut metal sits.
    - Has all the computerized controls to move the plasma cutter to the desired location.
2. Techno CNC - Hypertherm Powermax 45XP Plasma Torch -**$3,510**
    - Cutting device.
    - Requires 220 amp breaker (Already in shop).
    - Requires clean, compressed air (already in shop).

3. Techno CNC - Hypertherm Powermax 45 torch consumable kit - **$210**
    - Plasma cutter electrode tip that wears out.
4. Techno CNC - Vectric V-Carve Pro software H22V30-VCARVEPRO - **$950**
    - Will work with the current computers and laptops that have SolidWorks.
5. Techno CNC - Top Safety enclosure TSE - **$1,450**
    - Includes shaded windows, which will protect your eyes from the bright light the plasma cutter produces.
    - Keeps sparks from exiting into the shop.
6. Techno CNC - Steel Base with casters SBC - **$1,250**
7. Penn State Industries - 1.5HP Portable Dust Collector DC3XX - **$340**
    - Vents the fumes and smoke to outside the shop.
8. AET - Training - Installation/Training - **$1,200**
9.
    a. This training will be for myself, Bill Melville (art dept.), John Kotch (Science department head) and Tate shippen (math dept.) along with anyone else who would like to join; it is not limited to a certain number.

    b. Training includes set-up and detailed explanation of how to use the CNC plasma cutter – including but not limited to: How to transfer a file from V-Carve (CNC drawing program) to the CNC machine, setting up the plasma cutter to make the correct cuts (height, voltage, speed, air pressure ect.), using the water-table and vents to eliminate any fumes/smoke.

    c. The training does not include how to use the software V-Carve Pro. However, I have already been working through a demo program, which was given to me by AET labs, and working through online tutorials found on Youtube. In addition, one of my current students has experience using V-Carve from his internship over the summer with a local engineering company.

10. Shipping - Estimated Shipping - **$900**
    - **Cost = $21,310**

START-UP METAL *(See details attached)*

1. ¼" - 4'x8" steel sheet metal (x2) – $405.50

2. 11GA – 4'x8' steel sheet metal (x3) - $288.00

3. 16GA – 4'x8' steel sheet metal (x5) - $264.75

   - **Cost = $958.25**

Total cost

CNC Machine, etc. ($21,310) + Start-up metal ($958.25) = Total cost ($22,268.25)

6. Possible future expenditures linked to this project (i.e. maintenance, parts replacement, professional development, etc.) including timeframes.

- Sheet metal – The department(s) will be able to budget for this after the initial start-up metal order.

- Maintenance/parts – Like anything with moving parts and technology, the likelihood of something breaking is always possible. However, the dealer is located right in Essex and easy to get in touch with if an issue arises.

    - As far as software issues go, we are lucky to have a technology staff here that will keep everything running smooth.

    - In regards to the plasma cutter part of the machine, we currently have a plasma cutter that I have become very familiar with. I have no trouble addressing any issues or maintenance. For the most part, maintenance usually only involves replacing the torch consumables, which are included with the overall CNC plasma cutter package.

- Teacher trainings – When this CNC machine is set up, the company also trains the teacher(s) on how to use it. The software that is used with this CNC machine has many step-by-step training tutorials that can be found for free on Youtube.com.

-

    - Once the immediate staff that is most interested in this grant learns how to use the machine and software, then EdCamp trainings can be offered to other teachers who are interested.

7. Method of evaluating success of project (i.e. student feedback).

- The success of this project will be measured by the results of the lessons/projects developed by various faculty members as well as by the feedback from the students as they work through the process of designing and creating their product. Specific classes will be required to write a reflection on using the CNC plasma cutter and how it impacted their learning experience.

Additional Comments: Feel free to watch the videos below to see how a CNC plasma cutter can be used and some of the processes involved.

- Video link showing a simple project made with a techno CNC plasma cutter. Same brand and operation, just larger than the one in the grant: **https://www.youtube.com/watch?v=smDK-LH7XVI**

- Video link showing a rack and pinion gear being made at the same time on a CNC plasma cutter. **https://www.youtube.com/watch?v=ycnFkj1W5mg**

- Video link showing amazing maple tree sculpture made with CNC plasma cutter and welder. **https://www.youtube.com/watch?v=_7PU5qHZfLY**

Signature(s) of Applicant(s): Jeff Walsh Date: 2/27/18

Approval

Please submit grant application to your Principal for approval before sending to Dana Allara at edfundgrants@gmail.com, Edfund Grants Committee Chair with a copy to Director of Curriculum, Assessment and Instruction, Peggy McElhinney at m.mcelhinney@hwschools.net.

Principal: _____ Date: 2/27/18

Revised 5/10/2016

Price Quotes from AET Labs and Northstar Steel and Aluminum.

AΣT Labs
Where Industry and Education Converge

239 Western Ave.
Essex, MA 01929
Main: (888) 768-4550
Fax: (978) 768-4553
www.aetlabs.com

Quote

Date: 01/12/2018
Quote Number : AET351815
Valid Thru: 02/12/2018

To:

Hamilton Wenham Regional High School
Jeff Walsh
775 Bay Road
S. Hamilton, MA 01982
(978) 468-0400
j.walsh@hwschools.net

Project: Techno CNC Plasma 2136 - H-W High School



Rep: James Carmilia
Estimated Delivery: 4 - 8 weeks
Shipping: FOB Destination, Freight Prepaid
Shipping Method: Standard

No.	Product Details	Qty	Price	Total
1.	**Techno CNC - HDII-2136 Table top CNC Plasma HTPLWRM24036000E**	1	$ 11,500.00	$ 11,500.00

HDII-2136 Table top CNC Plasma
X-Axis Travel = 21"
Y-Axis Travel = 36"
Z-Axis Travel = 7-1/2"
Gantry Clearance = 7-1/2"
Specifications:
-CNC Plasma height control features automatic CNC torch height control and maintains a constant arc voltage with optional. Includes magnetic torch breakaway with Z-axis auto retract reetract.
-Table: Steel V-Grid table.
-Drive system: Precision ball screws on X,Y, and Z
-Control System: PC based WinCNC micro stepper controller with brushless stepper motors and drives.
-Compatibilty: G & M code
-Repeatability: +/-.003 inches
-Max. rapid traverse speed: 200 in/min
-Approx. weight = 500lbs
Power requirements:
Machine: 220V, 1-phase (15amp circuit req'd)
Torch Power: See torch details for power requirements

2.	**Techno CNC - Hypertherm Powermax 45XP Plasma Torch H24H00-PM0045XP**	1	$ 3,510.00	$ 3,510.00

System includes - Techno's CNC Plasma real-time torch height control, and Torch mounting accessories.
Cutting specifications: Production pierce = 3/8"
Edgecut severance = 1/2"
Requirements:
-A clean dry non-fluctuating 90psi Compressed air or Nitrogen (required for Aluminum and Stainless steel cutting applications) source.
-Input Voltage: 200-240V, 1-PH, 50/60Hz, CSA
230V, 1-PH, 50/60Hz, CE
400V, 3-PH, 50/60Hz, CE
-Input Current: 200-240V, 1-PH: 30Amps
230V, 1-PH: 30Amps
400V, 3-PH: 10Amps
-Flow rate and pressure: 360scfh @ 90psi
-Duty Cycle: 50%
-NOTE: Techno auto CNC torch height control included with the purchase of the Hypertherm torch from Techno.
If customer chooses to use their own Hyperthem unit add $2000 for integration and torch height control circuitry and software capability.

3.	**Techno CNC - Hypertherm Powermax 45 torch consumable kit H25XHY-850-490**	1	$ 210.00	$ 210.00

No.	Product Details	Qty	Price	Total
4.	**Techno CNC - Vectric V-Carve Pro software H22V30-VCARVEPRO** Vectric V-Carve Pro software Features: -High quality toolpath previewer -Precision V-Carving & Engraving -True shape nesting -2D Production profile cutting & drilling -3D Raised prism machining -Fast and Efficient Pocketing -Automatic 2 Tool Pocket Machining -Fluting Toolpaths - Ramp In / Out -Auto-Inlay Toolpaths -Drawing and layout tools	1	$ 950.00	$ 950.00
5.	**Techno CNC - Top Safety enclosure TSE**	1	$ 1,450.00	$ 1,450.00
6.	**Techno CNC - Steel Base with casters SBC**	1	$ 1,250.00	$ 1,250.00
7.	**Penn State Industries - 1.5HP Portable Dust Collector DC3XX** - 1 -1/2 HP Portable Exhaust Blower - For direct vented applications (Ceiling and wall penetrations to be done by qualified facilities personnel) Nominal Voltage: 110220 Phases: 1 Collector Footprint: 14" x 14" Height (inches): 16.5 Sound Rating db: 62db Max Static Pressure (inches): 8.5 Max Airflow through collector (CFM): 850 Running Amps: 16 @ 110V Horsepower: 1.5 Main Inlet Size (inches): 4 Impeller Size (inches): 9 Impeller Material: Steel Hose/bag not included	1	$ 340.00	$ 340.00
8.	**AET - Training - Installation/Training - 480-20003**	1	$ 1,200.00	$ 1,200.00
9.	**Shipping - Estimated Shipping**	1	$ 900.00	$ 900.00
			Sub Total	$ 21,310.00
			(If applicable) Tax	$ 0.00
			Adjustment	$ 0.00
			Grand Total	**$ 21,310.00**

Payment Terms

Net 30 days

FED Tax ID - 20-2391756

Notes

2136 system has a water table.

NORTHSTAR Steel & Aluminum, Inc.
205 BOUCHARD STREET * P.O. BOX 4886
MANCHESTER, NH 03108-4886
PHONE (800) 258-3515 FAX (603) 629-9943

QUOTATION

SOLD TO: HAMILTON-WENHAM REG SCHOOL DIST
C/O SUPT. OF SCHOOLS
775 BAY ROAD
SOUTH HAMILTON MA 01982

SHIP TO: HAMILTON-WENHAM REG SCHOOL DIST
775 BAY ROAD
SOUTH HAMILTON MA 01982

QUOTATION NUMBER: 01379413

P.O.#: QUOTE

BID DATE: 2/26/18

F.O.B. POINT: DESTINATION

TERMS: NET 30 DAYS

IN RESPONSE TO YOUR INQUIRY, WE ARE PLEASED TO QUOTE AS FOLLOWS.

TERMS ARE SUBJECT TO CREDIT APPROVAL

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	EXTENDED PRICE	SHIPMENT DATE
00510	A-36 H R PLATE 1/4		202.7500 EA	405.50	0/00/00
	2 EA	WIDTH 48 LENGTH 96			
			654 LB		
05468	BLACK SHEET 11GA		96.0000 EA	288.00	0/00/00
	3 EA	WIDTH 48 LENGTH 96			
			480 LB		
05325	BLACK SHEET 16GA		52.9500 EA	264.75	0/00/00
	5 EA	WIDTH 48 LENGTH 96			
			400 LB		

A surcharge of an additional $1.42 per line item will reflect in your final invoice.

SALES TAX/ SALES TOTALS	$958.25
TOTAL LBS	1,534.000

PRICES ARE VALID FOR 48 HOURS; SUBJECT TO STOCK AVAILABILITY

PRICING BASED ON QUOTE AS SHOWN. CHANGES SUBJECT TO RE-QUOTE

BY: MATT

SIGNATURE:

Mineola HS Introduces CNC Technology into Their Curriculum

By Maryann Valentine

EAGER to learn, the students at Mineola High School (MHS), Long Island, NY, work hard day to day, not only in their core classes like math, science, and ELA, but also enthusiastically in the woodshop, to learn everyday skills. The school recently updated their entire Tech Ed woodworking and metalworking classroom, switching from conventional methods of producing projects to an exclusive "Fab Lab" that consists of some of the most advanced technological equipment used in the industry.

The new Fab Lab at MHS is equipped with machinery that few other schools have on the Island—a CNC plasma cutter and CNC router from Techno CNC Systems. Whitney Smith, principal at MHS, spoke proudly about the new lab and how it has effectively and efficiently changed the way the students are learning.

"Adding CNC to our high school program was really the next step for us," stated Smith. "We are always on the cutting edge of technology. We are always searching for the best tools for our students. We have always had a traditional woodshop and metalshop, but now we are focusing on showing the students the latest and greatest technology in automation, and the students are very excited about it. We already knew our students had great ideas, but now, it is incredible to be able to see these students take their ideas from inception to completion, using CAD/CAM technology," said Smith.

"The school was able to transform the lab from a conventional shop to an advanced lab for students to learn and enhance their engineering skills.



Determined technical education student from Mineola High School operating Techno CNC System's HD Series CNC Router for her senior project

The technology in the Fab Lab has changed everything. All our 8th graders get introduced to the equipment and do a problem-solving activity. They get introduced to Aspire CAD/CAM software by choosing a letter of the alphabet, setting up the job, and creating a toolpath. The students are shown how to setup and operate the CNC router under the direction of the instructor," said Paul Sommer, tech expert/teacher at MHS.

"Having a space like this is unique. We are the only school on Long Island to have made the commitment to adding this technology and advanced learning which benefits our students. Another benefit about the space is that the 8th grade students are all given a chance to find a passion in CNC, thus getting them excited for the more advanced tech courses offered in grades 9-12. We also partnered with Queensborough Community College, where students can receive college credits for courses taken," Smith said.

Maryann Valentine is the marketing manager at Techno CNC Systems in Bohemia, NY.

Transforming the shop and learning the equipment was a challenge for the school, at first. The transformation was a huge commitment, but overall, was a necessity for the school to further their knowledge and better their classes. MHS now has grades 8-12 students flowing through the shop for all nine periods of the day.



"We are still learning how to integrate the new equipment into our teaching curriculum. It is a work in progress, but very much worth it. We also spend more time on designing and learning the Aspire, AutoCAD, and Inventor CAD/CAM programs. As a result, the types of projects have changed tremendously. Before, we used a lot of hard and soft woods, and now, we are using more plywood.

"We are getting the students to solve more real-world problems such as seating, flat pack furniture, and space organizers." Sommer stated that, "The biggest challenge to adding CNC into our program was that we were given two high-end CNC machines and high-end computer design programs all at once. This was overwhelming in the beginning, especially since we had little to no experience with these types of machines and software.

"Thanks to the training and exceptional tech support from Techno CNC Systems, we were able to get through the first few months and begin to develop a curriculum for our students. Now, our students are able to use the software and run the machines with no problems. The possibilities are endless."

MHS recently created an entire robotics team. Smith states, "The CNC equipment has been tremendously beneficial for our new robotics team, as well. We are able to manufacture our own parts, and we can customize any of our parts. It has also helped us with our alliances with other robotics clubs. We are now able to help other schools manufacture their own robotics parts."

Not only is the Fab Lab used for classes and manufacturing robotic team parts, but it is also used for many other activities that the entire town requires. Sommer explained how the CNC equipment has completely transformed the theater clubs in the elementary, middle, and high schools of Mineola. "Once word got out that we could manufacture pretty much anything, we were getting requests from everyone asking if we could create their designs."

Paul Sommer and Andrew Woolsey, technology teachers at MHS, were also asked to help with theater design. They were given the project to create stage lighting from the bottom. They were able to route out an entire stage lighting template. "If we had to do these by hand, it would have taken months. We had to create six of these and I was able to program it all within minutes, letting the router do the rest," said Woolsey. The tech teachers were also able to design and route perfect (and huge) theater props for the play.

"The students are taught the software, but are given freedom to think out of the box, challenging their young minds," says Sommer. He uses online tools available to him and the students for learning and finding quick solutions to immediate challenges. Sommer believes this is a great tool for students to use at home or in the shop, as a secondary way to master Aspire and AutoCAD software.

The program at MHS has completely transformed the learning process from conventional hand tools to now being able to design, program, and route whatever they imagine,



as well as cut metals with their new CNC plasma metal cutting machine. "We had trouble cutting thick material so I had wanted to research a



plasma cutter. It has changed the welding class by allowing us to cut thick plate steel accurately. In the past, we used a torch or hand-held plasma," said Sommer.

The students have developed a passion for CNCs, and are even considering manufacturing as a future. "As a high school, it is our job to prepare our students for the real world. We want our students to leave high school with an idea and direction, and with the possibility of getting a job that they love after school. We are really focused on getting kids to pursue a pathway for their future here at MHS and we concentrate on having electives that pave that pathway.

"We are using this CNC equipment not only in tech classes but in our business classes, as well. The CNC equipment has allowed us to create a school store where students can actually showcase and sell their projects. Not only has the CNC equipment benefited the tech students, but it has also made it possible for business students to practice marketing, design, and advertising, while having an idea come to life," said Smith.

The lab is designed to let the kids design whatever they want. "Basically, if you can draw it, you can route it," Sommer explained. The students are taught to create, design, program, and route, and have their visions come to life.

The Business Ownership & Marketing class at MHS works closely with the students from the Tech Class to design and create a finished product. The Business Ownership & Marketing class students are responsible for designing the product to hopefully be sold in their new school store. The students then bring their ideas to the Tech students who bring their concepts to life.

"I first started to think of a product that I could sell at local events,

