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|  | Report to the Legislature: Commonwealth Virtual Schools – Fiscal Year 2016 |
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| This report provides information on the implementation and impact of virtual schools pursuant to G.L. c. 71 §94(q).January 2017 |
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| ESE logoThis document was prepared by the Massachusetts Department of Elementary and Secondary EducationJeff WulfsonActing Commissioner **Board of Elementary and Secondary Education Members**Mr. Paul Sagan, Chair, CambridgeMr. James Morton, Vice-Chair, BostonMs. Katherine Craven, BrooklineMr. Ed Doherty, BostonMs. Amanda Fernandez, BelmontMs. Margaret McKenna, BostonMs. Hannah Trimarchi, Chair, Student Advisory Council, MarbleheadMr. Michael Moriarty, HolyokeDr. Martin West, NewtonMr. James Peyser, Secretary of EducationMs. Mary Ann Stewart, LexingtonJeff Wulfson, Acting Commissioner and Secretary to the BoardThe Massachusetts Department of Elementary and Secondary Education, an affirmative action employer, is committed to ensuring that all of its programs and facilities are accessible to all members of the public. We do not discriminate on the basis of age, color, disability, national origin, race, religion, sex, gender identity, or sexual orientation.  Inquiries regarding the Department’s compliance with Title IX and other civil rights laws may be directed to the Human Resources Director, 75 Pleasant St., Malden, MA 02148-4906. Phone: 781-338-6105.© 2017 Massachusetts Department of Elementary and Secondary EducationPermission is hereby granted to copy any or all parts of this document for non-commercial educational purposes. Please credit the “Massachusetts Department of Elementary and Secondary Education.”This document printed on recycled paperMassachusetts Department of Elementary and Secondary Education75 Pleasant Street, Malden, MA 02148-4906Phone 781-338-3000TTY: N.E.T. Relay 800-439-2370www.doe.mass.eduState Seal of Massachusetts |

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| Mitchell D. Chester, Ed.D.*Commissioner* |  |
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January 11, 2017

Dear Members of the General Court:

I am pleased to submit this Report to the Legislature: Commonwealth Virtual Schools, pursuant to G.L. c. 71, § 94(q).

A Commonwealth Virtual School (CMVS) is a public school operated by a board of trustees whose teachers primarily teach from a remote location using the Internet or other computer-based methods and whose students are not required to be located at the physical premises of the school. Like a charter school, a virtual school is an autonomous, single-school district that operates independently of any existing school district.

The Board grants a certificate to the board of trustees of a virtual school for not less than 3 years and not more than 5 years, as determined by the Board. The school and its board then become a state entity, directly accountable to the Board of Elementary and Secondary Education (Board) and the Department of Elementary and Secondary Education (Department). A virtual school may not discriminate in the enrollment of students based on race, color, national origin, creed, sex, gender identity, ethnicity, sexual orientation, mental or physical disability, age, ancestry, athletic performance, special need, English language proficiency, or academic achievement.

The Board has granted two virtual school certificates, one to the Greenfield Commonwealth Virtual School (GCVS) and one to the TEC Connections Academy Commonwealth Virtual School (TECCA). Both schools enroll students statewide. As of October 1, 2016, these schools enrolled a total of 1,786 students.

I am available if you have questions or would like to discuss this further. You may also contact Senior Associate Commissioner Cliff W. Chuang at 781-338-3222.

Sincerely,

Jeff Wulfson

Acting Commissioner of Elementary and Secondary Education

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# Introduction

The Department of Elementary and Secondary Education (Department) respectfully submits this Report to the Legislature: Commonwealth Virtual Schools pursuant to G.L. c. 71 § 94(q):

*“On or before September 1, the commissioner shall prepare a report on the implementation and impact of this section, including, but not limited to:(1) the fiscal impact on sending districts; (2) any necessary adjustments to tuition rates, including whether the amount should vary based on grade or type of school and the appropriate mechanism for funding virtual schools; (3) information on course completion and student attendance and participation rates; (4) the academic achievement of students attending commonwealth virtual schools; (5) the level of supervision or support needed for students in elementary and middle school; (6) the support necessary or helpful to ensure that students successfully complete online courses; (7) the professional development virtual school teachers require; (8) the appropriate enrollment limit for a virtual school, if any, including information about wait lists; and (9) the need for any changes to the commonwealth virtual school program.”*

A Commonwealth Virtual School (CMVS) is a public school operated by a board of trustees where Massachusetts-licensed teachers primarily teach from a remote location using the Internet or other computer-based methods, and where students are not required to be located at the physical premises of the school. The statute permits up to ten virtual schools to operate in the Commonwealth at any time: three virtual schools were allowed to operate during the 2013-16 school years; three additional certificates will be available from 2016-19; and four additional certificates will be available starting in 2020.

As of this writing, the Board of Elementary and Secondary Education (Board) has granted two virtual school certificates, one to the Greenfield Commonwealth Virtual School (GCVS) and one to the TEC Connections Academy Commonwealth Virtual School (TECCA). Both schools enroll students statewide. As of October 1, 2016, these schools enrolled a total of 1,786 students.[[1]](#footnote-1)

# Greenfield Commonwealth Virtual School

On June 25, 2013, the Board granted a three-year certificate to operate the Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School (GCVS)[[2]](#footnote-2) to a board of trustees formed to assume governance of the school from the Greenfield Public Schools.

On June 5, 2014, the Department reviewed GCVS in accordance with CMR 52.08. The review documented concerns about the school’s faithfulness to its certificate, the quality of its academic program, the quality and amount of supports for diverse learners, and lack of compliance with certain regulatory requirements and Department guidance. Due to these concerns, the Commissioner recommended the Board place GCVS on probation for the remainder of the school's certificate term, through June 30, 2016, with conditions.[[3]](#footnote-3)

The school’s certificate expired at the end of the 2015-16 school year. Pursuant to CMR 52.11, GCVS applied to renew its certificate in July 2015. On November 2, 2015 the Department conducted a renewal inspection review[[4]](#footnote-4) in accordance with 603 CMR 52.11. The review found that while GCVS met four of the five conditions placed on its certificate, it did not demonstrate evidence of significant academic improvement in mathematics or English language arts. On February 23, 2016, the Board renewed the certificate for GCVS for an additional three years (the minimum permitted by statute), from July 1, 2016 through June 30, 2019, but extended the school’s probation with additional conditions placed on the certificate, including a maximum enrollment cap of 750 students.[[5]](#footnote-5)

In May 2017, GCVS terminated the school’s contract with K12, Inc. (“K12”), a for-profit virtual school provider, effective June 30, 2017. The reasons GCVS gave for the change were concerns about the affordability of K12’s products and services and the opportunity for GCVS to provide more flexible learning options for students through new software and curriculum. A renewal inspection review of GCVS is scheduled for December 2017.

# TEC Connections Academy Commonwealth Virtual School

On February 25, 2014, the Board granted a three-year certificate to the board of trustees of the [TEC Connections Academy Commonwealth Virtual School (TECCA)](http://profiles.doe.mass.edu/profiles/general.aspx?topNavId=1&orgcode=39020900&orgtypecode=6&).[[6]](#footnote-6) TECCA opened in the fall of 2014.

The Department reviewed TECCA in accordance with CMR 52.08 on February 24, 2016 and a renewal inspection review was conducted on November 3, 2016. While both reports noted TECCA was delivering an instructional program consistent with its certificate, the renewal inspection noted TECCA was classified into Level 3 of the state's accountability and assistance system for very low MCAS participation (less than 90 percent) in the aggregate and for multiple subgroups. The review also found TECCA lacked an English language education curriculum to support its growing English learner (EL) population.

On February 17, 2017, the Board voted to renew the certificate for TECCA for an additional five years and placed conditions on the school’s certificate to address the concerns related to student participation in MCAS tests and supports for ELs.

# Fiscal Impact on Sending Districts

Virtual schools are funded through payments from sending districts at a per-pupil tuition rate set by the Board. Under the legislation [G.L. c. 71, §94(k)] the per-pupil capitation a school district pays for resident students is funded through the school choice mechanism (G.L. c. 76, §12B). For students who attend a CMVS for less than a full year, the tuition payment is based upon the number of days of enrollment. The Department notifies both the virtual school and resident districts of the amount of these payments and corresponding reductions in local aid under G.L. c. 70.[[7]](#footnote-7)

The first five monthly payments in each fiscal year are based on a pre-enrollment report submitted by the virtual school in June; remaining monthly payments for the fiscal year are based on Student Information Management System (SIMS) data collected from the school in October. Although each monthly payment is intended to equal approximately one twelfth of the projected annual amount, payments in the later months of each fiscal year (from December through June) include adjustments to correct any over- or under-payments in earlier months, including adjustments for special education increments. Summary figures of tuition payments by resident districts to each of the two virtual schools are provided in Appendices B and C.

The cost of special education services is calculated in accordance with 603 CMR 10.07(3). The CMVS is responsible for providing special education services to students in accordance with each student’s IEP. Resident school districts remain fiscally responsible for such students as if the CMVS were a receiving district pursuant to school choice under G.L. c. 76, §12B. For both schools, the Board approved a per pupil tuition rate of $6,700, of which the Department retains $75 per pupil for program administration.

In fiscal year 2016 (FY2016), GCVS received $4,307,308 in tuition from 204 resident districts and TECCA received $6,136,953 from 228 resident districts. The majority of students attending GCVS in FY2016 resided in the districts of Springfield, New Bedford, and Boston (16.5 percent); in FY2016 the majority of students who attended TECCA resided in Boston, Springfield, and Worcester (12.4 percent).

# Course Completion and Student Attendance and Participation Rates

GCVS and TECCA provide 425 instructional hours in kindergarten, 900 hours in grades 1-8, and 990 hours in grades 9-12 in accordance with state regulations.

There is flexibility in terms of the time of day when students participate; however, teachers take daily attendance and monitor the hours of schoolwork completed with the student and learning coach (typically the students’ parent/guardian). Each school’s calendar provides for school holidays and vacation times during which teachers are not available; however, students may continue to do schoolwork and access the online learning management system at any time during the school year. Attendance is based on completion of courses and not “seat time”; the schools’ expectation is that students will complete their coursework by the end of the semester or school year. In FY2016, GCVS reported an attendance rate of 89.3 percent and TECCA reported an attendance rate of 88.9 percent.

Course completion data for GCVS and TECCA are provided in Tables 2-5 on the following pages. As illustrated in Tables 2 and 4, in FY2016, 94.7 percent of GCVS students completed their courses and 84 percent of TECCA students completed their courses (as reported to the Department). Because many students arrive in school after the beginning of the school year or transferred out of the school prior to the end of the school year, course completion data, as represented in Table 2, are only reported for students enrolled in the schools for a full academic year, as defined in Table 1 below. In addition, comparisons of 2015 and 2016 course completion and pass rate are provided in Table 3 for GCVS and Table 5 for TECCA.

| **Table 1: Course Completion Data Definitions** |
| --- |
| **Column** | **Label** | **Definition** |
| **A** | Students in grade level | Number of students enrolled in the CMVS as of October 1 of the prior school year, excluding transfers out and transfers in after October 1. |
| **B** | Courses attempted | Courses attempted: Number of courses in which the students in Column A were enrolled during the school year (includes both full-year and semester-based courses). |
| **C** | Courses incomplete | Number of courses from which students withdrew, regardless of the grade they earned in the course at the time of course wit­­­­­hdrawal. |
| **D** | Courses passed (#) | Number of courses completed in which students earned a passing grade as determined by the school. |
| **E** | Courses completed (%) | [(Column B – Column C) ÷ Column B] |
| **F** | Courses passed (#) | [Column D ÷ (Column B − Column C)] |

| Table 2: FY2016 Course Completion Data, GCVS |
| --- |
| Grade | A. | B. | C. | D. | E. | F.[[8]](#footnote-8) |
| Students in Grade Level | Courses Attempted | Courses Incomplete | Courses Passed (#) | Courses Completed (%) | Courses Passed (%) |
| K | 25 | 198 | 0 | 198 | 100.0% | 100.0% |
| 1 | 36 | 282 | 8 | 274 | 97.2% | 100.0% |
| 2 | 39 | 276 | 0 | 276 | 100.0% | 100.0% |
| 3 | 35 | 249 | 14 | 235 | 94.4% | 100.0% |
| 4 | 33 | 233 | 7 | 226 | 97.0% | 100.0% |
| 5 | 32 | 222 | 14 | 208 | 93.7% | 100.0% |
| 6 | 57 | 402 | 35 | 367 | 91.3% | 100.0% |
| 7 | 54 | 384 | 56 | 328 | 85.4% | 100.0% |
| 8 | 69 | 494 | 43 | 451 | 91.3% | 100.0% |
| 9 | 48 | 495 | 8 | 349 | 98.4% | 71.7% |
| 10 | 37 | 386 | 10 | 303 | 97.4% | 80.6% |
| 11 | 26 | 260 | 11 | 202 | 95.8% | 81.1% |
| 12 | 30 | 281 | 16 | 242 | 94.3% | 91.3% |
| Totals | 521 | 4,162 | 222 | 3,659 | 94.7% | 92.9% |

| Table 3: FY2015 – FY2016 Comparison of Course Completion and Pass Rates, GCVS |
| --- |
| Grade | 2015 Courses completed (%) | 2015 Courses passed (%) | 2016 Courses completed (%) | 2016 Courses passed (%) | 2015-2016 Change in Courses Completed | 2015-2016 Change in Courses Passed |
| K | 92.2% | 100.0% | 100.0% | 100.0% | 7.8% | 0.0% |
| 1 | 100.0% | 100.0% | 97.2% | 100.0% | -2.8% | 0.0% |
| 2 | 95.1% | 100.0% | 100.0% | 100.0% | 4.9% | 0.0% |
| 3 | 99.5% | 100.0% | 94.4% | 100.0% | -5.1% | 0.0% |
| 4 | 96.9% | 100.0% | 97.0% | 100.0% | 0.1% | 0.0% |
| 5 | 96.2% | 100.0% | 93.7% | 100.0% | -2.5% | 0.0% |
| 6 | 86.5% | 100.0% | 91.3% | 100.0% | 4.8% | 0.0% |
| 7 | 95.2% | 100.0% | 85.4% | 100.0% | -9.8% | 0.0% |
| 8 | 96.9% | 100.0% | 91.3% | 100.0% | -5.6% | 0.0% |
| 9 | 97.1% | 67.9% | 98.4% | 71.7% | 1.3% | 3.8% |
| 10 | 95.2% | 80.4% | 97.4% | 80.6% | 2.2% | 0.2% |
| 11 | 96.1% | 81.7% | 95.8% | 81.1% | -0.3% | -0.6% |
| 12 | 92.6% | 90.8% | 94.3% | 91.3% | 1.7% | 0.5% |
| All | 89.5% | 93.9% | 94.7% | 92.9% | 5.2% | -1.0% |

| **Table 4: FY2016 Course Completion Data, TECCA** |
| --- |
| **Grade** | **A.** | **B.** | **C.** | **D.** | **E.** | **F.** |
| **Students in Grade Level** | **Courses Attempted** | **Courses Incomplete** | **Courses Passed (#)** | **Courses Completed (%)** | **Courses Passed (%)** |
| **K** | 25 | 265 | 33 | 231 | 88% | 99.6% |
| **1** | 19 | 202 | 31 | 144 | 85% | 84.2% |
| **2** | 28 | 274 | 70 | 176 | 74% | 86.3% |
| **3** | 19 | 200 | 57 | 130 | 72% | 90.9% |
| **4** | 30 | 317 | 49 | 244 | 85% | 91.0% |
| **5** | 37 | 402 | 38 | 319 | 91% | 87.6% |
| **6** | 53 | 559 | 113 | 323 | 80% | 72.4% |
| **7** | 72 | 814 | 144 | 558 | 82% | 83.3% |
| **8** | 86 | 989 | 123 | 721 | 88% | 83.3% |
| **9** | 159 | 1703 | 294 | 800 | 83% | 56.8% |
| **10** | 114 | 1178 | 253 | 714 | 79% | 77.2% |
| **11** | 77 | 882 | 118 | 639 | 87% | 83.6% |
| **12** | 70 | 851 | 87 | 700 | 90% | 91.6% |
| **Totals** | **789** | **8636** | **1410** | **5699** | **84%** | **78.9%** |

| Table 5: FY2015 – FY2016 Comparison of Course Completion and Pass Rates, TECCA |
| --- |
| Grade | 2015 Courses completed (%) | 2015 Courses passed (%) | 2016 Courses completed (%) | 2016 Courses passed (%) | 2015-2016 Change in Courses Completed | 2015-2016 Change in Courses Passed |
| K | 100.0% | 93.7% | 88% | 99.6% | 5.9% | -12.5% |
| 1 | 100.0% | 100.0% | 85% | 84.2% | -15.8% | -15.3% |
| 2 | 94.3% | 100.0% | 74% | 86.3% | -13.7% | -19.8% |
| 3 | 100.0% | 75.0% | 72% | 90.9% | 15.9% | -28.5% |
| 4 | 97.9% | 97.9% | 85% | 91.0% | -6.9% | -13.4% |
| 5 | 94.8% | 93.2% | 91% | 87.6% | -5.6% | -4.3% |
| 6 | 99.5% | 93.9% | 80% | 72.4% | -21.5% | -19.7% |
| 7 | 99.1% | 78.7% | 82% | 83.3% | 4.6% | -16.8% |
| 8 | 98.9% | 82.7% | 88% | 83.3% | 0.6% | -11.3% |
| 9 | 99.6% | 63.1% | 83% | 56.8% | -6.3% | -16.9% |
| 10 | 99.2% | 70.1% | 79% | 77.2% | 7.1% | -20.7% |
| 11 | 99.1% | 84.4% | 87% | 83.6% | -0.8% | -12.5% |
| 12 | 99.3% | 91.2% | 90% | 91.6% | 0.4% | -9.5% |
| All | 78.70% | 79.50% | 84% | 78.9% | -0.6% | 5.0% |

# Enrollment Trends, Limits and Wait Lists

The statute caps the total number of full-time students attending virtual schools at two percent of the total number of students attending all public schools in the Commonwealth. In FY2016, 953,429 students attended public schools in the Commonwealth, of which .15 percent, or 1,429 students, were enrolled in a CMVS. This is a change from .11 percent, or 1,087 students, enrolled in a CMVS in FY2015.

When the certificate for GCVS was renewed by the Board in 2016, overall enrollment was capped at 750 students.[[9]](#footnote-9) TECCA is approved to enroll 1,000 students in FY2015, up to 1,500 in FY2016, and 2,000 in FY2017. Overall enrollment trends for both schools are provided in Figure 1.



Both schools enroll similar proportions of students identified as high needs (a student belonging to one or more of the following categories: economically disadvantaged, English language learner, and students with disabilities (Figure 2)). In 2015-2016 TECCA’s student population has undergone significant growth, both in terms of enrollment and the diversity of needs. As compared to October 2015 state figures, both virtual schools enrolled fewer Els than all Massachusetts public schools, but enrolled higher percentages of economically disadvantaged and high needs students than brick-and-mortar schools. Across all categories of selected populations, the virtual schools experienced increases from October 2014.

Overall, the proportion of enrollment by racial and ethnic groups in Massachusetts virtual schools tracks closely with brick-and-mortar schools statewide (Figure 3).

In FY2016, GCVS reported 105 students on waitlists due to school-imposed grade-level enrollment caps; 45 of these wait-listed students ultimately enrolled, while 60 did not enroll. TECCA did not have a wait-list. Due to a lack of longitudinal enrollment data for both schools, the Department will monitor these trends to determine the extent to which they are indicative of the virtual school context.

According to the enrollment policies of both schools, eligibility for enrollment in a specific grade requires a student to have successfully completed the preceding grade. Each school reviews academic documentation to ensure accurate grade level assignments and course placements.

# Academic Achievement

In FY2016, GCVS administered computer-based Partnership for Assessment of Readiness for College and Careers (PARCC) tests in English language arts (ELA) and mathematics to students in grades 3-8. TECCA elected to administer the paper-based Massachusetts Comprehensive Assessment System (MCAS).

GCVS received an annual progress and performance index (PPI) score based on the improvement it made toward its own targets over the following two-year periods: 2012-13, 2013-14, 2014-15, and 2015-16. The school’s 2016 cumulative PPI of 48, in addition to low assessment participation and subgroup performance, placed GCVS in Level 3 of the state’s five-level accountability and assistance system.

Figure 4 provides comparisons of the percentage of students in GCVS scoring *Proficient* or higher as compared to the state in Spring 2016 MCAS tests. Spring 2016 results in grades 3-8 ELA and mathematics are not reported because all GCVS students participated in the PARCC test. Since only a portion of students in grades 3-8 participated in 2016 MCAS in ELA and mathematics, a representative sample of students from across Massachusetts was used to estimate student achievement at the state level in those subjects, and have therefore been suppressed. In subjects and grades for which state comparisons are available, GCVS students scored nine percentage points above the state average in Grade 10 ELA; GCVS students’ scores matched the state average in Grade 10 Technology/Engineering (STE); and GCVS students scored at least 20 percentage points below state averages in Grade 10 Mathematics, and Grade 5 STE, and Grade 8 STE.



TECCA administered paper-based MCAS tests in ELA, mathematics, and STE for the second time in 2016-17. Although the school has insufficient data for the Department to calculate an accountability rating based on statewide assessment data, TECCA was classified into Level 3 of the state's accountability and assistance system for very low MCAS participation (less than 90 percent) in the aggregate and for multiple subgroups.[[10]](#footnote-10) When the change in MCAS participation rates is compared between 2015 and 2016, TECCA demonstrated declining participation rates across all student groups in all subjects. For the first time, TECCA received ratings for the change in student performance between 2015 and 2016. Across each subject and student group, TECCA received a rating of *On Target* or *Above Target* on 11 of 18 academic indicators, *No Change* on 4 indicators, and *Below Target* on 3 indicators. The tables below are comparisons of the percentage of students in TECCA scoring *Proficient* or higher and as compared to the state, where possible, in Spring 2016 MCAS tests.[[11]](#footnote-11)







# Supervision and Support for Students in Elementary and Middle School

With both schools, a “learning coach,” typically the student’s parent/guardian, facilitates student progress through daily lessons, with flexibility in terms of pace and scheduling. Each school expects learning coaches to spend three to five hours daily supporting students and students to spend five to six hours daily on schoolwork and homework. Teachers are expected to manage all facets of the student’s instructional experience and engage in regular communication with learning coaches and students via e-mail, telephone, and online meetings.

The June 5, 2014 accountability review of GCVS found the distinction between the role of the teacher and the learning coach unclear, notably in the early grades. Focus groups of elementary and middle school teachers acknowledged that reaching all learners by incorporating multiple learning styles was an ongoing challenge. According to both school leadership and K12, Inc. (the school’s education management organization) every student has an individualized learning plan. As is reported in the November 2015 renewal inspection report, family engagement coordinators and the high school guidance counselor help students and learning coaches adjust to the virtual environment, address students’ nonacademic needs, and create a sense of community among all stakeholders at GCVS.

Recognizing learning coaches as key components to the TECCA educational program, one of TECCA’s stated priorities for the 2015-16 was addressing their involvement. TECCA reported an array of support for learning coaches, including an orientation process consisting of a careful explanation of responsibilities. In addition, as reported in the February 2016 accountability review, TECCA implemented a “socialization and connectedness action plan,” with the goals of improving academic performance through greater student engagement, and a higher share of returning students.

# Support for Online Course Completion

Staff from both schools acknowledged that much of the responsibility for student learning is placed on the learning coach, particularly in the early grades, because learning coaches are expected to facilitate their student’s progress through daily lessons and help manage the student’s schedule and pacing through the online program. Both schools have systems in place for closely monitoring student progress on a course-by-course basis. In addition, acknowledging that there is a relationship with family/learning involvement and success in the virtual environment, both schools have increased supports in 2015-16. GCVS employed three family engagement coordinators in addition to a high school guidance counselor and a part-time school psychologist. These and other personnel regularly engage families to help students and learning coaches adjust to the virtual environment, address students’ nonacademic needs, and create a sense of community among all stakeholders at GCVS. TECCA focused efforts on supporting the involvement of learning coaches, through an orientation process consisting of careful explanation of the role and responsibilities and subsequent regular opportunities for them to convene and network around various topics.

# Professional Development

Each MCVS takes its own approach to professional development. At GCVS, teachers are employees of K12, Inc., and work from home. Consequently, most of the professional development they receive is virtual and the school uses its online learning management system as a training and networking tool. Professional evaluations of GCVS teachers are performed by the school leader and a representative from K12, Inc.

GCVS introduced a “Teacher Induction and Mentor Program” in the 2014-15 school year to support beginning teachers. The program was inclusive of new teacher orientation, the development of mentor/coach relationships, support teams, workshops and training for beginning teachers and mentors, and the state’s educator evaluation system. Now in its second year of implementation, the school’s teacher induction and mentor program supports beginning teachers with a full week of professional development prior to the start of school and the pairing of every teacher with a mentee. In 2015-16, GCVS implemented a teaming initiative (“team leaders”) in which teachers and other staff members are organized into teams by grade span (K-5, 6-8, and high school).

At TECCA, teachers are employees of the school as opposed to Connections Education, the school’s education management organization. The focus of professional development is determined partly by Connections Education and partly by TECCA educators and leadership. Connections Education has a career ladder program for teachers to assume additional responsibilities and compensation. In addition to management support, Connections Education provides training, professional development, and human resources support to TECCA.

TECCA provides professional development every Wednesday. The morning portion is for all staff and the afternoon is provided by grade level. Topics of professional development at TECCA in FY2016 included how to run online lessons, how to use different tools in LiveLessons, how to check for understanding, and how the layout of LiveLessons impacts student learning (elementary); teacher task, child find, and human resources (middle); and Bloom’s Taxonomy (high school).

# Recommended Changes to the Commonwealth Virtual School Program

As the CMVS program is still relatively new, the Department continues to collect data and other information on the implementation of the program through accountability reviews, site visits, and reporting requirements as per the statute and regulations.

The regular education per-pupil allocation was established by the Board in each school’s terms of certificate and is $6,700 for GCVS and TECCA. Any rate adjustment must be approved by the Board. With input from the state’s Digital Learning Advisory Council, the Department is exploring the possibility of a rate increase for the virtual schools.

# Appendix A: Commonwealth Virtual Schools (G.L. c. 71 §94)

Section 94. (a) As used in this section the following words shall, unless the context clearly requires otherwise, have the following meanings:—

“Board,” the board of elementary and secondary education.

“Commissioner”, the commissioner of elementary and secondary education.

“Commonwealth virtual school”, a public school operated by a board of trustees whose teachers primarily teach from a remote location using the internet or other computer-based methods and whose students are not required to be located at the physical premises of the school.

“Certificate”, a certificate of organization issued by the board to a commonwealth virtual school’s board of trustees which governs the operations of the commonwealth virtual school.

“Department”, the department of elementary and secondary education.

“District” or “school district”, the school department of a city, town, regional school district or county agricultural school.

“Education collaborative,” an association of 2 or more school committees or boards of trustees of charter schools established pursuant to section 4E of chapter 40.

(b) On or before October 1, the board shall issue a request for proposals to establish 1 or more commonwealth virtual schools; provided, however, that the board shall not be required to issue a request for proposals for any school year for which a certificate is not available to be awarded. The request for proposals shall be published on the department’s website. Persons or entities eligible to submit a proposal to establish a commonwealth virtual school shall include, but not be limited to: (i) a school district; (ii) 2 or more school districts; (iii) an education collaborative; (iv) an institution of higher education; (v) a non-profit entity; (vi) 2 or more certified teachers; or (vii) parents. Private and parochial schools and for-profit entities shall not be eligible to submit a proposal. A proposal shall be selected from the responses to the request for proposals and an applicant awarded a certificate under the procedures adopted by the board. The request for proposals shall include, but not be limited to, the following terms and conditions that shall be addressed in each response to the request for proposals and, upon selection by the board, shall be incorporated into the certificate to operate a commonwealth virtual school:

(1) the mission, purpose and specialized focus, if any, of the proposed commonwealth virtual school;

(2) the educational program, instructional methodology and services to be offered to students;

(3) the organization of the school by ages of students or grades to be taught and an estimate of the total enrollment of the commonwealth virtual school;

(4) the method for and timetable of admission to the commonwealth virtual school;

(5) the commonwealth virtual school governance and by-laws;

(6) the proposed school year;

(7) how the commonwealth virtual school shall administer state required assessment tests;

(8) a statement of equal educational opportunity which shall state that the commonwealth virtual school shall be open to all students, on a space available basis, and shall not discriminate on the basis of race, color, national origin, religion, sex, gender identity or sexual orientation;

(9) a description of any preferences the school shall give for enrollment and how the school shall conduct a lottery for admission if applications exceed enrollment capacity;

(10) the identity of any third party software or curriculum vendors that the school intends to use;

(11) a proposed arrangement or contract with an organization that shall manage or operate the school, including any proposed or agreed upon payments to such organization;

(12) a demonstration of the applicant’s capacity to support and store all critical student, program and staff data for expedient retrieval and analysis in compliance with federal and state laws;

(13) provisions for cyber safety;

(14) how the school shall notify each school district in writing of the number and grade levels of students who shall be attending the commonwealth virtual school from that district within 10 days of the student registering for enrollment in the commonwealth virtual school;

(15) whether the commonwealth virtual school will offer online courses to students attending other schools;

(16) the financial plan for the operation of the school;

(17) the number and qualifications of teachers and administrators to be employed;

(18) the procedures for evaluation and professional development for teachers and administrators, including what training, if any, shall be provided to teachers who have not previously taught online;

(19) the school’s capacity to address the particular needs of English language learners to learn English and learn content matter;

(20) the school’s plan to conduct outreach to prospective students;

(21) what supports shall be provided to students to help them complete courses, including the school’s strategies for ensuring that an enrolled student shall complete the program and goals regarding course completion and student achievement;

(22) how the school will monitor student progress in order to identify areas of difficulty and assist students who need additional attention;

(23) where relevant, what supports will be provided to help students prepare for college and careers;

(24) the school’s capacity to support students’ social and emotional growth;

(25) how the school shall create a community for students who are enrolled in the commonwealth virtual school;

(26) how the commonwealth virtual school applicant shall include activities to engage students;

(27) what, if any, in person activities, learning or interaction will be provided or offered, including extra-curricular activities;

(28) expectations for age appropriate supervision of students under the age of 14, if applicable;

(29) a description of where students will access the school’s courses, including whether it is in the home or in a location provided and overseen by the commonwealth virtual school applicant;

(30) methods to assure that all students shall have access to necessary technology and materials;

(31) what technical support shall be available to students, including whether the commonwealth virtual school applicant shall offer an orientation for taking an online course before starting the coursework;

(32) how the school shall define and monitor student attendance, including how it shall verify that each student is participating in classes, how truancy shall be addressed and goals regarding student attendance;

(33) expectations and goals for communication between teachers and students and how such interaction shall be documented;

(34) how the school shall involve parents and guardians as partners in the education of the children and goals for parental and family engagement;

(35) the school’s capacity to implement the proposal and provide high quality instructional services;

(36) the school’s capacity to instruct students in the following categories, if the school intends to serve any such students: (i) students with physical or other challenges that make it difficult for them to physically attend a school; (ii) students with medical needs requiring a home or hospital setting; (iii) students with unusual needs requiring a flexible schedule; (iv) students who are over-age for their grade; (v) students who have been expelled; (vi) students who have dropped out or are at risk of dropping out; (vii) students who are pregnant or have a child; (viii) students with social and emotional challenges that make it difficult for them to physically attend a school; (ix) students who feel bullied or cannot attend school because their safety is at risk; (x) gifted and talented students; (xi) students who seek academic work not available in their school; (xii) students in rural communities; and (xiii) students in institutionalized settings;

(37) whether the school proposes a mechanism to provide meals to students eligible for free and reduced price lunch;

(38) the student to teacher ratio; and

(39) whether the school will establish a personalized learning plan for each student, in conjunction with the student’s school district of residence.

(c) The board shall make the final determination on selecting proposals; provided, however, that the board shall only grant a certificate to a qualified applicant as determined by the board; provided further, that the board shall hold a public hearing on the proposals which shall be attended by at least 1 member of the board. Not more than 10 commonwealth virtual schools shall be allowed to operate in the commonwealth at any time; provided, however, that a commonwealth virtual school operated by a single school district, under an agreement entered into by more than 1 school district or by an education collaborative shall not be counted towards this limit if the commonwealth virtual school only enrolls students who reside in the school district, in the school districts that signed the agreement or in the school districts that are members of an education collaborative. The board may authorize a single board of trustees to manage more than 1 commonwealth virtual school; provided, however, that each school is issued its own certificate. Under no circumstances shall the total number of full-time students attending commonwealth virtual schools exceed 2 per cent of the total number of students attending public schools in the commonwealth. In the case of a commonwealth virtual school that is established by a school district, not less than 5 per cent of the students enrolled in the commonwealth virtual school shall be from the school district that established the school. In the case of a commonwealth virtual school that is established by more than 1 school district or by an education collaborative, not less than 5 per cent of the students enrolled in the school shall be from the combined enrollment of the districts that established the school or the districts that are members of the education collaborative.

The board shall give preference to proposals that include an educational program or specialized focus that appropriately addresses 1 or more of the following: students with physical or other challenges that make it difficult for them to physically attend a school; students with medical needs requiring a home or hospital setting; students with unusual needs requiring a flexible schedule; students who are over-age for their grade; students who have been expelled; students who have dropped out; students at risk of dropping out; students who are pregnant or have a child; students with social and emotional challenges that make it difficult for them to physically attend a school; students who feel bullied or cannot attend school because the students’ safety is at risk; gifted and talented students; students who seek academic work not available in their school; students in rural communities; and students in institutionalized settings. The board shall also consider whether proposed schools will create or enhance the opportunity for students to attend virtual schools in all grades from kindergarten through grade 12.

(d) A commonwealth virtual school shall operate under a certificate issued by the board and be governed by a board of trustees. If a district or education collaborative operates the commonwealth virtual school, then the board of trustees shall be appointed by the member school committees of the district or the collaborative board. The board of trustees of a commonwealth virtual school, upon being granted a certificate, shall be deemed to be a public agent authorized by the commonwealth to supervise and control the commonwealth virtual school. A commonwealth virtual school shall be deemed to be a state agency under chapter 268A and members of the board of trustees shall be deemed to be public employees under chapter 268B.

(e) The board of trustees of a commonwealth virtual school shall have all powers necessary or desirable for carrying out its virtual program, including, but not limited to, the power to:

(1) adopt a name and corporate seal; provided, that any name selected shall include the words “commonwealth virtual school”;

(2) acquire real property, from public or private sources, by lease, lease with an option to purchase or by gift, for use as a school facility;

(3) receive and disburse funds for school purposes;

(4) incur temporary debt in anticipation of receipt of funds; provided that, notwithstanding any general or special law to the contrary, the terms of repayment of any commonwealth virtual school’s debt shall not exceed the duration of the school’s certificate without the approval of the board;

(5) solicit and accept grants or gifts for school purposes; and

(6) determine the school’s curriculum and develop the school’s annual budget.

(f) A commonwealth virtual school may provide access to its courses in an existing public school building or any other suitable location; provided, however, that a commonwealth virtual school shall comply with all applicable state and federal health and safety laws and regulations.

(g) The board may waive requirements that students who attend a commonwealth virtual school, attend school for a minimum number of hours or days each school year and may permit students to earn credits by demonstrating competency in a grade or subject matter. Students in commonwealth virtual schools shall be required to meet the same academic standards, testing and portfolio requirements set by the board for students in other public schools.

To ensure that students are learning and demonstrating their knowledge, each commonwealth virtual school shall ensure that students are provided, in each credit-bearing course, multiple synchronous learning opportunities with their teachers in which students are required to participate and share their knowledge.

(h) Commonwealth virtual schools shall comply with chapter 71B; provided, however, that the fiscal responsibility for a student with a disability enrolled in or determined to require a private day or residential school shall remain with the school district where the student resides. If a commonwealth virtual school expects that a student with a disability enrolled in the commonwealth virtual school may be in need of the services of a private day or residential school, it shall convene an individualized education program team meeting for the student. Notice of the team meeting shall be provided to the special education department of the school district in which the child resides at least 5 days in advance. Personnel from the school district in which the child resides shall participate in the team meeting concerning future placement of and services for the child and shall agree on the needed services for the child.

(i) No teacher shall be hired by a commonwealth virtual school who is not certified pursuant to section 38G. Nothing herein shall preclude such teacher from using digital content which may include, but not be limited to, guest lecturers.

(j) A certificate to operate a commonwealth virtual school granted by the board shall be for not less than 3 years and not more than 5 years, as determined by the board. The board shall develop procedures and guidelines for amending, revoking and renewing a virtual school’s certificate. When deciding on certificate renewal, the board shall consider progress made in student academic achievement and whether the school has met its obligations and commitments under the certificate.

(k) The amount of tuition per pupil a school district shall pay for a student residing in the district who is enrolled in a commonwealth virtual school shall be the school choice tuition amount, which shall be paid through the school choice mechanism; provided, that the department may, in consultation with the operational services division, approve alternative tuition amounts proposed by applicants that shall not exceed the state average per pupil foundation budget for students of the same classification and grade level; provided, further, that the department may authorize additional tuition assessments for services required by an individualized education program established pursuant to chapter 71B. If a commonwealth virtual school offers online courses to students attending other schools, the commonwealth virtual school shall work with the student’s district or school to determine whether the online courses meet said district’s or school’s standards and requirements and what the commonwealth virtual school will charge the student’s district or school for such online courses.

The department may retain not more than $75 per pupil for the administration of the commonwealth virtual school program.

The department, in consultation with the department of youth services, shall determine the appropriate tuition responsibility for students who are in the custody of the department of corrections, a sheriff or the department of youth services.

Students enrolled in a commonwealth virtual school shall be counted in the foundation enrollment of the school district where the student resides.

(l) The department shall promulgate rules and regulations creating a reporting requirement for a commonwealth virtual school’s net asset balance at the end of each fiscal year; provided, however, that the report shall include, but not be limited to: (1) the revenue and expenditures for the prior fiscal year with a specific accounting of the uses of public and private dollars; (2) compensation and benefits for teachers, staff, administrators, executives and members of the board of trustees; (3) the amount of funds paid to a management company; (4) the sources of surplus funds, specifically whether the funds are private or public; (5) how surplus funds were used in the previous fiscal year; and (6) the planned use of surplus funds in the upcoming fiscal year and in future fiscal years. The board may establish limits for excess funds that may be retained by commonwealth virtual schools and may require commonwealth virtual schools to return excess funds to school districts.

(m) Each commonwealth virtual school shall submit an annual report, on or before January 1, to the board. The school shall make its report available to the public on its website. The annual report shall be in such form as may be prescribed by the board and shall include, but not be limited to: (1) a discussion of progress made toward the achievement of the goals set forth in the certificate; (2) a list of the programs and courses offered; (3) a description and number of the students enrolled in the commonwealth virtual school by grade level, the number of students eligible for free and reduced price lunch and the number of students who applied and were not admitted; (4) a financial statement describing by appropriate categories the revenue and expenditures for the prior fiscal year and a balance sheet describing the commonwealth virtual school’s assets, liabilities and fund balances or equities; (5) information regarding and a discussion of student attendance and participation; (6) information regarding and a discussion of student-teacher interaction; (7) information regarding and a discussion of student performance in the commonwealth virtual school, including data from state assessments and a comparison of students’ achievement against the achievement of the students in the sending district; (8) a discussion of how many courses were completed and not completed; (9) a discussion of how the school created a community for students; (10) what activities were included to engage students and how students participated in those activities; (11) a discussion of parental involvement; and (12) a discussion of the school’s outreach and recruitment efforts; provided, however, that said report shall include input from teachers and administrators at the virtual school and input from administrators in a district that has established a virtual school or districts that are members of an education collaborative that has established a virtual school.

(n) Each commonwealth virtual school shall maintain an accurate account of all its activities and all its receipts and expenditures and shall annually conduct an independent audit of its accounts. Such audit shall be filed annually, on or before January 1 with the department and the state auditor and shall be in a form prescribed by the state auditor. The state auditor may investigate the budget and finances of commonwealth virtual schools and their financial dealings, transactions and relationships and shall have the power to examine the records of commonwealth virtual schools and to prescribe methods of accounting and the rendering of periodic reports.

(o) On or before September 1, the commissioner shall furnish a supplemental report on the Massachusetts comprehensive assessment system performance results of students served by each commonwealth virtual school and on the racial, ethnic and socio-economic make-up of the students served by each commonwealth virtual school. The commissioner shall also provide information on the number of students enrolled in each commonwealth virtual school who have individualized education programs pursuant to chapter 71B. The department shall make such report available to the public on the department’s website.

(p) On or before September 1, the commissioner shall prepare a report on the implementation and impact of this section, including, but not limited to:

(1) the fiscal impact on sending districts;

(2) any necessary adjustments to tuition rates, including whether the amount should vary based on grade or type of school and the appropriate mechanism for funding virtual schools;

(3) information on course completion and student attendance and participation rates;

(4) the academic achievement of students attending commonwealth virtual schools;

(5) the level of supervision or support needed for students in elementary and middle school;

(6) the support necessary or helpful to ensure that students successfully complete online courses;

(7) the professional development virtual school teachers require;

(8) the appropriate enrollment limit for a virtual school, if any, including information about wait lists; and

(9) the need for any changes to the commonwealth virtual school program.

The report shall be based partially on information in each commonwealth virtual school’s annual report and financial audits. This report shall include input from virtual school teachers and administrators. The commissioner shall consult with the digital learning advisory council to prepare this report. The commissioner shall file the report with the clerks of the house and senate, who shall forward the report to the joint committee on education. The department shall make the report available to the public on the department’s website.

(q) The commissioner shall identify and offer information on online courses which are aligned with state academic standards that districts may use and shall publish that list on the department’s website. At least 1 of the online courses listed shall be available at no cost to school districts, provided that such no cost online course is aligned with state academic standards. The list shall be reviewed and updated annually. Nothing in this subsection shall preclude school districts from using other courses not identified by the commissioner.

(r) The board may promulgate regulations for implementation and enforcement of this section, provided that the regulations may include, but shall not be limited to, a provision indicating the appropriate percentage of online academic instruction provided for a school to be considered a commonwealth virtual school pursuant to this section. Upon release of the proposed regulations, the board shall file a copy of the regulations with the clerks of the house of representatives and the senate, who shall forward the regulations to the joint committee on education. Within 30 days of the filing, the committee may hold a public hearing and issue a report on the regulations and file the report with the board. The board, pursuant to applicable law, may adopt final regulations making revisions to the proposed regulations as it deems appropriate after consideration of the report and shall file a copy of the regulations with the chairpersons of the joint committee on education and, not earlier than 30 days after the filing, the board shall file the final regulations with the state secretary.

(s) Nothing in this section shall preclude a student from taking some or all of the student’s classes online when such classes are offered or approved by the school the student attends or by an education collaborative in which the student’s school district participates.

This section shall not apply to a virtual school operated by a single school district if the school enrolls only students residing in the school district; provided, however, that such district shall submit a summary description of the proposed virtual school to the commissioner for review and comment at least 4 months in advance of the opening of the virtual school. The commissioner shall then provide written comments on the proposal to each district’s school committee.

(t) A school committee may, by vote, restrict enrollment of its students in commonwealth virtual schools if the total enrollment of its students in commonwealth virtual schools exceeds 1 per cent of the total enrollment in its district; provided, however, that no student enrolled in a commonwealth virtual school shall be compelled to withdraw as a result of that vote.

# Appendix B: FY2016 Student FTE and Tuition by Sending District, GCVS

| FY2016 Student FTE and Tuition by Sending District, GCVS |
| --- |
|  | Full Time Equivalent | Tuition |
| **District** | **Jun '15** | **Dec '16** | **Jun '16** | **Change** | **Jun '15** | **Dec '16** | **Jun '16** | **Change** |
| Abington  | 6.23 | 3.00 | 3.00 | 0.00 | 41,799 | 20,100 | 20,100 | 0 |
| Agawam  | 4.00 | 3.00 | 3.00 | 0.00 | 26,800 | 20,100 | 20,100 | 0 |
| Amesbury  | 1.98 | 2.00 | 1.36 | -0.64 | 14,400 | 21,532 | 11,555 | -9,977 |
| Amherst  | 0.47 | 0.00 | 0.00 | 0.00 | 3,189 | 0 | 0 | 0 |
| Andover  | 1.51 | 1.00 | 1.00 | 0.00 | 10,154 | 6,700 | 6,700 | 0 |
| Arlington  | 0.48 | 2.00 | 1.18 | -0.82 | 3,255 | 21,400 | 9,563 | -11,837 |
| Ashland  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Attleboro  | 3.23 | 7.00 | 7.85 | 0.85 | 22,379 | 53,900 | 53,025 | -875 |
| Auburn  | 3.22 | 3.00 | 1.76 | -1.24 | 22,842 | 20,100 | 11,886 | -8,214 |
| Barnstable  | 4.23 | 7.00 | 7.65 | 0.65 | 28,825 | 46,900 | 51,642 | 4,742 |
| Bedford  | 2.00 | 2.00 | 0.00 |  | 13,400 | 13,400 | 0 |
| Belchertown  | 0.28 | 1.00 | 0.13 | -0.87 | 2,504 | 6,700 | 936 | -5,764 |
| Bellingham  | 3.00 | 0.00 | 0.00 | 0.00 | 21,706 | 0 | 0 | 0 |
| Beverly  | 9.57 | 7.00 | 5.86 | -1.14 | 64,152 | 46,900 | 39,274 | -7,626 |
| Billerica  | 3.65 | 3.00 | 4.55 | 1.55 | 24,557 | 24,100 | 36,349 | 12,249 |
| Boston  | 29.94 | 29.00 | 28.25 | -0.75 | 205,436 | 208,986 | 198,832 | -10,154 |
| Bourne  | 3.51 | 1.00 | 0.81 | -0.19 | 23,632 | 6,700 | 5,441 | -1,259 |
| Boxford  | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 6,700 | 6,700 | 0 |
| Boylston  | 1.92 | 0.00 | 0.00 | 0.00 | 12,870 | 0 | 0 | 0 |
| Braintree  | 2.66 | 1.00 | 1.76 | 0.76 | 17,848 | 6,700 | 11,810 | 5,110 |
| Brockton  | 16.22 | 11.00 | 10.25 | -0.75 | 108,808 | 73,700 | 69,089 | -4,611 |
| Burlington  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Cambridge  | 2.00 | 2.00 | 2.00 | 0.00 | 13,400 | 13,400 | 13,400 | 0 |
| Carver  | 3.21 | 3.00 | 2.31 | -0.69 | 21,566 | 20,100 | 15,529 | -4,571 |
| Chelmsford  | 1.48 | 3.00 | 2.46 | -0.54 | 9,955 | 20,100 | 16,523 | -3,577 |
| Chelsea  | 2.78 | 6.00 | 6.09 | 0.09 | 18,642 | 40,200 | 40,872 | 672 |
| Chicopee  | 6.00 | 12.00 | 13.66 | 1.66 | 40,200 | 84,400 | 95,278 | 10,878 |
| Clinton  | 7.00 | 4.00 | 2.61 | -1.39 | 46,900 | 26,800 | 17,666 | -9,134 |
| Danvers  | 0.99 | 1.00 | 1.00 | 0.00 | 6,634 | 6,700 | 6,700 | 0 |
| Dartmouth  | 2.00 | 2.00 | 1.47 | -0.53 | 13,400 | 13,400 | 9,889 | -3,511 |
| Dedham  | 1.46 | 1.00 | 1.00 | 0.00 | 9,898 | 6,700 | 6,700 | 0 |
| Deerfield  | 3.00 | 2.98 | -0.02 |  | 20,100 | 19,968 | -132 |
| Douglas  | 3.00 | 2.00 | 4.00 | 2.00 | 20,100 | 13,400 | 27,724 | 14,324 |
| Dracut  | 1.00 | 4.00 | 4.57 | 0.57 | 6,700 | 26,800 | 30,956 | 4,156 |
| East Bridgewater  | 3.00 | 0.00 | 0.00 | 0.00 | 20,100 | 0 | 0 | 0 |
| Easthampton  | 2.96 | 2.00 | 2.68 | 0.68 | 19,835 | 13,400 | 17,980 | 4,580 |
| East Longmeadow  | 3.00 | 2.00 | 1.40 | -0.60 | 20,133 | 13,400 | 9,425 | -3,975 |
| Easton  | 3.00 | 1.00 | 1.00 | 0.00 | 20,921 | 7,521 | 7,926 | 405 |
| Everett  | 2.00 | 1.96 | -0.04 |  | 13,400 | 13,136 | -264 |
| Fairhaven  | 0.11 | 0.00 | 0.00 | 0.00 | 804 | 0 | 0 | 0 |
| Fall River  | 13.80 | 13.00 | 12.94 | -0.06 | 98,310 | 92,865 | 91,169 | -1,696 |
| Falmouth  | 1.10 | 1.00 | 1.74 | 0.74 | 7,438 | 6,700 | 11,678 | 4,978 |
| Fitchburg  | 6.19 | 5.00 | 6.09 | 1.09 | 45,829 | 36,844 | 44,983 | 8,139 |
| Foxborough  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Framingham  | 1.00 | 2.00 | 1.22 | -0.78 | 6,700 | 13,400 | 8,233 | -5,167 |
| Franklin  | 2.00 | 2.00 | 0.00 |  | 17,400 | 13,779 | -3,621 |
| Gardner  | 4.94 | 8.00 | 7.30 | -0.70 | 33,469 | 73,600 | 50,959 | -22,641 |
| Gloucester  | 1.70 | 1.00 | 1.00 | 0.00 | 12,726 | 6,700 | 6,700 | 0 |
| Grafton  | 1.47 | 3.00 | 2.92 | -0.08 | 10,823 | 24,100 | 20,909 | -3,191 |
| Greenfield  | 17.32 | 18.00 | 16.66 | -1.34 | 125,521 | 173,004 | 126,089 | -46,915 |
| Hatfield  | 5.00 | 6.00 | 6.00 | 0.00 | 33,500 | 40,200 | 40,200 | 0 |
| Haverhill  | 5.65 | 5.00 | 4.92 | -0.08 | 37,957 | 33,500 | 33,046 | -454 |
| Hingham  |  | 0.52 | 0.52 |  |  | 3,520 | 3,520 |
| Holbrook  | 4.96 | 4.00 | 4.66 | 0.66 | 33,838 | 26,800 | 31,248 | 4,448 |
| Holliston  | 0.61 | 0.00 | 0.00 | 0.00 | 4,191 | 0 | 0 | 0 |
| Holyoke  | 3.68 | 5.00 | 6.13 | 1.13 | 29,638 | 38,307 | 44,670 | 6,363 |
| Hopedale  | 0.49 | 2.00 | 2.00 | 0.00 | 3,471 | 20,400 | 17,266 | -3,134 |
| Hudson  |  | 1.00 | 1.00 |  |  | 6,700 | 6,700 |
| Hull  | 1.81 | 2.00 | 1.87 | -0.13 | 12,217 | 17,400 | 15,930 | -1,470 |
| Lawrence  | 6.24 | 6.00 | 6.74 | 0.74 | 45,654 | 43,838 | 49,586 | 5,748 |
| Leominster  | 9.29 | 4.00 | 3.98 | -0.02 | 66,721 | 36,753 | 28,252 | -8,501 |
| Lexington  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Lincoln  | 0.42 | 3.00 | 2.22 | -0.78 | 2,858 | 20,100 | 14,933 | -5,167 |
| Littleton  | 1.22 | 1.00 | 1.00 | 0.00 | 8,308 | 6,700 | 6,700 | 0 |
| Lowell  | 12.07 | 12.00 | 11.46 | -0.54 | 83,870 | 86,228 | 83,872 | -2,356 |
| Ludlow  | 1.31 | 1.00 | 1.00 | 0.00 | 8,829 | 6,700 | 6,700 | 0 |
| Lunenburg  | 1.00 | 1.00 | 1.54 | 0.54 | 6,700 | 6,700 | 10,353 | 3,653 |
| Lynn  | 11.62 | 11.00 | 12.54 | 1.54 | 77,883 | 77,700 | 85,005 | 7,305 |
| Malden  | 3.89 | 2.00 | 3.56 | 1.56 | 26,071 | 17,400 | 25,404 | 8,004 |
| Mansfield  | 2.00 | 3.00 | 3.00 | 0.00 | 13,400 | 20,100 | 20,100 | 0 |
| Marblehead  | 2.00 | 2.00 | 0.00 |  | 13,400 | 13,400 | 0 |
| Marion  | 1.00 | 0.00 | 0.00 | 0.00 | 9,670 | 0 | 0 | 0 |
| Marlborough  | 5.09 | 5.00 | 5.98 | 0.98 | 34,172 | 33,500 | 40,143 | 6,643 |
| Marshfield  | 1.60 | 1.00 | 1.00 | 0.00 | 10,751 | 6,700 | 6,700 | 0 |
| Mashpee  | 2.00 | 0.00 | 0.00 | 0.00 | 13,400 | 0 | 0 | 0 |
| Medford  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Medway  | 1.00 | 0.89 | -0.11 |  | 10,700 | 7,370 | -3,330 |
| Melrose  | 1.00 | 2.00 | 1.63 | -0.37 | 8,403 | 15,103 | 11,851 | -3,252 |
| Methuen  | 4.91 | 3.00 | 2.85 | -0.15 | 34,610 | 20,100 | 19,106 | -994 |
| Middleborough  | 2.39 | 5.00 | 6.42 | 1.42 | 16,059 | 33,500 | 44,451 | 10,951 |
| Middleton  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Milford  | 0.65 | 0.00 | 0.00 | 0.00 | 4,457 | 0 | 0 | 0 |
| Millbury  | 2.22 | 2.00 | 2.00 | 0.00 | 14,933 | 13,400 | 13,400 | 0 |
| Millis  | 2.00 | 1.81 | -0.19 |  | 13,400 | 12,142 | -1,258 |
| Milton  | 2.70 | 2.00 | 2.00 | 0.00 | 18,188 | 13,400 | 13,400 | 0 |
| Monson  | 6.84 | 8.00 | 6.60 | -1.40 | 45,840 | 53,600 | 44,326 | -9,274 |
| Nantucket  | 1.00 | 0.55 | -0.45 |  | 6,700 | 3,719 | -2,981 |
| Natick  | 3.00 | 2.00 | 2.54 | 0.54 | 20,100 | 13,400 | 18,146 | 4,746 |
| New Bedford  | 17.46 | 34.00 | 32.38 | -1.62 | 119,946 | 250,248 | 223,031 | -27,217 |
| Newburyport  | 0.70 | 0.00 | 0.00 | 0.00 | 4,713 | 0 | 0 | 0 |
| Newton  | 0.07 | 2.00 | 1.24 | -0.76 | 539 | 13,400 | 8,365 | -5,035 |
| Norfolk  | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 6,700 | 6,700 | 0 |
| North Adams  | 1.70 | 1.00 | 1.00 | 0.00 | 11,413 | 6,700 | 6,700 | 0 |
| Northampton  | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 6,700 | 6,700 | 0 |
| North Attleborough  | 7.00 | 8.00 | 8.00 | 0.00 | 46,900 | 53,600 | 53,600 | 0 |
| Northborough  | 1.00 | 0.98 | -0.02 |  | 6,700 | 6,568 | -132 |
| Northbridge  | 1.44 | 2.00 | 1.46 | -0.54 | 9,881 | 13,400 | 9,823 | -3,577 |
| North Brookfield  | 2.00 | 1.00 | 1.00 | 0.00 | 13,732 | 6,700 | 6,700 | 0 |
| North Reading  | 1.00 | 1.00 | 0.98 | -0.02 | 6,700 | 6,700 | 6,568 | -132 |
| Norton  | 6.70 | 4.00 | 2.16 | -1.84 | 48,558 | 26,800 | 14,610 | -12,190 |
| Norwood  | 2.00 | 3.00 | 3.00 | 0.00 | 18,110 | 24,810 | 22,529 | -2,281 |
| Orange  | 0.62 | 0.00 | 0.16 | 0.16 | 4,183 | 0 | 1,135 | 1,135 |
| Orleans  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Oxford  | 6.00 | 5.00 | 3.98 | -1.02 | 42,236 | 35,536 | 27,916 | -7,620 |
| Palmer  | 2.69 | 1.00 | 1.32 | 0.32 | 18,046 | 6,700 | 8,970 | 2,270 |
| Peabody  | 5.67 | 1.00 | 0.28 | -0.72 | 41,113 | 6,700 | 1,930 | -4,770 |
| Pembroke  | 0.99 | 1.00 | 1.00 | 0.00 | 6,634 | 6,700 | 6,700 | 0 |
| Pittsfield  | 7.42 | 6.00 | 6.07 | 0.07 | 53,400 | 47,540 | 44,486 | -3,054 |
| Plymouth  | 0.06 | 2.00 | 0.74 | -1.26 | 473 | 13,400 | 5,052 | -8,348 |
| Provincetown  | 0.62 | 0.62 |  |  | 4,258 | 4,258 |
| Quincy  | 4.91 | 3.00 | 4.66 | 1.66 | 32,904 | 27,100 | 33,072 | 5,972 |
| Randolph  | 3.86 | 0.00 | 1.34 | 1.34 | 25,873 | 0 | 9,028 | 9,028 |
| Reading  | 2.00 | 4.00 | 3.60 | -0.40 | 13,400 | 30,800 | 24,809 | -5,991 |
| Revere  | 3.27 | 3.00 | 4.60 | 1.60 | 24,288 | 22,424 | 31,578 | 9,154 |
| Rockland  | 2.70 | 4.00 | 3.76 | -0.24 | 20,801 | 30,800 | 27,314 | -3,486 |
| Salem  | 4.00 | 3.00 | 3.84 | 0.84 | 26,800 | 20,100 | 25,816 | 5,716 |
| Sandwich  | 0.10 | 2.00 | 2.00 | 0.00 | 852 | 13,400 | 13,400 | 0 |
| Saugus  | 1.48 | 3.00 | 2.98 | -0.02 | 10,400 | 20,100 | 19,968 | -132 |
| Scituate  | 1.70 | 0.00 | 0.00 | 0.00 | 11,413 | 0 | 0 | 0 |
| Seekonk  | 2.00 | 1.00 | 1.00 | 0.00 | 13,400 | 6,700 | 6,700 | 0 |
| Sharon  | 0.69 | 0.00 | 0.00 | 0.00 | 4,646 | 0 | 0 | 0 |
| Shrewsbury  | 0.99 | 1.00 | 0.29 | -0.71 | 6,634 | 6,700 | 1,996 | -4,704 |
| Somerset  | 0.29 | 0.00 | 0.00 | 0.00 | 1,996 | 0 | 0 | 0 |
| Somerville  | 1.00 | 2.00 | 2.00 | 0.00 | 6,700 | 13,400 | 13,400 | 0 |
| Southborough  | 3.00 | 3.00 | 3.00 | 0.00 | 20,100 | 24,100 | 21,917 | -2,183 |
| Southbridge  | 3.94 | 9.00 | 8.07 | -0.93 | 26,403 | 71,300 | 55,908 | -15,392 |
| South Hadley  | 4.00 | 4.00 | 4.38 | 0.38 | 30,178 | 34,178 | 31,853 | -2,325 |
| Springfield  | 40.92 | 43.00 | 42.15 | -0.85 | 281,595 | 319,360 | 302,325 | -17,035 |
| Stoneham  |  | 1.26 | 1.26 |  |  | 8,498 | 8,498 |
| Stoughton  | 2.00 | 2.00 | 2.00 | 0.00 | 13,400 | 17,400 | 14,918 | -2,482 |
| Sturbridge  | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 13,700 | 20,035 | 6,335 |
| Sutton  | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 6,700 | 6,700 | 0 |
| Taunton  | 4.86 | 4.00 | 5.15 | 1.15 | 32,999 | 33,800 | 38,094 | 4,294 |
| Tewksbury  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Tyngsborough  | 2.04 | 1.00 | 1.00 | 0.00 | 13,740 | 6,700 | 6,700 | 0 |
| Uxbridge  | 4.00 | 3.00 | 1.00 | -2.00 | 26,800 | 20,100 | 6,700 | -13,400 |
| Wakefield  |  | 3.24 | 3.24 |  |  | 21,764 | 21,764 |
| Waltham  | 3.00 | 4.00 | 4.50 | 0.50 | 20,100 | 26,800 | 30,188 | 3,388 |
| Ware  | 8.21 | 6.00 | 5.29 | -0.71 | 55,183 | 40,200 | 35,497 | -4,703 |
| Wareham  | 2.80 | 6.00 | 7.16 | 1.16 | 19,099 | 40,200 | 48,379 | 8,179 |
| Watertown  | 2.00 | 3.00 | 3.00 | 0.00 | 13,400 | 20,100 | 20,100 | 0 |
| Webster  | 1.00 | 3.00 | 2.51 | -0.49 | 6,700 | 24,100 | 20,704 | -3,396 |
| Westborough  | 0.27 | 0.00 | 0.00 | 0.00 | 1,864 | 0 | 0 | 0 |
| West Boylston  | 2.00 | 2.00 | 2.00 | 0.00 | 13,400 | 13,400 | 13,400 | 0 |
| West Bridgewater  | 1.72 | 0.00 | 0.00 | 0.00 | 11,620 | 0 | 0 | 0 |
| Westfield  | 3.35 | 9.00 | 9.07 | 0.07 | 25,692 | 66,468 | 67,787 | 1,319 |
| Westford  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| West Springfield  | 12.68 | 8.00 | 8.00 | 0.00 | 85,131 | 57,600 | 54,763 | -2,837 |
| Weymouth  | 5.79 | 4.00 | 4.00 | 0.00 | 38,884 | 26,800 | 26,800 | 0 |
| Wilmington  | 1.00 | 0.92 | -0.08 |  | 10,700 | 6,906 | -3,794 |
| Winchendon  | 5.98 | 3.00 | 3.77 | 0.77 | 43,192 | 23,224 | 26,572 | 3,348 |
| Winchester  | 3.00 | 3.00 | 3.00 | 0.00 | 20,100 | 20,100 | 20,100 | 0 |
| Winthrop  | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 6,700 | 6,700 | 0 |
| Woburn | 1.00 | 1.38 | 0.38 |  | 6,700 | 9,368 | 2,668 |
| Worcester  | 23.00 | 15.00 | 14.07 | -0.93 | 154,653 | 100,500 | 94,639 | -5,861 |
| Acton Boxborough  | 2.00 | 1.00 | 1.00 | 0.00 | 13,400 | 6,700 | 6,700 | 0 |
| Adams Cheshire  | 0.51 | 0.51 |  |  | 4,226 | 4,226 |
| Amherst Pelham  | 2.00 | 2.00 | 2.30 | 0.30 | 13,400 | 13,400 | 16,313 | 2,913 |
| Ashburnham Westminster  | 1.22 | 1.00 | 1.00 | 0.00 | 9,337 | 7,439 | 7,488 | 49 |
| Athol Royalston  | 8.14 | 11.00 | 6.76 | -4.24 | 57,562 | 76,157 | 49,464 | -26,693 |
| Ayer Shirley | 2.00 | 2.00 | 2.00 | 0.00 | 17,967 | 13,400 | 13,400 | 0 |
| Berkshire Hills  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Bridgewater Raynham  | 2.06 | 1.00 | 1.42 | 0.42 | 21,560 | 6,700 | 9,558 | 2,858 |
| Central Berkshire  | 3.15 | 2.00 | 2.00 | 0.00 | 23,798 | 16,028 | 18,492 | 2,464 |
| Dennis Yarmouth  | 3.00 | 1.00 | 1.00 | 0.00 | 20,702 | 6,700 | 6,700 | 0 |
| Dighton Rehoboth  | 2.59 | 3.00 | 3.74 | 0.74 | 17,459 | 20,100 | 25,078 | 4,978 |
| Dover Sherborn  | 3.00 | 1.00 | 1.00 | 0.00 | 20,100 | 6,700 | 6,700 | 0 |
| Dudley Charlton  | 2.17 | 3.00 | 2.94 | -0.06 | 14,705 | 20,100 | 19,703 | -397 |
| Nauset  | 1.00 | 0.00 | 0.78 | 0.78 | 6,700 | 0 | 5,243 | 5,243 |
| Freetown Lakeville  | 3.94 | 2.00 | 2.00 | 0.00 | 26,403 | 13,400 | 13,400 | 0 |
| Frontier  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Gateway  | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 6,700 | 6,700 | 0 |
| Groton Dunstable  | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 6,700 | 6,700 | 0 |
| Gill Montague  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Hamilton Wenham  | 3.00 | 1.00 | 1.00 | 0.00 | 20,100 | 6,700 | 6,700 | 0 |
| Hampden Wilbraham  | 4.40 | 1.00 | 1.00 | 0.00 | 29,526 | 6,700 | 6,700 | 0 |
| Hampshire  | 5.00 | 6.00 | 6.00 | 0.00 | 33,500 | 40,200 | 40,200 | 0 |
| King Philip  | 0.06 | 2.00 | 1.43 | -0.57 | 473 | 20,400 | 10,460 | -9,940 |
| Manchester Essex | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Martha’s Vineyard  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Mendon Upton  | 2.00 | 2.00 | 1.34 | -0.66 | 13,400 | 13,400 | 9,028 | -4,372 |
| Monomoy | 1.00 | 2.00 | 1.26 | -0.74 | 6,700 | 17,400 | 8,498 | -8,902 |
| Mount Greylock  | 2.00 | 1.00 | 1.00 | 0.00 | 13,400 | 6,700 | 6,700 | 0 |
| Mohawk Trail  | 2.00 | 3.00 | 2.03 | -0.97 | 13,400 | 24,100 | 15,258 | -8,842 |
| Narragansett  | 0.25 | 0.00 | 0.00 | 0.00 | 1,731 | 0 | 0 | 0 |
| Nashoba  | 2.78 | 0.00 | 1.62 | 1.62 | 18,642 | 0 | 10,882 | 10,882 |
| New Salem Wendell  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Northboro Southboro  | 0.47 | 1.00 | 0.46 | -0.54 | 3,189 | 6,700 | 3,123 | -3,577 |
| North Middlesex  | 2.55 | 5.00 | 4.26 | -0.74 | 17,119 | 33,500 | 28,598 | -4,902 |
| Old Rochester  | 1.00 | 1.00 | 0.00 |  | 9,670 | 7,936 | -1,734 |
| Pentucket  | 1.92 | 1.00 | 1.00 | 0.00 | 14,715 | 8,545 | 8,177 | -368 |
| Pioneer  | 1.52 | 1.00 | 1.00 | 0.00 | 10,220 | 6,700 | 6,700 | 0 |
| Quabbin  | 4.41 | 7.00 | 7.68 | 0.68 | 39,549 | 62,247 | 61,573 | -674 |
| Ralph C Mahar  | 2.08 | 1.00 | 0.53 | -0.47 | 14,006 | 6,700 | 3,662 | -3,038 |
| Silver Lake  | 2.00 | 1.97 | -0.03 |  | 13,400 | 13,201 | -199 |
| Somerset Berkley | 0.29 | 0.00 | 0.00 | 0.00 | 1,996 | 0 | 0 | 0 |
| Southern Berkshire  | 3.55 | 0.00 | 0.00 | 0.00 | 23,819 | 0 | 0 | 0 |
| Southwick Tolland | 1.00 | 1.00 | 1.00 | 0.00 | 6,700 | 6,700 | 6,700 | 0 |
| Spencer East Brookfield  | 1.15 | 1.00 | 1.39 | 0.39 | 8,073 | 10,700 | 10,016 | -684 |
| Tantasqua  | 1.00 | 2.00 | 1.00 |  | 6,700 | 13,400 | 6,700 |
| Triton  | 0.11 | 1.00 | 1.55 | 0.55 | 804 | 6,700 | 10,419 | 3,719 |
| Wachusett  | 8.22 | 7.00 | 5.95 | -1.05 | 55,261 | 46,900 | 39,944 | -6,956 |
| Quaboag | 1.00 | 0.98 | -0.02 |  | 6,700 | 6,568 | -132 |
| Whitman Hanson  | 1.00 | 2.00 | 1.97 | -0.03 | 6,700 | 13,400 | 13,201 | -199 |

# Appendix C: FY2016 Student FTE and Tuition by Sending District, TECCA

| FY2016 Student FTE and Tuition by Sending District, TECCA |
| --- |
| Full Time Equivalent | Full Time Equivalent | Full Time Equivalent |
| **District** | **Jun '15** | **Dec '16** | **Jun '16** | **Change** | **Jun '15** | **Dec '16** | **Jun '16** | **Change** |
| Abington  | 1.57 | 3.00 | 4.10 | 1.10 | 11,022 | 20,100 | 27,613 | 7,513 |
| Acushnet  | 1.00 | 3.16 | 2.16 |  | 6,700 | 21,235 | 14,535 |
| Agawam  | 0.43 | 2.00 | 2.60 | 0.60 | 2,924 | 13,400 | 17,450 | 4,050 |
| Amesbury  | 3.82 | 8.00 | 6.32 | -1.68 | 28,458 | 63,315 | 43,244 | -20,071 |
| Andover  | 3.83 | 2.00 | 2.00 | 0.00 | 25,749 | 17,400 | 14,767 | -2,633 |
| Arlington  | 0.43 | 0.00 | 0.78 | 0.78 | 2,924 | 0 | 5,243 | 5,243 |
| Ashland  | 0.50 | 1.86 | 1.36 |  | 3,388 | 12,620 | 9,232 |
| Attleboro  | 6.81 | 10.00 | 9.72 | -0.28 | 47,164 | 71,000 | 66,566 | -4,434 |
| Auburn  | 0.29 | 0.00 | 0.62 | 0.62 | 1,996 | 0 | 4,335 | 4,335 |
| Avon  | 0.49 | 0.00 | 0.47 | 0.47 | 3,458 | 0 | 3,967 | 3,967 |
| Barnstable  | 2.72 | 5.00 | 5.41 | 0.41 | 18,395 | 41,500 | 39,254 | -2,246 |
| Bedford  | 0.90 | 0.00 | 1.16 | 1.16 | 6,113 | 0 | 8,265 | 8,265 |
| Belchertown  | 5.21 | 7.00 | 7.06 | 0.06 | 35,207 | 50,900 | 48,339 | -2,561 |
| Bellingham  | 6.44 | 10.00 | 9.25 | -0.75 | 44,259 | 71,000 | 62,325 | -8,675 |
| Belmont  | 1.30 | 1.30 |  |  | 8,920 | 8,920 |
| Beverly  | 6.72 | 11.00 | 11.94 | 0.94 | 47,367 | 79,376 | 85,591 | 6,215 |
| Billerica  | 5.11 | 5.00 | 5.42 | 0.42 | 34,305 | 41,500 | 40,903 | -597 |
| Boston  | 25.22 | 41.00 | 43.83 | 2.83 | 172,984 | 292,614 | 300,422 | 7,808 |
| Bourne  | 1.69 | 0.00 | 0.00 | 0.00 | 12,138 | 0 | 0 | 0 |
| Braintree  | 1.57 | 1.00 | 2.43 | 1.43 | 10,627 | 6,700 | 16,520 | 9,820 |
| Brockton  | 8.75 | 14.00 | 14.43 | 0.43 | 60,207 | 106,505 | 99,419 | -7,086 |
| Brookline  | 1.00 | 1.31 | 0.31 |  | 6,700 | 8,829 | 2,129 |
| Burlington  | 2.50 | 3.00 | 3.88 | 0.88 | 16,788 | 20,100 | 26,005 | 5,905 |
| Cambridge  | 2.90 | 3.00 | 3.41 | 0.41 | 19,479 | 20,100 | 22,891 | 2,791 |
| Canton  | 0.03 | 1.00 | 1.40 | 0.40 | 274 | 6,700 | 9,836 | 3,136 |
| Carver  | 0.50 | 3.00 | 0.88 | -2.12 | 3,502 | 20,100 | 6,422 | -13,678 |
| Chelmsford  | 2.41 | 5.00 | 3.31 | -1.69 | 17,114 | 45,500 | 23,046 | -22,454 |
| Chelsea  | 1.20 | 1.00 | 3.18 | 2.18 | 8,100 | 6,700 | 21,518 | 14,818 |
| Chicopee  | 4.54 | 8.50 | 10.37 | 1.87 | 30,637 | 56,988 | 70,316 | 13,328 |
| Clinton  | 2.93 | 2.00 | 1.20 | -0.80 | 19,711 | 13,400 | 8,100 | -5,300 |
| Concord  | 0.78 | 2.00 | 2.00 | 0.00 | 5,243 | 13,400 | 13,400 | 0 |
| Danvers  | 3.27 | 5.00 | 6.78 | 1.78 | 23,100 | 34,223 | 46,277 | 12,054 |
| Dartmouth  | 0.70 | 1.00 | 3.00 | 2.00 | 4,863 | 6,700 | 20,175 | 13,475 |
| Dedham  | 1.20 | 1.00 | 0.14 | -0.86 | 8,100 | 6,700 | 1,003 | -5,697 |
| Douglas  | 0.56 | 3.00 | 3.47 | 0.47 | 3,861 | 20,100 | 23,416 | 3,316 |
| Dracut  | 0.77 | 4.00 | 4.42 | 0.42 | 5,251 | 26,800 | 29,658 | 2,858 |
| Duxbury  | 0.71 | 1.00 | 1.77 | 0.77 | 4,779 | 6,700 | 12,477 | 5,777 |
| East Bridgewater  | 2.37 | 1.00 | 1.00 | 0.00 | 16,002 | 6,700 | 6,700 | 0 |
| Easthampton  | 0.18 | 1.00 | 1.00 | 0.00 | 1,309 | 6,700 | 6,700 | 0 |
| East Longmeadow  | 2.00 | 2.57 | 0.57 |  | 17,400 | 20,834 | 3,434 |
| Easton  | 2.18 | 2.00 | 3.64 | 1.64 | 14,668 | 17,400 | 25,857 | 8,457 |
| Everett  | 3.45 | 1.00 | 1.26 | 0.26 | 23,456 | 6,776 | 8,649 | 1,873 |
| Fairhaven  | 0.81 | 1.00 | 1.54 | 0.54 | 5,701 | 10,700 | 11,532 | 832 |
| Fall River  | 8.87 | 11.00 | 11.59 | 0.59 | 61,988 | 83,799 | 88,716 | 4,917 |
| Falmouth  | 3.20 | 3.00 | 4.14 | 1.14 | 22,484 | 21,008 | 30,662 | 9,654 |
| Fitchburg  | 5.71 | 9.00 | 9.81 | 0.81 | 39,089 | 68,300 | 67,049 | -1,251 |
| Foxborough  | 0.17 | 1.00 | 1.87 | 0.87 | 1,201 | 6,700 | 12,539 | 5,839 |
| Framingham  | 3.34 | 15.00 | 10.45 | -4.55 | 22,653 | 112,500 | 71,561 | -40,939 |
| Franklin  | 5.66 | 7.00 | 7.21 | 0.21 | 41,575 | 53,033 | 54,736 | 1,703 |
| Gardner  | 3.84 | 5.00 | 8.56 | 3.56 | 26,235 | 33,500 | 57,769 | 24,269 |
| Georgetown  | 3.11 | 3.00 | 3.48 | 0.48 | 21,587 | 20,100 | 23,355 | 3,255 |
| Gloucester  | 2.00 | 3.91 | 1.91 |  | 13,400 | 26,279 | 12,879 |
| Grafton  | 4.72 | 4.00 | 7.19 | 3.19 | 32,049 | 30,800 | 48,809 | 18,009 |
| Granby  | 1.00 | 2.00 | 1.90 | -0.10 | 7,696 | 14,396 | 13,100 | -1,296 |
| Greenfield  | 0.97 | 2.50 | 2.90 | 0.40 | 8,555 | 18,842 | 22,942 | 4,100 |
| Hadley  | 3.35 | 4.00 | 5.33 | 1.33 | 23,033 | 27,339 | 39,999 | 12,660 |
| Hatfield  |  | 0.03 | 0.03 |  |  | 274 | 274 |
| Haverhill  | 4.92 | 12.50 | 10.52 | -1.98 | 33,393 | 95,788 | 72,767 | -23,021 |
| Hingham  | 3.00 | 2.96 | -0.04 |  | 28,100 | 20,652 | -7,448 |
| Holbrook  | 1.48 | 2.00 | 1.99 | -0.01 | 9,955 | 13,400 | 13,334 | -66 |
| Holland  |  | 0.52 | 0.52 |  |  | 3,520 | 3,520 |
| Holliston  | 2.32 | 4.00 | 3.99 | -0.01 | 16,737 | 30,800 | 27,115 | -3,685 |
| Holyoke  | 0.58 | 6.00 | 3.83 | -2.17 | 3,992 | 40,200 | 26,050 | -14,150 |
| Hopedale  | 2.17 | 3.00 | 4.39 | 1.39 | 14,601 | 20,100 | 31,031 | 10,931 |
| Hopkinton  | 3.00 | 4.44 | 1.44 |  | 24,100 | 30,129 | 6,029 |
| Hudson  | 2.89 | 5.00 | 7.30 | 2.30 | 19,623 | 41,500 | 51,794 | 10,294 |
| Hull  | 2.69 | 3.00 | 3.13 | 0.13 | 18,736 | 20,789 | 21,348 | 559 |
| Ipswich  | 1.85 | 4.00 | 3.89 | -0.11 | 12,407 | 26,800 | 26,147 | -653 |
| Lawrence  | 3.57 | 14.50 | 10.41 | -4.09 | 24,102 | 109,188 | 72,480 | -36,708 |
| Lee  | 1.88 | 1.00 | 1.00 | 0.00 | 13,691 | 6,700 | 6,700 | 0 |
| Leicester  | 0.24 | 0.00 | 0.02 | 0.02 | 1,665 | 0 | 208 | 208 |
| Lenox  | 2.07 | 0.00 | 0.00 | 0.00 | 13,939 | 0 | 0 | 0 |
| Leominster  | 7.34 | 8.00 | 8.65 | 0.65 | 53,156 | 60,064 | 62,411 | 2,347 |
| Leverett  | 0.34 | 1.00 | 0.37 | -0.63 | 2,328 | 6,700 | 2,526 | -4,174 |
| Lexington  | 1.43 | 4.00 | 4.34 | 0.34 | 10,525 | 26,800 | 29,128 | 2,328 |
| Littleton  | 1.00 | 1.00 | 0.00 |  | 10,700 | 8,831 | -1,869 |
| Longmeadow  | 1.00 | 0.00 | 1.06 | 1.06 | 6,881 | 0 | 7,248 | 7,248 |
| Lowell  | 5.80 | 18.00 | 20.31 | 2.31 | 42,223 | 128,600 | 139,908 | 11,308 |
| Ludlow  | 1.25 | 2.00 | 2.03 | 0.03 | 8,432 | 13,400 | 13,674 | 274 |
| Lunenburg  | 1.00 | 0.68 | -0.32 |  | 6,700 | 4,656 | -2,044 |
| Lynn  | 12.61 | 16.00 | 17.82 | 1.82 | 89,252 | 118,530 | 124,892 | 6,362 |
| Malden  | 1.48 | 2.00 | 2.38 | 0.38 | 11,046 | 13,400 | 15,993 | 2,593 |
| Mansfield  | 0.27 | 0.00 | 0.00 | 0.00 | 1,864 | 0 | 0 | 0 |
| Marblehead  | 0.60 | 1.00 | 1.41 | 0.41 | 4,221 | 10,700 | 9,777 | -923 |
| Marlborough  | 3.75 | 4.50 | 4.34 | -0.16 | 25,637 | 34,188 | 29,399 | -4,789 |
| Marshfield  | 1.94 | 4.00 | 5.14 | 1.14 | 13,153 | 26,800 | 36,422 | 9,622 |
| Mashpee  |  | 0.28 | 0.28 |  |  | 2,005 | 2,005 |
| Mattapoisett  | 0.39 | 2.00 | 1.33 | -0.67 | 3,740 | 14,481 | 10,208 | -4,273 |
| Medfield  | 0.22 | 3.00 | 4.17 | 1.17 | 1,533 | 24,100 | 30,402 | 6,302 |
| Medford  | 2.75 | 6.00 | 4.98 | -1.02 | 19,089 | 47,200 | 40,221 | -6,979 |
| Medway  | 1.00 | 2.00 | 1.73 | -0.27 | 6,700 | 13,400 | 11,904 | -1,496 |
| Melrose  | 1.84 | 0.00 | 0.00 | 0.00 | 12,910 | 0 | 0 | 0 |
| Methuen  | 1.34 | 8.00 | 10.58 | 2.58 | 9,179 | 57,600 | 73,932 | 16,332 |
| Middleborough  | 4.44 | 6.00 | 8.45 | 2.45 | 30,849 | 44,814 | 57,629 | 12,815 |
| Milford  | 5.69 | 6.00 | 6.87 | 0.87 | 40,434 | 53,172 | 49,841 | -3,331 |
| Millbury  | 1.90 | 3.00 | 3.00 | 0.00 | 12,813 | 20,100 | 20,460 | 360 |
| Millis  | 1.53 | 3.00 | 3.80 | 0.80 | 10,850 | 24,664 | 26,303 | 1,639 |
| Milton  | 2.00 | 2.00 | 0.00 |  | 13,400 | 13,400 | 0 |
| Monson  | 1.58 | 0.00 | 0.00 | 0.00 | 10,844 | 0 | 0 | 0 |
| Nantucket  |  | 0.62 | 0.62 |  |  | 4,183 | 4,183 |
| Natick  | 4.66 | 4.00 | 2.85 | -1.15 | 33,077 | 31,694 | 20,661 | -11,033 |
| Needham  | 1.41 | 5.00 | 4.91 | -0.09 | 9,491 | 37,500 | 33,205 | -4,295 |
| New Bedford  | 5.78 | 5.00 | 9.66 | 4.66 | 39,355 | 33,500 | 65,431 | 31,931 |
| Newburyport  | 1.00 | 1.29 | 0.29 |  | 10,700 | 10,268 | -432 |
| Newton  | 0.22 | 5.00 | 3.32 | -1.68 | 1,533 | 37,500 | 22,446 | -15,054 |
| North Adams  | 2.85 | 4.00 | 2.54 | -1.46 | 19,426 | 34,800 | 17,450 | -17,350 |
| Northampton  | 0.95 | 4.00 | 3.99 | -0.01 | 8,952 | 29,383 | 27,820 | -1,563 |
| North Andover  | 0.78 | 0.00 | 0.00 | 0.00 | 5,243 | 0 | 0 | 0 |
| North Attleborough  | 0.29 | 1.00 | 2.90 | 1.90 | 2,072 | 6,700 | 20,306 | 13,606 |
| Northborough  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Northbridge  | 1.00 | 3.96 | 2.96 |  | 6,700 | 27,331 | 20,631 |
| North Brookfield  | 1.63 | 3.50 | 3.50 | 0.00 | 12,300 | 24,764 | 24,026 | -738 |
| North Reading  | 2.01 | 2.00 | 2.74 | 0.74 | 13,542 | 13,400 | 18,378 | 4,978 |
| Norton  | 0.90 | 5.00 | 5.82 | 0.82 | 6,375 | 33,500 | 39,598 | 6,098 |
| Norwell  | 1.00 | 1.00 | 0.00 |  | 10,700 | 6,941 | -3,759 |
| Norwood  | 2.49 | 3.00 | 1.65 | -1.35 | 16,881 | 24,100 | 11,330 | -12,770 |
| Orange  | 1.00 | 1.40 | 0.40 |  | 6,700 | 9,425 | 2,725 |
| Orleans  |  | 0.49 | 0.49 |  |  | 3,321 | 3,321 |
| Oxford  | 7.21 | 9.00 | 7.74 | -1.26 | 48,593 | 72,300 | 52,817 | -19,483 |
| Palmer  | 3.25 | 5.00 | 4.97 | -0.03 | 23,063 | 34,732 | 36,117 | 1,385 |
| Peabody  | 2.10 | 3.00 | 3.73 | 0.73 | 14,138 | 20,100 | 25,827 | 5,727 |
| Pembroke  | 3.57 | 3.00 | 2.51 | -0.49 | 24,136 | 20,100 | 16,929 | -3,171 |
| Pittsfield  | 3.69 | 8.00 | 10.42 | 2.42 | 25,275 | 57,600 | 73,444 | 15,844 |
| Plymouth  | 6.46 | 5.00 | 5.82 | 0.82 | 43,473 | 41,500 | 40,085 | -1,415 |
| Quincy  | 2.47 | 5.00 | 3.23 | -1.77 | 17,973 | 38,809 | 23,783 | -15,026 |
| Randolph  | 0.31 | 6.00 | 5.03 | -0.97 | 2,185 | 44,200 | 35,085 | -9,115 |
| Reading  |  | 1.32 | 1.32 |  |  | 10,182 | 10,182 |
| Revere  | 0.94 | 2.00 | 1.96 | -0.04 | 6,419 | 13,400 | 13,135 | -265 |
| Rockland  | 5.90 | 6.00 | 5.67 | -0.33 | 39,538 | 40,200 | 38,089 | -2,111 |
| Rockport  | 0.87 | 0.00 | 0.00 | 0.00 | 5,839 | 0 | 0 | 0 |
| Salem  | 2.88 | 3.00 | 4.07 | 1.07 | 19,597 | 24,100 | 28,232 | 4,132 |
| Sandwich  | 2.84 | 5.00 | 8.31 | 3.31 | 19,228 | 41,500 | 58,759 | 17,259 |
| Saugus  | 1.33 | 2.00 | 2.28 | 0.28 | 9,037 | 13,400 | 15,405 | 2,005 |
| Scituate  | 1.04 | 0.00 | 1.30 | 1.30 | 7,040 | 0 | 9,081 | 9,081 |
| Seekonk  | 0.81 | 2.00 | 3.30 | 1.30 | 5,779 | 20,400 | 24,931 | 4,531 |
| Sharon  | 1.00 | 1.00 | 0.00 |  | 10,700 | 7,856 | -2,844 |
| Shrewsbury  | 5.78 | 6.00 | 5.18 | -0.82 | 39,043 | 44,200 | 35,914 | -8,286 |
| Shutesbury  |  | 0.03 | 0.03 |  |  | 241 | 241 |
| Somerset  | 1.00 | 1.45 | 0.45 |  | 10,700 | 12,026 | 1,326 |
| Somerville  | 1.08 | 0.00 | 0.00 | 0.00 | 7,305 | 0 | 0 | 0 |
| Southborough  | 0.42 | 2.00 | 1.17 | -0.83 | 2,858 | 13,400 | 7,901 | -5,499 |
| Southbridge  | 4.81 | 4.00 | 3.23 | -0.77 | 32,648 | 26,800 | 21,848 | -4,952 |
| South Hadley  | 0.53 | 2.00 | 2.00 | 0.00 | 3,662 | 13,400 | 13,400 | 0 |
| Springfield  | 22.27 | 32.00 | 36.62 | 4.62 | 153,999 | 222,476 | 250,991 | 28,515 |
| Stoneham  |  | 0.47 | 0.47 |  |  | 3,351 | 3,351 |
| Stoughton  | 5.09 | 7.00 | 6.63 | -0.37 | 34,248 | 51,052 | 47,225 | -3,827 |
| Sutton  | 1.00 | 1.00 | 1.08 | 0.08 | 6,700 | 6,700 | 7,305 | 605 |
| Swampscott  | 0.49 | 3.00 | 3.88 | 0.88 | 3,321 | 20,100 | 26,837 | 6,737 |
| Swansea  | 1.00 | 2.00 | 2.00 | 0.00 | 6,776 | 13,400 | 13,400 | 0 |
| Taunton  | 6.49 | 7.50 | 11.10 | 3.60 | 43,521 | 54,288 | 75,376 | 21,088 |
| Tewksbury  | 2.06 | 6.00 | 4.95 | -1.05 | 14,229 | 44,200 | 33,779 | -10,421 |
| Truro  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Tyngsborough  | 0.89 | 1.00 | 1.00 | 0.00 | 6,064 | 6,700 | 6,700 | 0 |
| Uxbridge  | 1.61 | 2.00 | 0.81 | -1.19 | 10,816 | 13,400 | 5,633 | -7,767 |
| Wakefield  | 1.03 | 4.00 | 5.21 | 1.21 | 6,974 | 26,800 | 35,042 | 8,242 |
| Walpole  | 2.70 | 3.50 | 3.88 | 0.38 | 18,605 | 27,488 | 26,499 | -989 |
| Waltham  | 0.46 | 3.00 | 3.83 | 0.83 | 3,123 | 20,100 | 25,824 | 5,724 |
| Ware  | 2.00 | 0.91 | -1.09 |  | 21,400 | 6,441 | -14,959 |
| Wareham  | 4.38 | 5.00 | 8.03 | 3.03 | 31,950 | 55,307 | 58,347 | 3,040 |
| Watertown  | 2.51 | 4.00 | 5.32 | 1.32 | 17,578 | 26,800 | 36,984 | 10,184 |
| Wayland  | 1.00 | 1.95 | 0.95 |  | 6,700 | 13,144 | 6,444 |
| Webster  | 2.43 | 4.00 | 5.24 | 1.24 | 18,668 | 28,247 | 37,197 | 8,950 |
| Westborough  | 0.99 | 1.00 | 1.00 | 0.00 | 8,143 | 6,700 | 6,700 | 0 |
| West Boylston  | 2.82 | 2.00 | 2.00 | 0.00 | 18,982 | 13,400 | 13,400 | 0 |
| West Bridgewater  | 1.93 | 2.00 | 2.44 | 0.44 | 13,293 | 17,400 | 16,740 | -660 |
| Westfield  | 3.21 | 3.00 | 3.35 | 0.35 | 21,641 | 20,100 | 22,726 | 2,626 |
| Westford  | 1.00 | 3.00 | 3.41 | 0.41 | 6,886 | 20,100 | 23,216 | 3,116 |
| Weston  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Westport  | 0.83 | 2.00 | 3.26 | 1.26 | 6,182 | 13,933 | 23,637 | 9,704 |
| West Springfield  | 1.00 | 4.00 | 5.93 | 1.93 | 7,112 | 37,800 | 40,730 | 2,930 |
| Westwood  | 0.19 | 0.00 | 0.00 | 0.00 | 1,334 | 0 | 0 | 0 |
| Weymouth  | 2.15 | 10.00 | 9.50 | -0.50 | 14,980 | 71,000 | 67,824 | -3,176 |
| Williamstown  | 0.12 | 0.00 | 0.00 | 0.00 | 945 | 0 | 0 | 0 |
| Wilmington  | 0.90 | 0.00 | 0.16 | 0.16 | 6,038 | 0 | 1,135 | 1,135 |
| Winchendon  | 0.07 | 1.00 | 2.84 | 1.84 | 539 | 6,700 | 19,190 | 12,490 |
| Winchester  | 1.00 | 0.80 | -0.20 |  | 10,700 | 8,083 | -2,617 |
| Winthrop  | 0.71 | 1.00 | 1.85 | 0.85 | 4,929 | 6,700 | 12,482 | 5,782 |
| Woburn | 1.91 | 0.00 | 2.48 | 2.48 | 12,954 | 0 | 16,864 | 16,864 |
| Worcester  | 15.00 | 30.50 | 30.37 | -0.13 | 104,216 | 219,924 | 209,780 | -10,144 |
| Acton Boxborough  | 0.22 | 0.00 | 0.00 | 0.00 | 1,583 | 0 | 0 | 0 |
| Adams Cheshire  | 1.00 | 1.02 | 0.02 |  | 10,700 | 10,398 | -302 |
| Amherst Pelham  | 2.83 | 3.00 | 2.84 | -0.16 | 18,974 | 24,100 | 19,317 | -4,783 |
| Ashburnham Westminster  | 2.04 | 6.00 | 6.01 | 0.01 | 13,837 | 40,200 | 40,416 | 216 |
| Athol Royalston  | 2.66 | 5.00 | 7.71 | 2.71 | 17,848 | 41,500 | 54,264 | 12,764 |
| Ayer Shirley | 2.00 | 2.50 | 2.69 | 0.19 | 13,400 | 16,788 | 18,266 | 1,478 |
| Berkshire Hills  | 0.42 | 0.00 | 0.00 | 0.00 | 2,858 | 0 | 0 | 0 |
| Berlin Boylston  | 0.99 | 3.00 | 3.00 | 0.00 | 6,634 | 20,100 | 20,100 | 0 |
| Blackstone Millville  | 2.11 | 5.50 | 5.26 | -0.24 | 14,455 | 36,888 | 35,373 | -1,515 |
| Bridgewater Raynham  | 1.56 | 2.00 | 1.99 | -0.01 | 11,712 | 13,400 | 13,409 | 9 |
| Central Berkshire  | 0.14 | 1.00 | 1.48 | 0.48 | 1,003 | 6,700 | 9,955 | 3,255 |
| Concord Carlisle  | 1.00 | 1.88 | 0.88 |  | 6,700 | 12,742 | 6,042 |
| Dennis Yarmouth  | 1.00 | 4.00 | 9.05 | 5.05 | 6,700 | 26,800 | 61,508 | 34,708 |
| Dighton Rehoboth  | 1.00 | 0.00 | 0.00 | 0.00 | 6,700 | 0 | 0 | 0 |
| Dover Sherborn  | 1.31 | 1.00 | 2.54 | 1.54 | 8,829 | 6,700 | 17,053 | 10,353 |
| Dudley Charlton  | 4.45 | 9.50 | 10.78 | 1.28 | 30,705 | 71,688 | 73,239 | 1,551 |
| Nauset  | 1.36 | 4.00 | 3.23 | -0.77 | 9,625 | 38,562 | 22,783 | -15,779 |
| Freetown Lakeville  | 5.04 | 3.00 | 2.25 | -0.75 | 34,192 | 24,100 | 16,412 | -7,688 |
| Frontier  | 1.00 | 0.00 | 0.49 | 0.49 | 6,700 | 0 | 3,447 | 3,447 |
| Gateway  | 0.19 | 1.00 | 0.14 | -0.86 | 1,559 | 6,700 | 1,003 | -5,697 |
| Groton Dunstable  | 1.00 | 3.00 | 2.99 | -0.01 | 8,170 | 21,570 | 20,585 | -985 |
| Hamilton Wenham  | 2.00 | 2.03 | 0.03 |  | 17,400 | 14,281 | -3,119 |
| Hampden Wilbraham  | 0.09 | 2.00 | 1.53 | -0.47 | 680 | 21,400 | 10,936 | -10,464 |
| Hampshire  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| King Philip  | 1.13 | 5.00 | 6.65 | 1.65 | 7,711 | 33,500 | 45,139 | 11,639 |
| Lincoln Sudbury  | 1.00 | 1.02 | 0.02 |  | 6,700 | 6,908 | 208 |
| Manchester Essex |  | 1.58 | 1.58 |  |  | 10,693 | 10,693 |
| Marthas Vineyard  | 0.04 | 1.00 | 1.48 | 0.48 | 340 | 10,700 | 11,152 | 452 |
| Masconomet  | 1.00 | 1.00 | 0.00 |  | 6,700 | 6,700 | 0 |
| Mendon Upton  | 1.00 | 1.40 | 0.40 |  | 6,700 | 9,425 | 2,725 |
| Monomoy | 1.44 | 2.00 | 3.81 | 1.81 | 14,452 | 29,400 | 41,152 | 11,752 |
| Mount Greylock  | 0.84 | 2.00 | 0.57 | -1.43 | 5,640 | 13,400 | 3,927 | -9,473 |
| Narragansett  | 1.46 | 2.00 | 2.00 | 0.00 | 9,823 | 13,400 | 13,400 | 0 |
| Nashoba  | 2.73 | 1.00 | 1.21 | 0.21 | 18,782 | 6,700 | 8,643 | 1,943 |
| Northboro Southboro  | 0.19 | 0.00 | 0.48 | 0.48 | 1,374 | 0 | 3,255 | 3,255 |
| North Middlesex  | 0.41 | 2.00 | 1.09 | -0.91 | 2,791 | 13,400 | 7,521 | -5,879 |
| Old Rochester  | 0.97 | 5.00 | 2.81 | -2.19 | 6,501 | 33,500 | 19,718 | -13,782 |
| Pentucket  | 1.74 | 2.00 | 2.48 | 0.48 | 11,833 | 13,400 | 16,807 | 3,407 |
| Pioneer  | 2.17 | 1.00 | 1.48 | 0.48 | 16,249 | 8,272 | 11,871 | 3,599 |
| Quabbin  | 0.30 | 5.00 | 5.62 | 0.62 | 2,063 | 33,500 | 38,049 | 4,549 |
| Ralph C Mahar  | 0.25 | 1.00 | 0.69 | -0.31 | 1,731 | 6,700 | 4,722 | -1,978 |
| Silver Lake  | 0.40 | 1.00 | 0.84 | -0.16 | 2,725 | 6,700 | 5,715 | -985 |
| Somerset Berkley | 0.36 | 1.00 | 1.45 | 0.45 | 2,460 | 6,700 | 9,756 | 3,056 |
| Spencer East Brookfield  | 3.43 | 2.00 | 2.96 | 0.96 | 25,369 | 13,400 | 19,981 | 6,581 |
| Tantasqua  | 2.61 | 2.00 | 2.07 | 0.07 | 17,591 | 13,400 | 13,939 | 539 |
| Triton  | 1.84 | 2.00 | 3.48 | 1.48 | 12,770 | 13,400 | 23,626 | 10,226 |
| Wachusett  | 5.43 | 7.00 | 9.82 | 2.82 | 38,341 | 54,900 | 67,406 | 12,506 |
| Quaboag | 1.11 | 1.00 | 3.54 | 2.54 | 7,504 | 6,700 | 24,124 | 17,424 |
| Whitman Hanson  | 5.07 | 4.00 | 3.18 | -0.82 | 34,836 | 27,520 | 21,899 | -5,621 |

# Appendix D: Terms of Certificate, GCVS (2016-2019)

1. **Name:**

 Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School (GCVS)

1. **Board of trustees:**

Christina Powell

Ruth-Ellen Verock-O’Loughlin

Chris Joseph

John Lunt

Daryl Essensa

Members of the boards of trustees of Commonwealth of Massachusetts virtual schools may not be paid for attendance at board meetings but may receive reimbursement of reasonable expenses.

1. **Term of certificate:**

July 1, 2016 through June 30, 2019

Note: See conditions related to probation that permit an earlier end to the Term of Certificate.

1. **Annual per pupil tuition rate:**

$6,700, with $75 per pupil retained by the Department of Elementary and Secondary Education for administration of the Commonwealth of Massachusetts virtual schools program. The cost of special education services shall be calculated in accordance with 603 CMR 10.07(3), and shall be added to the per pupil tuition amount unless such services are provided in kind by the sending district.

1. **Maximum enrollment and grade levels:**

Students must be 5 by September 1st of the year of enrollment.

|  |  |
| --- | --- |
| Grades | Enrollment |
| K-12 | 750 |

Note: See conditions related to enrolling no less than 5 percent of students who are Greenfield residents. These conditions require weekly enrollment reports and submission of budgets prospectively.

1. **Enrollment region:**

Commonwealth of Massachusetts

1. **Mission, purpose, and specialized focus:**

Massachusetts Virtual Academy at Greenfield [Commonwealth Virtual School], the Commonwealth’s first virtual K-12 public school, delivers a transformative education with unique strengths and flexibility perfectly suited for the modern world. Our approach encourages critical thinking and an independent learning style that meets the key needs of diverse learners by providing educational resources that cultivate curiosity, exploration and inquiry.

The school will serve primarily students in selected target groups, as indicated in the enrollment preferences.

1. **Educational program, instructional methodology, and services for students:**

The Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School will provide mastery-learning based using Core Knowledge, aligned with the Massachusetts Curriculum Frameworks and Common Core Standards. The school will deliver lessons in diverse ways to accommodate various learning styles and needs. The school will use the following instructional methods:

* **Individualized Learning Plans**;
* **A Learning Coach** to facilitate daily lessons and supervise and support students;
* **Computer and Printer Technology** to enable learning anytime, anywhere;
* **Software Management Programs** to give students and parents daily information about work to be accomplished and quality of work accomplished;
* **Daily Lesson Plans,** announcements, online school discussions, communication, and support tools;
* **Lectures and Discussions using** both small group and synchronous learning forums;
* **Online** **Classrooms** for interaction between faculty and students and cooperative learning opportunities for students to work together on a structured project;
* **Inquiry-based learning,** including learning labs and experiments; and
* **Demonstrations and Simulations** using synchronous classroom and video instruction.

For grades kindergarten through 8, the curriculum will use formative assessments to track progress and inform instruction. The school will offer high school students a broad selection of courses, including diverse electives, to enable students to meet graduation requirements and prepare for college and a career. The school will offer mathematics, English language arts, science, and history courses at a number of levels, including Advanced Placement. The school also will offer four years of foreign language for high school students. All high school students will be offered courses sufficient to meet MassCore requirements.

To assure students are fully engaged in learning with a home-coach model requires teachers to communicate regularly with parents via live synchronous sessions, email, and scheduled telephone conferences. Communications will occur as needed and at least twice monthly. Parents will review student assessment results and engage in discussion of interventions available to students as well as those supports being provided.

The school will provide opportunities for students to develop socially including but not limited to:

* social gatherings or activities provided regionally or statewide, including back-to-school picnics, academic field trips, and talent shows;
* school clubs in person and online for group activities;
* informing students and parents of resources available in their communities;
* parent gatherings;
* a lecture series on topics of interest and importance to students including drugs, alcohol, emotional and physical health, personal safety, interventions; and
* encouraging students to participate in community health, sport, and fitness programs.

The school will offer extra-curricular activities through online forums and physical outings.

1. **Governance and bylaws:**

A board of trustees of five to seven members. The board of trustees of the Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School will submit any amendments to its bylaws for the Department’s approval in accordance with the regulations for Commonwealth of Massachusetts Virtual Schools, 603 CMR 52.00.

1. **Proposed school year:**

Late August or early September through June.

1. **Enrollment policy and preferences:**

The Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School will provide an enrollment preference to:

1. Students who reside in Greenfield, Massachusetts;
2. Students with disabilities;
3. Students out of school due to pregnancy or parenting;
4. Students who have been bullied or who are out of school due to other safety concerns;
5. Students who seek an advanced coursework not available in their current school;
6. Students who must work during the day; and
7. Students in training for competitive arts or sports;

If more applicants are received than the commonwealth virtual school can admit within its enrollment limit, the Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School will admit students with an enrollment preference in the order of priority listed above and then will conduct an admissions lottery through using an impartial person. Students who do not receive an offer of admission will be placed on a waitlist. The Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School will submit an enrollment policy, procedure, and application to the Department of Elementary and Secondary Education for review and approval, such approval to have been received prior to admission of any students.

1. **The identity of third party software or curriculum vendor partnerships:**

Educational courses and teaching services, including management software, learning materials, and technical support services will be provided by K12, Inc.

Note: The school’s contract with K12, Inc., expires at the end of this school year and the school’s board has issued a Request for Proposals. Any change in vendor or terms of contract will require an amendment to the school’s Certificate.

1. **Proposed contract with management/operational organization, including payments:**

The board of trustees of the Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School will submit for the Department’s approval a proposed contract in accordance with the condition imposed on the commonwealth virtual school’s certificate.

Note: The school’s contract with K12, Inc., expires at the end of this school year and the school’s board has issued a Request for Proposals. Any change in vendor or terms of contract will require an amendment to the school’s Certificate.

1. **Demonstration of capacity to support and store all critical data in compliance with state and federal law:**

The Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School will contract with the Greenfield Public Schools for services to support and to store all critical data in compliance with state and federal law.

Note: Any change in vendor or terms of contract would require an amendment to the school’s Certificate.

# Appendix E: GCVS – Additional Conditions and Reporting Requirements

On February 23, 2016 the Board of Elementary and Secondary Education voted to renew the certificate for the Massachusetts Virtual Academy at Greenfield Commonwealth Virtual School (GCVS) for an additional three years (the minimum permitted by statute), from July 1, 2016 through June 30, 2019 and extend probation with additional conditions placed on the school’s certificate, as follows:

1. GCVS must continue to submit to the Department, at odl@doe.mass.edu or 75 Pleasant St., Malden, MA, 02148, board meeting agendas and materials prior to each board meeting at the same time that these items are sent to GCVS board members. Further, GCVS must submit to the Department the minutes of these proceedings as soon as the GCVS board approves them. The Department reserves the right to require the submission of additional information, such as quarterly or monthly financial statements, if board materials do not already include this information. GCVS must provide such additional information within two business days.
2. Effective immediately, GCVS must submit to the Department weekly student enrollment reports that indicate the number of students enrolled on a full-or part-time basis, including the number of students residing in Greenfield.
3. By May 1st of each year, GCVS must submit to the Department a budget for the following fiscal year that demonstrates how the school will provide a high quality education program while adhering to the requirement that not less than 5 percent of the students enrolled in GCVS are residents of Greenfield as required by G.L. c. 71, § 94(c).
4. By March 1, 2016, GCVS must submit to the Department a corrective action plan for ensuring that not less than 95 percent of all student groups participate in state assessments.
5. By March 31, 2016, the school must establish an escrow account in an amount determined by the Department in consultation with the school to pay for any potential closing, legal, and audit expenses associated with closure, should that occur.
6. Effective beginning in the 2016-17 school year, the enrollment of GCVS shall be limited to a maximum of 750 students.
7. By December 31, 2017, GCVS must demonstrate significant and sustained academic improvement in mathematics, English language arts, and science. Should the school fail to do so, the Commissioner and the Board of Elementary and Secondary Education will consider revoking the school’s charter effective June 30, 2018, and not wait until the end of the certificate term on June 30, 2019.

# Appendix F: Terms of Certificate, TECCA (2014-2017)

1. **Name:**

 TEC Connections Academy Commonwealth Virtual School (TECCA)

1. **Board of trustees:**

Jean Kenney

Liz Pape

Kirby Salerno

Peter Sanchioni

The board of trustees must include a minimum of five members. Members of the boards of trustees of Commonwealth of Massachusetts virtual schools may not be paid for attendance at board meetings but may receive reimbursement of reasonable expenses.

Note: The board of trustees must submit for the Commissioner’s approval a list of additional proposed board members who possess the needed skills and expertise to oversee the school, with a minimum of 5 total board members, and identify the board chair, no later than March 14, 2014. Further, all appointed and proposed trustees members of the board of trustees who also hold or held a position, whether paid or unpaid, with The Education Cooperative or its member school districts must request a written opinion from the State Ethics Commission. Upon receipt, such individuals must provide a copy of that opinion to the Department. For appointed trustees, that opinion must be requested no later than the close of business on March 14, 2014.

1. **Term of certificate:**

July 1, 2014 through June 30, 2017

1. **Annual per pupil tuition rate:**

$6,700, with $75 per pupil retained by the Department of Elementary and Secondary Education for administration of the Commonwealth of Massachusetts virtual schools program. The tuition for individual courses must be agreed upon between the virtual school and the sending districts. The virtual school may offer full time and individual courses to districts that are members of The Education Cooperative at a discount of no more than 50% of what other districts or schools are charged. The cost of special education services shall be calculated in accordance with 603 CMR 10.07(3), and shall be added to the per pupil tuition amount unless such services are provided in kind by the sending district.

1. **Maximum enrollment and grade levels:**

Students must be 5 by August 31st of the year of enrollment.

|  |  |  |
| --- | --- | --- |
| School Year | Grades | Enrollment |
| 2014-2015 | K-12 | 1000 |
| 2015-2016 | K-12 | 1500 |
| 2016-2017 | K-12 | 2000 |

1. **Enrollment region:**

Students who reside in the Commonwealth of Massachusetts

1. **Mission, purpose, and specialized focus:**

The mission of the TEC Connections Academy Commonwealth Virtual School is to provide a rigorous, effective virtual K–12 public school that provides students with multiple pathways to learn, communicate, collaborate and successfully compete for advancement in our global society whether they pursue college or career.

The school will serve primarily students in selected target groups, as indicated in the enrollment preferences.

1. **Educational program, instructional methodology, and services for students:**

The TEC Connections Academy Commonwealth Virtual School will offer a rigorous, effective curriculum aligned to the Massachusetts Curriculum Frameworks and utilize unique technology tools to help every student succeed, while also encouraging social growth. The school will use the following instructional methods:

* **Personalized learning plans** to tailor curriculum and instruction;
* **Learning Coach** (parent/guardian) who works in person with the student, monitors progress, and communicates with the teacher;
* **Computer and Internet connection** to enable learning anytime, anywhere;
* **Education management system** that provides access to the curriculum, schedules, and assignments; stores student data; and monitors student progress;
* **Real-time web conferences** with individual or groups of students using telephone, video, chat, electronic whiteboard, and shared web surfing;
* **Teacher contact** via telephone, email, or live web conference at least once every two weeks;
* **Asynchronous interactive tutorials** that employ graphics, audio and video;
* **Online and offline assessments** including ongoing informal assessments, telephone based curriculum assessments, and portfolio assignments;
* **Multi-tiered intervention approach** to provide targeted support for students who need it;
* **Threaded discussions** (at the high school level)to provide opportunities for collaboration and interaction; and
* **Online student orientation opportunities** such as videos and an online course to familiarize students with online learning.

The school will offer high school students a broad selection of courses, including diverse electives, to enable students to meet graduation requirements and prepare for college and a career. The school will offer mathematics, English language arts, science, history, foreign language, and arts courses, including Advanced Placement courses. All high school students will be offered courses sufficient to meet MassCore requirements, and the school’s graduation requirement will meet or exceed Massachusetts graduation requirements. Students will also be provided with internship opportunities.

To assure students are fully engaged in learning, teachers will communicate regularly with parents/guardians via live synchronous sessions, email, and telephone conferences. Communications will occur as needed and at least once every two weeks or more with students, depending on the needs of the student.

The school will provide opportunities for students to develop socially including but not limited to:

* regular field trips and outings facilitated by school staff and parent volunteers;
* back-to-school and end-of-the-year events such as picnics or other activities like bowling leagues;
* clubs and activities through which students explore interests beyond the classroom;
* message boardsto communicate with teachers, other students, and families; and
* school newsletters.

The school will offer Learning Academies in the following areas: Science, Technology, Engineering, and Mathematics (STEM); Arts; and Languages. These academies will offer at least four specialized courses. The STEM Academy will offer project-based learning, a variety of learning activities, personalized internships, early college learning experiences and professional development for instructors.

Note: Programs for special education and programs for English language learners are required by law; see condition to establish programs prior to opening and operate consistent with federal and state law. Additionally, no later than August 1, 2014, the school must submit annual goals that are specific and measurable for student achievement and college and career readiness including, but not limited to, the Department's Progress and Performance Index (PPI). Lastly, the school must complete alignment of its curriculum to the Massachusetts curriculum frameworks no later than September 1, 2015.

1. **Governance and by laws:**

The board of trustees of the TEC Connections Academy Commonwealth Virtual School will submit updated proposed bylaws for the Department’s approval in accordance with the condition imposed on the school’s certificate.

Note: No later than March 14, 2014, the school’s board of trustees must submit bylaws to the Department for review and approval.

1. **Proposed school year:**

Late August or early September through June

1. **Enrollment policy and preferences:**

The TEC Connections Academy Commonwealth Virtual School will provide an enrollment preference to:

1. Siblings of students currently attending the virtual school;
2. Students who reside in the districts that are members of The Education Cooperative;
3. Students with disabilities;
4. Students with medical needs requiring a home or hospital setting;
5. Students who have been expelled;
6. Students in institutionalized settings;
7. Students who are over-age for their grade;
8. Students who have or are at risk of dropping out;
9. Students who are pregnant or who have a child;
10. Students who feel bullied or who are out of school due to other safety concerns;
11. Students with unusual needs requiring a flexible schedule;
12. Students who seek academic work not available in their school;
13. Students in rural communities; and
14. Students who are gifted and talented.

If more applicants are received than the commonwealth virtual school can admit within its enrollment limit, the TEC Connections Academy Commonwealth Virtual School will admit students with an enrollment preference in the order of priority listed above and then will conduct an admissions lottery using an impartial lottery process that is consistent with state guidelines and regulations. Students who do not receive an offer of admission will have their names placed in a wait pool.

Note: No later than April 1, 2014, the school will submit to the Department a draft enrollment policy, procedure, and application for review and approval. The school must receive the Department’s approval prior to admitting any students.

1. **The identity of third party software or curriculum vendor partnerships:**

Educational courses and teaching services, including management software, learning materials, and technical support services will be provided by Connections Academy. Other operational services may be provided by The Education Cooperative.

1. **Proposed contract with management/operational organization, including payments:**

The board of trustees of the TEC Connections Academy Commonwealth Virtual School will submit for the Department’s approval a proposed contract in accordance with the condition imposed on the commonwealth virtual school’s certificate.

Note: No later than April 1, 2014, the school’s board of trustees will submit to the Department a draft contract for review and approval.

1. **Demonstration of capacity to support and store all critical data in compliance with state and federal law:**

The TEC Connections Academy Commonwealth Virtual School will contract with Connections Academy, using its Connexus® Education Management System, for services to support and to store all critical data in compliance with state and federal law.

1. **Adherence to assurances in the RFP:**

The TEC Connections Academy Commonwealth Virtual School will adhere to all assurances agreed to on pages 19-20 of the Application Process and Request for Proposals for Commonwealth of Massachusetts Virtual Schools (RFP) for schools opening in 2014-2015. This includes, but is not limited to, compliance with any regulations governing Commonwealth of Massachusetts virtual schools.

1. The virtual school statute authorizes the Board to grant up to 10 certificates to operate such schools, provided that not more than 2 percent of students statewide attend a CMVS. G.L. c. 71, § 94(c). [↑](#footnote-ref-1)
2. On November 30, 2017, the Department approved a request from the school’s board of trustees to rename the school “Greenfield Commonwealth Virtual School.” [↑](#footnote-ref-2)
3. These conditions are described in more detail in the Commissioner’s October 10, 2014 [memo](http://www.doe.mass.edu/boe/docs/2013-06/item3.html) to the Board. [↑](#footnote-ref-3)
4. http://www.doe.mass.edu/odl/cmvs/GCVS-2015-12Renewal.pdf [↑](#footnote-ref-4)
5. http://www.doe.mass.edu/boe/minutes/2016/0223reg-0222spec.pdf [↑](#footnote-ref-5)
6. http://profiles.doe.mass.edu/profiles/general.aspx?topNavId=1&orgcode=39020900&orgtypecode=6& [↑](#footnote-ref-6)
7. The Department, in consultation with the Department of Youth Services (DYS), determines the appropriate tuition responsibility for students who are in the custody of the Department of Corrections, a sheriff or DYS. [↑](#footnote-ref-7)
8. In grades K-8, a student who masters 80 percent of the course content is considered to have passed the course. [↑](#footnote-ref-8)
9. As is presented in my February 26, 2016 memorandum to the Board, “enrollment at GCVS has never exceeded 700 students, and there is little evidence that significant additional demand for the school’s program exists. Limiting the school’s enrollment to a maximum of 750 students should focus the school’s efforts on upgrading its program of instruction rather than expanding its enrollment.” [↑](#footnote-ref-9)
10. In 2016, assessment participation was calculated two ways: First, the 2016 participation rate for each subgroup in each subject area test was calculated. If the actual 2016 participation rate was lower than 95 percent for any group in any subject, that rate was compared to the average of the most recent two years of assessment participation data for that group and subject. The higher of the two resulting rates was factored into the assignment of the school or district's 2016 accountability and assistance level. [↑](#footnote-ref-10)
11. 2016 state-level achievement and growth results in grades 3-8 ELA and mathematics are not reported because most students in Massachusetts participated in the PARCC test, and for this reason, it was not possible to generate a representative sample to allow for statewide results. [↑](#footnote-ref-11)