# CLASS SIZE REPORT 2015-2016 

## Bedford Public Schools

 Bedford, MAOctober 27, 2015

## Overview

- Context
- Class Size Parameters
- DESE's Average Class Size Correction
- 2015 Class Size


## Context

| School | October <br> 1,2011 | October <br> $\mathbf{1 , 2 0 1 2}$ | October <br> $\mathbf{1 , 2 0 1 3}$ | October <br> $\mathbf{1 , 2 0 1 4}$ | October <br> $\mathbf{1 , 2 0 1 5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Davis | 513 | 492 | 543 | 567 | 587 |
| Lane | 501 | 537 | 533 | 540 | 534 |
| JGMS | 575 | 577 | 565 | 503 | 530 |
| BHS | 835 | 881 | 868 | 884 | 859 |
| Total | 2424 | 2487 | 2509 | 2494 | 2510 |


|  | PreK | K-2 |  |  | 3-5 |  |  | 6-8 |  |  | 9-12 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ACT | NES 1 | ACT | NES 2 | NES 1 | ACT | NES 2 | NES 1 | ACT | NES 2 | NES 1 | ACT | NES 2 |
| 2009-10 | 13 | 506 | 506 |  | 564 | 564 |  | 559 | 559 |  | 771 | 771 |  |
| 2010-11 | 13 | 496 | 486 |  | 551 | 534 |  | 571 | 568 |  | 804 | 783 |  |
| 2011-12 | 26 | 513 | 513 |  | 535 | 501 |  | 568 | 575 |  | 833 | 835 |  |
| 2012-13 | 40 | 505 | 492 |  | 564 | 537 |  | 591 | 577 |  | 835 | 881 |  |
| 2013-14 | 36 | 532 | 543 |  | 552 | 533 |  | 577 | 565 |  | 854 | 868 |  |
| 2014-15 | 36 | 522 | 567 |  | 571 | 540 |  | 560 | 503 |  | 862 | 884 |  |
| 2015-16 | 31 | 480 | 587 | 604 | 565 | 534 | 529 | 591 | 530 | 522 | 866 | 859 | 854 |
| 2016-17 |  | 466 |  | 595 | 591 |  | 567 | 578 |  | 516 | 871 |  | 849 |
| 2017-18 |  | 476 |  | 583 | 578 |  | 609 | 597 |  | 538 | 846 |  | 796 |
| 2018-19 |  | 483 |  | 548 | 532 |  | 648 | 592 |  | 525 | 893 |  | 803 |
| 2019-20 |  | 483 |  | 539 | 520 |  | 638 | 619 |  | 566 | 858 |  | 797 |
| 2020-21 |  |  |  | 537 |  |  | 625 |  |  | 605 |  |  | 782 |
| 2021-22 |  |  |  | 543 |  |  | 588 |  |  | 644 |  |  | 830 |
| 2022-23 |  |  |  | 541 |  |  | 580 |  |  | 634 |  |  | 860 |
| 2023-24 |  |  |  | 543 |  |  | 577 |  |  | 622 |  |  | 888 |
| 2024-24 |  |  |  | 540 |  |  | 585 |  |  | 587 |  |  | 953 |

## Class Size Parameters

In Bedford, these have variously been expressed as:

| K-2: | 18 | K-2: | $18-21$ | K-2: | $18,20,21$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $3-5:$ | $22-23$ | $3-5:$ | $22-25$ | $3-5:$ | $22,23,24$ |
| $6-8:$ | 25 | $6-8:$ | 25 | $6-8:$ | 24 core/ |
|  |  |  |  |  | 25 non-core |
| 9-12: | $18 \mathrm{CP} /$ | $9-12:$ | $18 \mathrm{CP} /$ | $9-12:$ | $18 \mathrm{CP} /$ |
|  | 25 Honors |  | 25 honors |  | 25 honors |

## Recommendation



Additionally, the middle and high school should strive to keep aggregate student numbers per teacher at a 100 limit.

## Rationale

- Curriculum and Instruction
- Standards-based education
- Higher order thinking and-student centered instruction
- Complex tasks and meaningful, timely feedback
- Inclusion and Population Complexity
- Guidelines and Maxes

| District | K | 1st Grade | 2nd <br> Gra <br> de | 3rd <br> Gra <br> de | 4th Grade | 5th Grade | 6th Grade | 7th Grade | 8th Grade | High School |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Andove |  |  |  | 25 | 25 | 25 |  |  |  |  |
| Belmont | 18-22 | 19-23 | $\begin{aligned} & 19- \\ & 23 \end{aligned}$ | $\begin{aligned} & 20- \\ & 24 \end{aligned}$ | 20-24 |  |  |  |  |  |
| Boxford |  |  |  | 16-21 | act. try to li |  |  |  |  |  |
| Canton | 16-20 | 18-20 | $\begin{aligned} & 18- \\ & 20 \end{aligned}$ | $\begin{aligned} & 20- \\ & 24 \end{aligned}$ | 20-24 |  |  |  |  |  |
| Acton and Boxborough | 20 max | 22 max | $\begin{aligned} & 22 \mathrm{~m} \\ & \mathrm{ax} \end{aligned}$ | $\begin{aligned} & 22 \mathrm{~m} \\ & \mathrm{ax} \end{aligned}$ | 24 max | 24 max | 24 max |  |  |  |
| Concord | 18-20 | 18-20 | $\begin{aligned} & 18- \\ & 20 \end{aligned}$ | $\begin{aligned} & 18- \\ & 20 \end{aligned}$ | 18-20 | 18-20 | 20-22 | 20-22 | 20-22 | 22-24 |
| Carlisle | 18 max | 18 max | $\begin{aligned} & 18 \\ & \max \end{aligned}$ | $\begin{aligned} & 18- \\ & 21 \end{aligned}$ | 18-21 | 18-21 | 21-25 | 21-25 | 21-25 |  |
| Sudbury | 20 | 22 | 22 | 24 | 24 | 24 |  |  |  |  |
| Winchester | <22 | <22 | <22 | <25 | <25 | <25 | <125/tea | <125/tea | <125/tea | $<125 /$ tea |
| Lexington | 1 to 18 | 1 to 20 | $\begin{aligned} & 1 \text { to } \\ & 22 \end{aligned}$ | $\begin{aligned} & 1 \text { to } \\ & 24 \end{aligned}$ | 1 to 24 | 1 to 24 | 20-22 | 20-22 | 20-22 |  |
| Middleton |  |  |  | $\begin{aligned} & 18- \\ & 20 \end{aligned}$ | $18-20$ | 18-20 |  |  |  |  |
| Reading | 18-22 | 18-22 | $\begin{aligned} & 18- \\ & 22 \end{aligned}$ | 25 | 25 | 25 |  |  |  |  |
| Topsfield | 18/19 | 18/19 | $\begin{aligned} & 18 / 1 \\ & 9 \end{aligned}$ | $\begin{aligned} & 18 / 1 \\ & 9 \end{aligned}$ | (no policy | vigilant) |  |  |  |  |
| Littleton | 20 | On average |  |  |  |  |  |  |  |  |
| Watertown | 16-18 | 19-22 | $\begin{aligned} & 19 \\ & 23 \end{aligned}$ | $\begin{aligned} & 20- \\ & 26 \end{aligned}$ | -16-26 | 13-24 | Actuals acr | sthree scho |  |  |
| Westford | 22 | 22 | 22 | 22 | 22 | 22 | 25 | 25 | 25 | 25 |
| Woburn | 20-25 | 20-26 | $\begin{aligned} & 20 \\ & 26 \end{aligned}$ | $\begin{aligned} & 20- \\ & 26 \end{aligned}$ | $20-28$ | 20-28 | 20-26 | 20-26 | 20-26 |  |

## Bedford's Actual Class Size Averages

- Bedford is fortunate to have excellent class size averages
- Core value
- Budget and community support: two years of corrections to significant overages at BHS $(26,27,32)$ and Davis (kindergartens at 23)
- Small grade bubble moving through the system 145 in $6^{\text {th }}$ grade as compared to the previous year's 183
- However, DESE and Boston Magazine gave a skewed depiction of class size averages (14.8)


## Three Factors

- Bedford has a higher number of small support classes in its high school than many, if not most, districts.

High School Students and Classes Reported in SIMS Data to DESE (2014)

| School | Bedford | Wayland | Norton | Ashland | Swampscott |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Classes | 562 | 389 | 334 | 453 | 369 |
| Students | 904 | 840 | 709 | 749 | 730 |
| Classes as $\%$ | $62 \%$ | $46 \%$ | $47 \%$ | $60 \%$ | $50 \%$ |

## Bedford Reports Fewer Elementary Grades

- Consequently, the high number of high school classes with lower class size than elementary classes, and the lower number of elementary grades given, disproportionately de-emphasizes the elementary classes with their higher class size numbers

|  | Average Number of <br> Elementary Grades Given Per <br> Student | Total Elementary Grades Given <br> Excluding Pre-school |
| :--- | :--- | :--- |
| Ashland | 7 | 27,801 |
| Bedford | 4 | 21,945 |
| Norton | 6.3 | 25,174 |
| Swampscott | 8.5 | 22,331 |
| Wayland | 5.1 | 26,242 |

## Inordinately High Number of Overlays

- Bedford High School teachers frequently teach multiple academic levels of the same course during the same class period.
- For example, a Psychology class combines honors (12 students) and high honors (13 students). The DESE instead counts these as two small classes.
- Bedford High School teachers voluntarily teach multiple courses in the same period/class in order to offer our students the wide range of curricular opportunities that we value.
- For example: an art teacher simultaneously teaches Art IV major (4 students), two sections of Art IV minor (8 students, 7 students), and Art Explorations (3 students) all in the same class period. The DESE counts these as four different small classes.


## As Compared to Other Districts

## Number of Classes with Overlays

|  | Ashland | Bedford | Norton | Swampscott | Wayland |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Overlays | $16-20$ | $\mathbf{1 1 8}$ | 32 | 30 | 29 |
| Total | 453 | 562 | 334 | 369 | 389 |

Bedford calculated only the overlays, not the base class, whereas the others included all classes, so the disparity is even greater.

## Methodology: Elementary Grades

| BEDFORD |  |  |  |  |  |  | WAYLAND PUBLIC SCHOOLS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Elementary Grades Balanced |  |  |  |  |  |  | Number of Elementary Grades Balanced |  |  |  |  |  |  |
| D <br> R | \# of <br> Clas <br> ses | Ave <br> /cl <br> ass | Stud ents | grades | $\begin{array}{r} 11405 . \\ 6 \end{array}$ | Gra <br> des/ <br> Stud <br> ent |  | \# of <br> Class es | Ave/cl ass | Stude nts | grades |  | Grade s/Stu dent |
| R' |  |  |  |  |  |  | Clay |  |  |  |  | 1212 |  |
| Dav |  |  |  |  |  |  | pit | 148 | 20.9 | 580 | 3093 | 2 | 5.3 |
| is | 73 | 21.2 | 538 | 1547.6 |  | 2.9 | Hap |  |  |  |  |  |  |
| Lan |  |  |  |  |  |  | Hol | 111 | 21.5 | 440 | 2387 | 9460 | 5.4 |
| e | 132 | 20 | 527 | 2640 | 10540 | 5.0 |  |  |  |  |  |  |  |
| JG |  |  |  |  |  |  | loker | 42 | 19.7 | 175 | 827 | 3448 | 4.7 |
| MS | 445 | 14.4 | 559 | 6408 | 8049.6 | 11.5 | Midd | 447 | 15.6 | 663 | 6973 | 1034 3 | 10.5 |
| BH |  |  |  |  |  |  |  |  |  |  |  | 1327 |  |
| S | 562 | 13 | 904 | 7313 | 11752 | 8.1 | WHS | 389 | 15.8 | 840 | 6146 | 2 | 7.3 |
| Tot |  |  |  | 17908. | 41747. |  |  |  |  |  |  | 4864 |  |
| al | 1212 | 14.8 | 2528 | 6 | 2 | 7.1 | Total | 1137 | 17.1 | 2698 | 19427 | 4 | 7.2 |
|  |  |  |  | Balanc ed Ave | 16.5 |  |  |  |  |  | Balanc ed Ave | 18.0 |  |

## Methodology: Course Overlays



## 2015 Class Size

## Davis School



## Lane School

LANE
Grade 3
$21 \quad 23 \quad 2$
$\begin{array}{lllll}23 & 23 & 24 & 22 & 23\end{array}$ 183

Grade 4
$19 \quad 23$
$23 \quad 21$
21
22
22
21
$22 \quad 21$
171
Grade 5
22
$23 \quad 21$
21
23
23
22
23
23
180

TOTAL
534

## JGMS

- 9 classes over 25- one major
- Sixth grade is 30-40 students smaller than typical
- Smaller average class sizes
- Core subjects have advantageous class sizes
- Some specials at or exceeding class size guidelines


## BHS

- At 859, BHS is 25 students fewer than last year
- Important improvement due to combination of FY16 enrollment-driven budget accommodations and approximately $20-25$ fewer students than projected
- Due in part to increased ninth grade private school enrollment
- This year, we have:
- 5 Major Classes under 10
- 0 Major Classes over 25
- 11 College Prep level classes over 18
- As compared to 9 classes under 10 and 23 major courses over 25 in 2013-2014

