

Teacher Pay Raises Explained

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Ever wonder how a 2.75% increase in the teachers' contract can amount to more than a 4% pay hike for some teachers and less than a 2.75% for others? Ever wonder where exactly the numbers on the teacher contract warrant article come from? Ever wonder how experienced or the Merrimack teaching staff is? If you answered yes to any of those questions, then this blog may help you with some answers. Below, I describe how the most recent Merrimack teachers contract, which included a 2.75% annual pay increase, resulted in individual teacher pay raises that are, on average, a 3.58% increase. It'll take a little math to explain things which can be dry but I did go through some effort to design an infographic to make it easier to follow along. If you haven't already done so, click the graphic in order to view the full-size infographic so that you can follow along as you read the text.

This is the second article in a series to help prepare Merrimack voters for the upcoming school budget season. As noted in my previous post, "[Golden Parachutes](#)", the Merrimack Teacher's Association (MTA) is currently negotiating a new contract with the Merrimack School Board which, barring any setbacks, will be presented to the School Board soon and then to the voters in April. The current MTA agreement was presented to the voters on April 12, 2011 this way:

ARTICLE 3 (Special Warrant Article) Shall the District vote to approve the cost items included in the collective bargaining agreement reached between the Merrimack School Board and the Merrimack Teachers Association which calls for the following increases in salaries and benefits:

Year	Estimated Increase
2011-2012	\$630,656
2012-2013	\$647,041

and raise and appropriate the sum of One Hundred Eighty Thousand Six Hundred Fifty Six Dollars (\$180,656) for the 2011-2012 fiscal year, such sum representing the 2011- 2012 net costs attributable to (1) the increase in salaries and benefits described above over those of the 2010-2011 fiscal year and (2) a savings of Four Hundred Fifty Thousand Dollars (\$ 450,000) to be realized by the District due to an increase in the negotiated contribution

level by the Merrimack Teachers Association towards the cost of their health insurance and other changes in the health plan design?

The contract was ratified by the voters by 1,812 voting in favor and 1,246 voting against. My purpose here is not to argue for or against the pay raises but rather to explain the details, many of which I think are unknown to most voters. To that end, I will trace through the numbers on the current MTA contract as the staff transitions from the 2011-12 salary table to the 2012-13 salary table. The second panel in the infographic is a cartoon that steps through the process described over the next several paragraphs.

The process to develop a new teacher salary table begins by assembling a full teacher population that lists the number of teachers in each part of the current pay schedule. The complete pay tables can be found [in Article XIV of the contract](#) (pg 27). The population data from December 2011 consisted of 346.8 total teachers as shown in the top panel of the infographic which displays the population both in terms of education credentials and pay step. Multiplying the teacher population by the corresponding salary from the 2011 pay scale and then summing the results, yields the total bottom line salary for the district, \$18,577,872. This is the figure considered during salary negotiations.

A 2.75% annual pay increase was negotiated in the last contract. What that means is that the bottom line salary number, \$18,577,872 in our example, was increased by 2.75% in each year of the contract. Some may mistakenly believe that individual teachers received a 2.75% pay increase which is not the case. I'll explain more on that later. Using the 2011 data, a 2.75% increase means that \$510,891 in new salary would be added to the total bottom line salary number to get a new total of \$19,088,764.

The MTA then takes input from the School Board and its membership to construct new pay tables. Their only constraint is that the new table must not exceed the bottom-line salary total for the existing population. The entire teacher population is moved forward one step (step increases are automatic each year) and then the MTA distributes pay raises in the new pay table while keeping the total salary below the new bottom line salary total.

An interesting consequence of this method is that individual teachers do not actually receive a 2.75% pay increase. In fact, most teachers actually receive more than 2.75% and some even receive less. You might be thinking, "How is it possible to get more than 2.75%?" or "Why would some teachers get less?" The answer is that the whole pay table is not populated equally (see the top panel in the graphic). Because of that, only certain pay table changes affect the MTA's ability to stay under the new bottom-line salary total. Let me illustrate with a couple of examples:

- 1) Merrimack had only two teachers in the "Bachelor's degree plus 36 credits" category that were also in pay step 3. The 2011-12 annual salary for that category and step was \$39,703. In the new 2012-13 salary table, the annual salary for BA +36 in pay step 4 is \$41,456. Note that this is only an increase of \$1,753 per educator, or \$3,506 for the group. So the total bottom-line salary number is only affected by \$3,506 for this group, barely noticeable when compared with the \$510,891 in new salary the MTA had to distribute, so it can afford to offer a 4.42% pay increase for those individual teachers.
- 2) Conversely, a very large portion of teachers reside in the top 2011 pay step (step 19) forcing the MTA to issue raises under 2.75% in order to keep the total salary cost under the \$510,891 ceiling.

The end result is that individual teachers will get various raises based on the MTA's pay table choices. The average pay increase is 3.58% across the pay schedule. All individual increase percentages are

shown in the bottom panel of the infographic.

Lastly, up until now, I have only been discussing salary. The number that matters to taxpayers, and the one required by law to be presented to voters on the warrant article, is the total “estimated increase.” In order to get the total cost, the so-called “burdened” salary must be calculated. Burdened salary includes retirement, benefits, and social security since all are computed as a percentage of the unburdened salary total. To get those burden costs we have to multiply the salary increase by the applicable factor. For our 2011 example, that calculation is as follows:

$$\begin{aligned}\text{Retirement Contribution} &= \text{Salary Increase} \times 11.3\% = \$510,891 \times .113 = \$57,731 \\ \text{Healthcare} &= \text{Salary Increase} \times 6.7\% = \$510,891 \times .067 = \$34,230 \\ \text{Dental} &= \text{Salary Increase} \times 4.5\% = \$510,891 \times .045 = \$22,990 \\ \text{Social Security} &= \text{Salary Increase} \times 7.65\% = \$510,891 \times .0765 = \$39,083\end{aligned}$$

Summing these amounts along with the salary increase yields a **total burdened salary increase of \$664,925**. This is how the District calculates the estimated costs for the warrant article text. One important thing to note is that all of the percentages used in our example to “burden” the salary change from year to year depending on many factors. For instance, the School Board has, in the past, negotiated increased benefit contributions with the MTA which affected some of those percentages. The District reports the estimated increase, \$664,925 in our example, on the warrant article and then voters make their decision. That is the whole process in a nutshell.

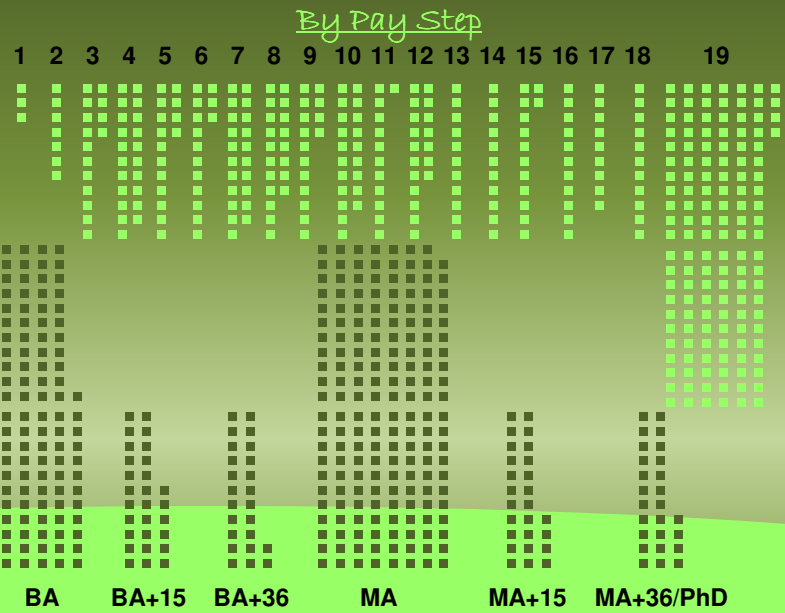
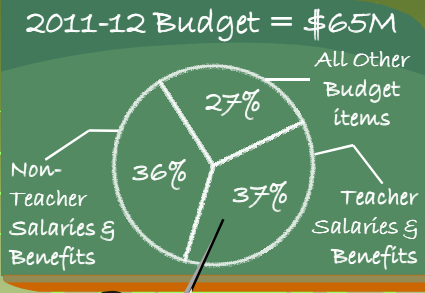
The bottom-line for voters is that the salary increase percentage reported during the school budget process represents the total salary cost increase to the budget but it doesn't give a good indication of how much of a raise teachers will receive. **Without viewing the full MTA agreement before voting, voters would have no way of knowing how much actual teacher pay raises amount to.** An interesting side note with the 2010 contract is that the MTA actually made two new pay tables for 2011-12 and 2012-13 because it added two new pay steps, 19 and 20 respectively. Again, this change would not be obvious to voters based on the warrant article text (quoted earlier).

While I suppose most readers are not interested in checking the District Administrator's math, my hope is that after reading this article, they could. All of this information is available to any town resident upon request from the Merrimack School District so don't be afraid to ask you School Board members for the details before you vote. **Be an informed voter.**

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Salary & Benefits Share of School Budget

2011 Merrimack Teacher Population



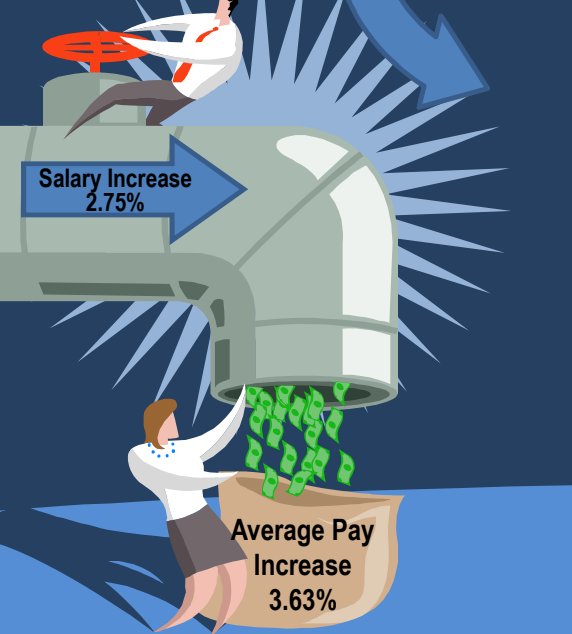
SOURCE: Merrimack School District Teacher Population from Dec 2011

Teacher Salary Negotiation Process



SOURCE: Merrimack School District 2011-12 Proposed Budget Material and Dec 2011 Teacher Population

Realized Salary Increase From 2011-12 to 2012-13



Step	BA	BA+15	BA+36	MA	MA+15	MA+30/PhD
1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	4.50%	4.46%	4.74%	4.74%	4.65%	4.51%
3	4.35%	4.31%	4.57%	4.57%	4.48%	4.36%
4	4.21%	4.17%	4.42%	4.42%	4.33%	4.22%
5	4.08%	4.05%	4.27%	4.27%	4.19%	4.09%
6	3.96%	3.93%	4.14%	4.14%	4.07%	3.97%
7	3.84%	3.81%	4.01%	4.01%	3.95%	3.86%
8	3.74%	3.71%	3.89%	3.89%	3.83%	3.75%
9	3.64%	3.62%	3.78%	3.78%	3.73%	3.65%
10	3.55%	3.52%	3.68%	3.68%	3.63%	3.55%
11	3.46%	3.44%	3.59%	3.59%	3.54%	3.47%
12	3.38%	3.35%	3.50%	3.50%	3.45%	3.38%
13	3.30%	3.28%	3.41%	3.41%	3.37%	3.30%
14	3.22%	3.20%	3.33%	3.33%	3.29%	3.23%
15	3.15%	3.13%	3.26%	3.26%	3.22%	3.16%
16	3.09%	3.07%	3.18%	3.18%	3.15%	3.09%
17	3.02%	3.01%	3.12%	3.12%	3.08%	3.03%
18	6.01%	5.57%	3.02%	3.02%	3.06%	3.39%
19	5.73%	5.33%	2.96%	2.96%	2.99%	3.31%
20	0.53%	0.53%	2.26%	2.26%	2.22%	2.17%

* Assumes 2011-12 workforce with annual step increase