**New Hampshire Department of Education**
**Long-term Comprehensive Modeling Analysis**
**New Hampshire Charter School Grant**


**Summary**

New Hampshire has the opportunity to both improve educational opportunities for all students, with a focus on at risk and disadvantaged students, and realize significant taxpayer savings through the implementation of the recently awarded $46 million federal charter school grant. New Hampshire public charter schools have demonstrated their ability to meet the unique needs of individual children, provide an education in which students outperform state performance averages in math, English language arts and science, and they are able to do this at a lower cost to state taxpayers.


## Analysis

In August 2019, the New Hampshire Department of Education received a $46 million federal grant to expand the state's successful charter school program. The funds, awarded by the federal Department of Education's Office of Innovation and Improvement, are similar to a grant awarded to New Hampshire in 2010 and will support the state's charter school program with a focus on at-risk students and help spread education innovations to other New Hampshire schools.

In New Hampshire, contrary to the understanding of many, charter schools are all tuition free public schools open to all students. Groups eligible to open a new charter school include two or more certified New Hampshire educators, 10 or more parents of students, non-profit organizations, or local school districts. The approval to open a charter school is granted by a local school board or the state board of education.

The department has heard from a number of traditional district public schools interested in accessing these funds to invest in innovative ideas at the local level. Given the reality of tight school budgets, it is nearly impossible for traditional schools to find resources to invest in and start up innovative programs that serve at risk students. This grant will allow traditional district schools to do just that. Some of these ideas that districts have expressed to the department include language immersion programs for elementary students, comprehensive technical education high schools, including post-secondary pathways at the community college, and a recovery high school for students struggling with substance misuse.

The federal grant will support these ground-breaking initiatives by subsidizing the opening of 20 new charter schools, the expansion of 5, and the replication of 7 existing charter schools. During the Joint Legislative Fiscal Committee process, questions arose relative to the long-term financial impact of this grant on New Hampshire taxpayers and education funding in the state. This analysis by the department is a comprehensive analysis of the statewide impact of the grant on New Hampshire taxpayers and education funding. This analysis differs from other analyses in

that it takes a comprehensive look at the funding impact rather than only considering a narrow portion of the effect.

In the modeling, the department considered the total cost per pupil to educate a student in a traditional school ($19,720 per pupil in FY 2019), the cost per pupil to educate a student in a charter school ($9,473 per pupil in FY 2019), inflation, various public charter school student enrollment scenarios, the fixed costs in a traditional school, also including various modeling scenarios, and the cost of special education. These last two variables were important to consider as historically some models have been criticized for not including them.

The model also assumes that all new public charter schools will be chartered by the state board of education. Under New Hampshire law, there is an option for public charter schools to be authorized by local school boards or by the state board of education. Charter schools are eligible for grants under either authorizing option. Since the pathway for public charter schools to be authorized by local school boards would not have a financial impact on education funding, this model assumes all schools are authorized by the state board of education.

Given the broad range of variables used in this modeling, the department is able to provide a richer and more comprehensive analysis of the long term effect of the charter school grant on New Hampshire taxpayers and education funding.

As context and to help readers understand how traditional and public charter schools are funded, the below table summarizes cost per pupil funding. Both traditional and charter schools receive adequacy payments from the state. These include a base adequacy ($3,709 and $7,188, respectively for traditional and charter schools) and differentiated aid for students qualifying for Free and Reduced lunch ($1,855), English language learners ($725), and students who are not proficient on the state English language arts assessment in 3$^{rd}$ grade ($725). Traditional public schools also receive an adequacy payment ($1,995) for all students in their respective district with an individualized education plan (IEP), irrespective of whether or not they attend a public traditional or charter school. This reflects the fact that local districts are awarded all state and federal grants for special education and retain the responsibility for special education services under New Hampshire law.

In addition to the funds granted above, state taxpayers also fund traditional public schools, not public charter schools, with the following:

- $158 million of stabilization grants to traditional school districts at an average of $932 per student, with some districts receiving as much as $6,467 per student. Public charter schools do not receive these funds.
- $34 million for school building aid

- $22.3 million for special education funding[1]
- $7.3 million for career and technical education tuition and transportation[2]
- $907 thousand for child nutrition programs
- $10.1 million for school infrastructure and other state grants

During the 2019 legislative session, the legislature also awarded traditional public schools additional one time payments of $350 and $1,750 per pupil for Free and Reduced aid and Fiscal Capacity aid, respectively. These one-time funds were not considered and were excluded from the modeling as if they did not occur.

| Funding Source[3, 4] | Traditional Public | Public Charter |
|---|---|---|
| **State Taxpayer Contribution** | 6,152 | 8,601 |
| **Local Taxpayer Contribution** | 12,246 | - |
| **Federal Taxpayer Contribution** | 1,006 | 209 |
| **Other** | 316 | 663 |
| **Total Per Pupil** | **$19,720** | **$9,473** |

Recognizing that when one or even several students leave a traditional public school, that may not be enough of a reduction to allow the school to reduce associated cost quickly, the modeled scenarios afford schools long periods of time to adjust fixed costs. With or without the implementation of this grant, traditional public schools will be managing costs over the next decade to adjust for declining numbers of students. The total number of students that may participate in this grant is approximately 4,000 students, or 2% of the total student count. This is far lower than the expected student decline of between 26,000 and 48,000 students. To aid schools in identifying cost reduction opportunities, several resources are included below.

This model assumes that the traditional school, in the first year that the student leaves the traditional school for a charter school, will not be able to reduce ***any*** costs. Of course, estimating that all of the costs of educating a child are fixed is an extremely conservative assumption. If this assumption were to hold true, then it would also work in reverse. That means that when a new student is added to a traditional school, there would not be any additional costs to educate that student. Generally, schools request additional funds to educate additional students. In addition to no cost reductions in the first year, this model assumes that the school will be able to reduce the cost for the student over 3-years.

[1] Refer to Assumptions below for a discussion of accounting for special education costs.
[2] A small number of charter school students participate in career and technical education programming, so the model adjusts for these costs. See assumptions below.
[3] Refer to Assumptions below for a discussion of accounting for special education costs.
[4] Refer to Assumptions below for discussion of cost per pupil derivation.

Additionally, we have modeled the continued cost of supporting special education students that leave a traditional school for a public charter school as under New Hampshire law, the district school is still funded for those special education costs and has responsibility for special education services.

Two cost modeling scenarios were used, one assuming that 100% per pupil costs are fixed and one assuming that savings realized when a student transfers from a traditional school to a charter school will be retained by the traditional school.

Three student enrollment modeling forecasts were used, conservative, historical and ambitious. Each of these student forecast models stops at 4,000 additional students, which is the student count number used in the grant and would be a doubling of the number of students attending charter schools in New Hampshire.

**Modeling Scenario 1:** This modeling scenario assumes that when a student leaves a traditional school for a charter school, the school will not realize any cost reductions in that year. This means that although the student will not be educated by the traditional school, the school will still continue to spend the same amount of funds. Of course this is an extreme case as all schools have a certain amount of variable costs associated with a student's education. In addition to no cost reductions in the first year, this model assumes that the school will be able to reduce the cost for the student over 3-years.

| | **Year 1** | **Year 2** | **Year 3** |
|---|---|---|---|
| **Per pupil costs that the model assumes will still be incurred by the Traditional School when a student leaves** | $15,049[5] | $10,033 | $5,016 |

The net cumulative savings to New Hampshire Taxpayers under this modeling scenario are outlined in the table below:

**10-Year Net Cumulative Taxpayer Savings**

**District Realizes No Cost Savings When Student Leaves**

| **Student Enrollment[6]** | **10-Year Savings** |
|---|---|
| **Conservative Growth** | 61,856,306 |
| **Historical Growth** | 81,715,016 |
| **Ambitious Growth** | 96,736,034 |

[5] $15,049 includes the total cost per student of $19,720 less the cost for special education, which is also retained by the school. See model Assumptions below.
[6] Yearly student enrollment numbers are listed below in Assumptions.

**Modeling Scenario 2:** This modeling scenario assumes that when a student leaves a traditional school for a charter school, there are shared savings realized. These savings are the difference between the cost per pupil to educate a student in the traditional public school ($19,720) less the per pupil cost for special education ($4,671) and the cost to educate a student in a public charter school ($9,473). In this model, 100% of the savings are retained by the traditional public school in year-1 and that the school will be able to achieve the cost reductions for the student over 3-years.

| | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| **Per pupil costs that the model assumes will still be incurred by the Traditional School when a student leaves** | $5,576 | $3,717 | $1,859 |

The net cumulative savings to New Hampshire Taxpayers under this modeling scenario are outlined in the table below:

**10-Year Net Cumulative Taxpayer Savings**

**District Retains 100% of Cost Savings When Student Leaves**

| Student Enrollment[3] | 10-Year Savings |
|---|---|
| **Conservative Growth** | 120,203,521 |
| **Historical Growth** | 166,628,094 |
| **Ambitious Growth** | 178,335,134 |

## Additional Modeling Assumptions

- Public charter schools will be authorized by the state board of education and eligible for state adequacy grants of $7,188 per student, plus differentiated aid. The actual average per student aid is $8,601. The average actual cost of education for a public charter school student is $9,473, which is based on the actual cost derived from charter school DOE25 reporting. This amount includes both state adequacy, federal funds, and third-party funds raised by the charter school through grants and contributions.
- The total cost per student in a traditional public school including tuition, transportation, and capital costs is $19,720 in FY 2018-2019, which is reported on the State Average Cost Per Pupil Rate report on the department website. This average cost was reduced by the average per pupil special education cost of $4,671, to derive the average cost per pupil for a traditional school of $15,049.

- Determination of per pupil costs by funding source (e.g., State, Local, Federal taxpayer) used the state-wide actual cost by funding source as a percent of total spending across all funding sources applied to the actual state-wide cost per pupil. For example, total State Taxpayer Contribution accounts for approximately 31% of total education funding. This 31% was applied to the actual per pupil cost of $19,720 to derive the per pupil State Taxpayer Contribution of $6,152. The same formula was used to derive Local Taxpayer Contribution, Federal Taxpayer Contribution and Other. This allocation method does not affect the actual per pupil cost of $19,720, but only determines the allocation among State, Local and Federal taxpayer contributions.
- The cost per pupil for special education was derived from the FY18-19 spending on special education ($770,030,262) as reported on the summary DOE25 divided by the number of students.
- Some special education services for students are paid by public charter schools and billed to the district traditional school responsible for the service. The cost of these services is reflected in Other costs under Public Charter schools and is also included in State, Local or Federal costs under Traditional Public schools. This process results in a duplication and possible overstatement of special education costs, a conservative estimate for the model. The amount of such costs, which could only be determined by a review of all invoices related to such services, is not believed to materially affect modeling results. In addition, when a traditional school provides special education services for a student in a public charter school, that spending by the traditional school may be made from state, local or federal funds in support of a charter school student.
- The per pupil savings for a student moving from a traditional school to a charter school is $5,576, which is the difference between $15,049 and $9,473.
- Per pupil amounts were adjusted for inflation over the 10-year forecast period.
- An inflation factor of 2.5% per year for the per pupil costs was applied.
- A range of student population forecasts were considered, including student population models derived by the department and student forecast models by the Western Interstate Commission for Higher Education ("WICHE"). Department models anticipate further student decline of 16% compared to 28% declines forecast by WICHE. The lower student population forecast of 16% was used. By using the lower estimate, the model provides allowances for students who might transfer from private school to a public charter school and the possibility of slower declines resulting from future inbound migration to the state.
- Charter school student enrollment models over ten years are:

| Year | Conservative | Historical | Ambitious |
|---|---|---|---|
| **1** | 260 | 260 | 260 |
| **2** | 650 | 776 | 787 |
| **3** | 1,079 | 1,452 | 1,544 |
| **4** | 1,447 | 2,148 | 2,492 |

| | | | |
|---|---|---|---|
| **5** | 1,748 | 2,804 | 3,256 |
| **6** | 1,922 | 3,335 | 3,807 |
| **7** | 2,115 | 3,780 | 4,000 |
| **8** | 2,326 | 4,000 | 4,000 |
| **9** | 2,559 | 4,000 | 4,000 |
| **10** | 2,815 | 4,000 | 4,000 |

**Qualitative consideration:** While the above financial analysis provides a compelling case for the financial benefit to New Hampshire taxpayers for the acceptance and implementation of the public charter school grant, numbers alone do not tell the whole story of educating New Hampshire's children. Not only is it important to support a financially effective system, but there is also a performance criterion that must be considered – not necessarily how much is spent, but what is realized by that investment in education, always with student outcomes as a key measure.

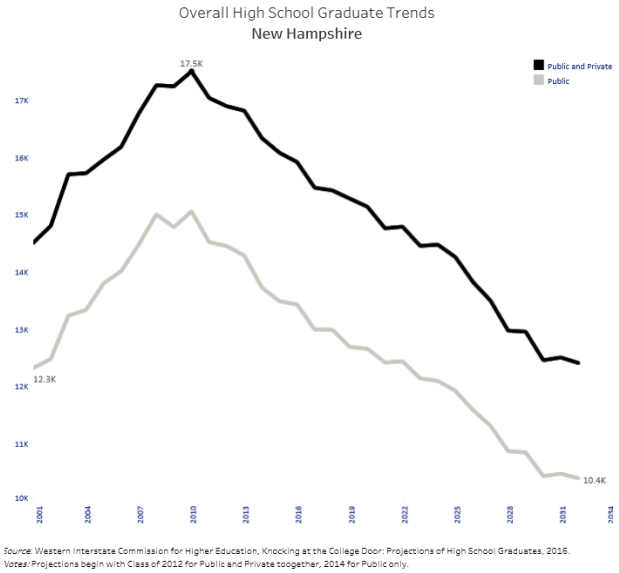
Public charter schools, relative to student outcome measures, perform at or above traditional public schools as illustrated below:

| **Percent of Students Proficient** | | | | |
|---|---|---|---|---|
| | **Math** | | **English Language Arts** | |
| **Grade** | **Charter School** | **Traditional School** | **Charter School** | **Traditional School** |
| **4** | 51% | 53% | 58% | 56% |
| **8** | 50% | 45% | 63% | 53% |
| **11** | 44% | 43% | 70% | 64% |

While anecdotal, the department hears many stories throughout the school year from students, parents, teachers and administrators – in both traditional and public charter schools – about the successes and positive experiences they have had. Similarly, the department hears many heartbreaking stories of students who have not found success in different educational settings. The point is that each child is different and there is not one educational model that will ever be able to meet the needs of all children. That is simply not possible.

Given this reality, the public charter school grant, which invests in innovative and creative alternative public education environments as discussed above, is qualitatively essential if we are to try to meet the needs of all of our children. The department strives to make sure that all students have a bright future and that there are no forgotten children. Public charter schools help New Hampshire to realize that vision which is embedded in the values which the state holds dearly.

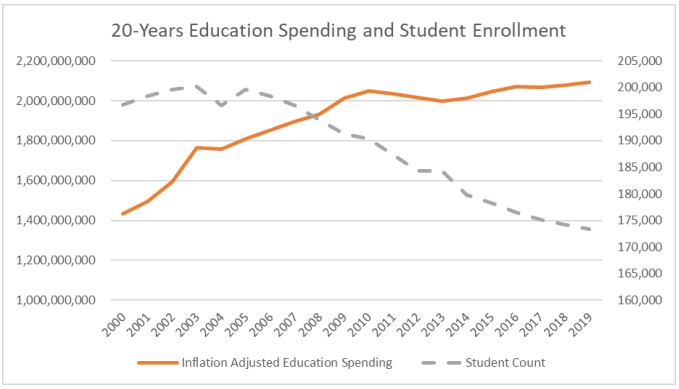
**Cost Management Resources:** The reality of declining student enrollment is a factor that needs to be considered in any school finance modeling, irrespective of the proposed public charter school grant. Various demographic modeling scenarios forecast declines of between 26,000 students (16%) to 48,000 students (28%) over the next 10-years.[7]




*Source:* Western Interstate Commission for Higher Education, Knocking at the College Door: Projections of High School Graduates, 2016.
*Notes:* Projections begin with Class of 2012 for Public and Private toogether, 2014 for Public only.

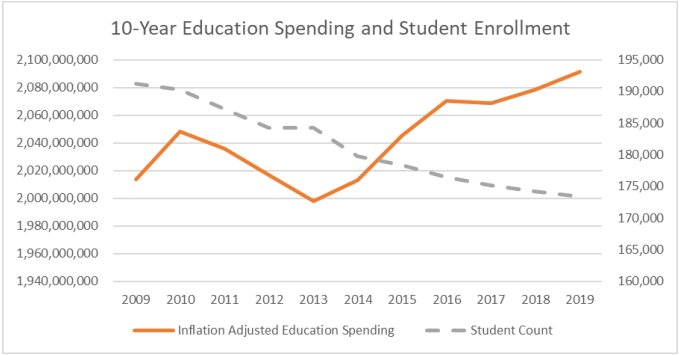
Recognizing that when one or even several students leave a traditional public school, that may not be enough of a reduction to allow the school to reduce associated cost quickly, the various scenarios modeled afford schools long periods of time to adjust fixed costs.

The two tables below provide context and shed some light on the long-term relationship between student population and spending on K-12 education in New Hampshire. The first chart provides a 20-year inflation adjusted illustration of cost and student population.




One observation from this data is that during periods of economic downturn, namely 2002 – 2004 and again in 2010 – 2013, using inflation adjusted numbers, school districts implemented cost management approaches to reduce budgets. During the most recent economic downturn, those reductions occurred over three-years.

While properly structuring costs with student enrollment is certainly a local determination, and local districts have demonstrated capacity to manage those reductions, this report includes some district practices from around the country that may help districts working through these reductions.




7 Western Interstate Commission for Higher Education, 2016

Reports[8] from three different states were compiled to help develop a list of possible cost management strategies for schools.

These include:

- "How School Districts Can Stretch the School Dollar," from Thomas Fordham Institute, 2012
- "Ten Ways to Cut Costs in New York Public Schools without Hurting the Classroom," from Alliance for Quality Education
- "Methods for Reducing Costs and Maximizing Revenue in Public School Districts," from the Texas Legislative Budget Board, 2011

The department recognizes that districts work diligently to manage costs and many districts will have addressed these recommendations and other cost management ideas. The department is able to maintain a best practice data set of all cost management recommendations across the state to facilitate implementation in all districts. In addition to these recommendations and given the expectation of declining student enrollment, the department is recommending that all districts begin the conversation and planning relative to how they will manage costs in the coming decade to address the fact that there will be fewer students.

Some of the recommendation from the above reports include:

| | |
|---|---|
| Aim for a leaner, more productive and better paid workforce | Compensation structures that reward productivity |
| Thoughtful integration of technology, looking at blended online and classroom instructional models | Evaluating costs across subject and course level |
| Administrative consolidation and shared services, even across districts | Evaluate ratios of teacher to administration ratios |
| Energy efficiency | Reverse auctions in contract bidding |
| Expansion of health and other insurance consortia | Integrate adjunct/part-time staffing for small course offerings; share unique educator resources across systems |
| Evaluate cost effectiveness of block scheduling | Implement Medicaid administrative billing recapture |
| Early retirement incentives | Fully utilize online options (VLACS) |
| Evaluate contracts for legal services annually | Perform efficiency audits across programs |
| Establish educational foundations | Establish business and community partnerships |

[8] These recommendation, taken from the above referenced reports, are generally from the time period around the significant recession about a decade ago now. At that time, many municipalities had to reduce costs, and school districts were not immune to those reductions.

| | |
|---|---|
| Evaluate tuition and fees for community education and facility usage, considering access for all | Provide online professional development to reduce travel cost |
| Implement recruiting and retention strategies to reduce turnover | Provide incentive to encourage employee attendance and reduce costs for substitutes |
| Maximize the use federal grant funds so they are not returned | Consider leasing computers |
| Maximize technical support efforts by using remote desktop management software | Consider a contract grant writer |
| Manage cash flow and investments | Use cash management services |
| Refinance bonds at lower rates | Analyze insurance plans annually |
| Participate in purchasing cooperatives | Develop, implement, and train district staff on purchasing policies |
| Use incentives, marketing and non-traditional methods to increase participation in and reimbursements from qualifying programs | Implement multi-tiered or staggered bell times district wide to maximize the use of bus drivers |
| Adopt policies related to extracurricular trips | Conduct bus route analysis |
| Manage food costs in menu planning | Maximize USDA food commodity program |
| Consider centralized food preparation | Participate in food purchasing cooperatives |
| Use building and construction prototypes | Develop preventative maintenance programs |
| Create staffing guidelines, formulas and ratios, including administrative staffing | Conduct cost/benefit analyses related to possible outsourcing of district functions |
| Contract piggybacking and cooperative purchasing | |

New Hampshire Department of Education
Long-term Comprehensive Modeling Analysis
New Hampshire Charter School Grant

**Full Cost Savings Model; Ambitious Student Growth**

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Traditional Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 6,152 | 6,306 | 6,463 | 6,625 | 6,791 | 6,960 | 7,134 | 7,313 | 7,496 | 7,683 |
| Federal Taxpayer Contribution | | 1,006 | 1,031 | 1,057 | 1,083 | 1,110 | 1,138 | 1,167 | 1,196 | 1,226 | 1,256 |
| Local Taxpayer Contribution | | 12,246 | 12,552 | 12,866 | 13,188 | 13,517 | 13,855 | 14,202 | 14,557 | 14,921 | 15,294 |
| Other | | 316 | 324 | 332 | 340 | 349 | 358 | 366 | 376 | 385 | 395 |
| | | 19,720 | 20,213 | 20,718 | 21,236 | 21,767 | 22,311 | 22,869 | 23,441 | 24,027 | 24,628 |
| Less Special Edcuation Costs Per Student | | 4,671 | 4,788 | 4,907 | 5,030 | 5,156 | 5,285 | 5,417 | 5,552 | 5,691 | 5,833 |
| Less Tuition and Transportation Per Student | | 44 | 45 | 47 | 48 | 49 | 50 | 51 | 53 | 54 | 55 |
| Total | | 15,005 | 15,380 | 15,764 | 16,159 | 16,563 | 16,977 | 17,401 | 17,836 | 18,282 | 18,739 |
| | | | | | | | | | | | |
| **Charter Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 8,601 | 8,816 | 9,036 | 9,262 | 9,494 | 9,731 | 9,975 | 10,224 | 10,479 | 10,741 |
| Federal Taxpayer Contribution | | 209 | 214 | 220 | 225 | 231 | 236 | 242 | 248 | 255 | 261 |
| Other | | 663 | 680 | 697 | 714 | 732 | 750 | 769 | 788 | 808 | 828 |
| | | 9,473 | 9,710 | 9,953 | 10,201 | 10,456 | 10,718 | 10,986 | 11,260 | 11,542 | 11,830 |
| | | | | | | | | | | | |
| Difference | | 5,532 | 5,670 | 5,812 | 5,957 | 6,106 | 6,259 | 6,415 | 6,576 | 6,740 | 6,909 |
| Inflation factor | 2.50% | 1.000 | 1.025 | 1.051 | 1.077 | 1.104 | 1.131 | 1.160 | 1.189 | 1.218 | 1.249 |
| | | | | | | | | | | | |
| New students per year | | 260 | 527 | 757 | 948 | 764 | 551 | 193 | - | - | - |
| Cumulative number of students | | 260 | 787 | 1,544 | 2,492 | 3,256 | 3,807 | 4,000 | 4,000 | 4,000 | 4,000 |
| | | | | | | | | | | | |
| Gross taxpayer savings per year | | 1,438,281 | 4,462,405 | 8,973,573 | 14,845,335 | 19,881,549 | 23,827,176 | 25,660,998 | 26,302,523 | 26,960,086 | 27,634,089 |
| Cumulative gross taxpayer savings per year | | 1,438,281 | 5,900,686 | 14,874,259 | 29,719,593 | 49,601,143 | 73,428,318 | 99,089,317 | 125,391,840 | 152,351,926 | 179,986,015 |
| | | | | | | | | | | | |
| Fixed cost amoritization | | (3,901,261) | (10,706,085) | (18,637,621) | (25,975,886) | (26,843,911) | (22,896,081) | (13,812,401) | (5,356,969) | (1,119,466) | 0 |
| Years for fixed cost adjustment | 3 | | | | | | | | | | |
| Grant funds to state | | 10,114,548 | 10,322,150 | 10,348,914 | 15,214,088 | - | - | - | - | - | - |
| **Net Annual Taxpayer Savings** | | **7,651,568** | **4,078,470** | **684,866** | **4,083,536** | **(6,962,361)** | **931,095** | **11,848,597** | **20,945,554** | **25,840,620** | **27,634,089** |
| | | | | | | | | | | | |
| **Net Cummulative Taxpayer Savings** | | **7,651,568** | **11,730,038** | **12,414,904** | **16,498,440** | **9,536,079** | **10,467,174** | **22,315,771** | **43,261,325** | **69,101,945** | **96,736,034** |

New Hampshire Department of Education
Long-term Comprehensive Modeling Analysis
New Hampshire Charter School Grant

**Full Cost Savings Model; Historical Student Growth**

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Traditional Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 6,152 | 6,306 | 6,463 | 6,625 | 6,791 | 6,960 | 7,134 | 7,313 | 7,496 | 7,683 |
| Federal Taxpayer Contribution | | 1,006 | 1,031 | 1,057 | 1,083 | 1,110 | 1,138 | 1,167 | 1,196 | 1,226 | 1,256 |
| Local Taxpayer Contribution | | 12,246 | 12,552 | 12,866 | 13,188 | 13,517 | 13,855 | 14,202 | 14,557 | 14,921 | 15,294 |
| Other | | 316 | 324 | 332 | 340 | 349 | 358 | 366 | 376 | 385 | 395 |
| | | 19,720 | 20,213 | 20,718 | 21,236 | 21,767 | 22,311 | 22,869 | 23,441 | 24,027 | 24,628 |
| Less Special Edcuation Costs Per Student | | 4,671 | 4,788 | 4,907 | 5,030 | 5,156 | 5,285 | 5,417 | 5,552 | 5,691 | 5,833 |
| Less Tuition and Transportation Per Student | | 44 | 45 | 47 | 48 | 49 | 50 | 51 | 53 | 54 | 55 |
| Total | | 15,005 | 15,380 | 15,764 | 16,159 | 16,563 | 16,977 | 17,401 | 17,836 | 18,282 | 18,739 |
| | | | | | | | | | | | |
| **Charter Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 8,601 | 8,816 | 9,036 | 9,262 | 9,494 | 9,731 | 9,975 | 10,224 | 10,479 | 10,741 |
| Federal Taxpayer Contribution | | 209 | 214 | 220 | 225 | 231 | 236 | 242 | 248 | 255 | 261 |
| Other | | 663 | 680 | 697 | 714 | 732 | 750 | 769 | 788 | 808 | 828 |
| | | 9,473 | 9,710 | 9,953 | 10,201 | 10,456 | 10,718 | 10,986 | 11,260 | 11,542 | 11,830 |
| | | | | | | | | | | | |
| Difference | | 5,532 | 5,670 | 5,812 | 5,957 | 6,106 | 6,259 | 6,415 | 6,576 | 6,740 | 6,909 |
| Inflation factor | 2.50% | 1.000 | 1.025 | 1.051 | 1.077 | 1.104 | 1.131 | 1.160 | 1.189 | 1.218 | 1.249 |
| | | | | | | | | | | | |
| New students per year | | 260 | 516 | 676 | 696 | 656 | 531 | 445 | 220 | - | - |
| Cumulative number of students | | 260 | 776 | 1,452 | 2,148 | 2,804 | 3,335 | 3,780 | 4,000 | 4,000 | 4,000 |
| | | | | | | | | | | | |
| Gross taxpayer savings per year | | 1,438,281 | 4,400,033 | 8,438,878 | 12,796,059 | 17,121,580 | 20,873,032 | 24,249,643 | 26,302,523 | 26,960,086 | 27,634,089 |
| Cumulative gross taxpayer savings per year | | 1,438,281 | 5,838,314 | 14,277,192 | 27,073,251 | 44,194,831 | 65,067,863 | 89,317,506 | 115,620,029 | 142,580,116 | 170,214,204 |
| | | | | | | | | | | | |
| Fixed cost amoritization | | (3,901,261) | (10,536,906) | (17,247,912) | (20,996,249) | (21,914,873) | (20,006,725) | (17,374,853) | (12,091,095) | (6,505,083) | (3,923,931) |
| Years for fixed cost adjustment | 3 | | | | | | | | | | |
| Grant funds to state | | 10,114,548 | 10,322,150 | 10,348,914 | 15,214,088 | - | - | - | - | - | - |
| **Net Annual Taxpayer Savings** | | **7,651,568** | **4,185,278** | **1,539,880** | **7,013,898** | **(4,793,293)** | **866,307** | **6,874,790** | **14,211,428** | **20,455,003** | **23,710,157** |
| | | | | | | | | | | | |
| **Net Cummulative Taxpayer Savings** | | **7,651,568** | **11,836,846** | **13,376,726** | **20,390,624** | **15,597,330** | **16,463,637** | **23,338,428** | **37,549,856** | **58,004,859** | **81,715,016** |

New Hampshire Department of Education
Long-term Comprehensive Modeling Analysis
New Hampshire Charter School Grant

**Full Cost Savings Model; Conservative Student Growth**

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Traditional Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 6,152 | 6,306 | 6,463 | 6,625 | 6,791 | 6,960 | 7,134 | 7,313 | 7,496 | 7,683 |
| Federal Taxpayer Contribution | | 1,006 | 1,031 | 1,057 | 1,083 | 1,110 | 1,138 | 1,167 | 1,196 | 1,226 | 1,256 |
| Local Taxpayer Contribution | | 12,246 | 12,552 | 12,866 | 13,188 | 13,517 | 13,855 | 14,202 | 14,557 | 14,921 | 15,294 |
| Other | | 316 | 324 | 332 | 340 | 349 | 358 | 366 | 376 | 385 | 395 |
| | | 19,720 | 20,213 | 20,718 | 21,236 | 21,767 | 22,311 | 22,869 | 23,441 | 24,027 | 24,628 |
| Less Special Edcuation Costs Per Student | | 4,671 | 4,788 | 4,907 | 5,030 | 5,156 | 5,285 | 5,417 | 5,552 | 5,691 | 5,833 |
| Less Tuition and Transportation Per Student | | 44 | 45 | 47 | 48 | 49 | 50 | 51 | 53 | 54 | 55 |
| Total | | 15,005 | 15,380 | 15,764 | 16,159 | 16,563 | 16,977 | 17,401 | 17,836 | 18,282 | 18,739 |
| | | | | | | | | | | | |
| **Charter Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 8,601 | 8,816 | 9,036 | 9,262 | 9,494 | 9,731 | 9,975 | 10,224 | 10,479 | 10,741 |
| Federal Taxpayer Contribution | | 209 | 214 | 220 | 225 | 231 | 236 | 242 | 248 | 255 | 261 |
| Other | | 663 | 680 | 697 | 714 | 732 | 750 | 769 | 788 | 808 | 828 |
| | | 9,473 | 9,710 | 9,953 | 10,201 | 10,456 | 10,718 | 10,986 | 11,260 | 11,542 | 11,830 |
| | | | | | | | | | | | |
| Difference | | 5,532 | 5,670 | 5,812 | 5,957 | 6,106 | 6,259 | 6,415 | 6,576 | 6,740 | 6,909 |
| Inflation factor | 2.50% | 1.000 | 1.025 | 1.051 | 1.077 | 1.104 | 1.131 | 1.160 | 1.189 | 1.218 | 1.249 |
| | | | | | | | | | | | |
| New students per year | | 260 | 390 | 429 | 368 | 301 | 174 | 193 | 211 | 233 | 256 |
| Cumulative number of students | | 260 | 650 | 1,079 | 1,447 | 1,748 | 1,922 | 2,115 | 2,326 | 2,559 | 2,815 |
| | | | | | | | | | | | |
| Gross taxpayer savings per year | | 1,438,281 | 3,685,595 | 6,271,040 | 8,620,064 | 10,673,510 | 12,029,375 | 13,568,253 | 15,294,917 | 17,247,715 | 19,447,490 |
| Cumulative gross taxpayer savings per year | | 1,438,281 | 5,123,876 | 11,394,915 | 20,014,979 | 30,688,489 | 42,717,864 | 56,286,117 | 71,581,035 | 88,828,750 | 108,276,240 |
| | | | | | | | | | | | |
| Fixed cost amoritization | | (3,901,261) | (8,599,029) | (12,062,170) | (12,454,393) | (11,203,884) | (8,259,601) | (6,989,460) | (6,986,982) | (9,142,568) | (12,820,286) |
| Years for fixed cost adjustment | 3 | | | | | | | | | | |
| Grant funds to state | | 10,114,548 | 10,322,150 | 10,348,914 | 15,214,088 | - | - | - | - | - | - |
| **Net Annual Taxpayer Savings** | | **7,651,568** | **5,408,716** | **4,557,783** | **11,379,759** | **(530,375)** | **3,769,775** | **6,578,793** | **8,307,935** | **8,105,148** | **6,627,204** |
| | | | | | | | | | | | |
| **Net Cummulative Taxpayer Savings** | | **7,651,568** | **13,060,284** | **17,618,067** | **28,997,826** | **28,467,451** | **32,237,226** | **38,816,019** | **47,123,954** | **55,229,102** | **61,856,306** |

New Hampshire Department of Education
Long-term Comprehensive Modeling Analysis
New Hampshire Charter School Grant

**Shared Savings Model; Ambitious Student Growth**

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Traditional Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 6,152 | 6,306 | 6,463 | 6,625 | 6,791 | 6,960 | 7,134 | 7,313 | 7,496 | 7,683 |
| Federal Taxpayer Contribution | | 1,006 | 1,031 | 1,057 | 1,083 | 1,110 | 1,138 | 1,167 | 1,196 | 1,226 | 1,256 |
| Local Taxpayer Contribution | | 12,246 | 12,552 | 12,866 | 13,188 | 13,517 | 13,855 | 14,202 | 14,557 | 14,921 | 15,294 |
| Other | | 316 | 324 | 332 | 340 | 349 | 358 | 366 | 376 | 385 | 395 |
| | | 19,720 | 20,213 | 20,718 | 21,236 | 21,767 | 22,311 | 22,869 | 23,441 | 24,027 | 24,628 |
| Less Special Edcuation Costs Per Student | | 4,671 | 4,788 | 4,907 | 5,030 | 5,156 | 5,285 | 5,417 | 5,552 | 5,691 | 5,833 |
| Less Tuition and Transportation Per Student | | 44 | 45 | 47 | 48 | 49 | 50 | 51 | 53 | 54 | 55 |
| Total | | 15,005 | 15,380 | 15,764 | 16,159 | 16,563 | 16,977 | 17,401 | 17,836 | 18,282 | 18,739 |
| | | | | | | | | | | | |
| **Charter Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 8,601 | 8,816 | 9,036 | 9,262 | 9,494 | 9,731 | 9,975 | 10,224 | 10,479 | 10,741 |
| Federal Taxpayer Contribution | | 209 | 214 | 220 | 225 | 231 | 236 | 242 | 248 | 255 | 261 |
| Other | | 663 | 680 | 697 | 714 | 732 | 750 | 769 | 788 | 808 | 828 |
| | | 9,473 | 9,710 | 9,953 | 10,201 | 10,456 | 10,718 | 10,986 | 11,260 | 11,542 | 11,830 |
| | | | | | | | | | | | |
| Difference | | 5,532 | 5,670 | 5,812 | 5,957 | 6,106 | 6,259 | 6,415 | 6,576 | 6,740 | 6,909 |
| Inflation factor | 2.50% | 1.000 | 1.025 | 1.051 | 1.077 | 1.104 | 1.131 | 1.160 | 1.189 | 1.218 | 1.249 |
| | | | | | | | | | | | |
| New students per year | | 260 | 527 | 757 | 948 | 764 | 551 | 193 | - | - | - |
| Cumulative number of students | | 260 | 787 | 1,544 | 2,492 | 3,256 | 3,807 | 4,000 | 4,000 | 4,000 | 4,000 |
| | | | | | | | | | | | |
| Gross taxpayer savings per year | | 1,438,281 | 4,462,405 | 8,973,573 | 14,845,335 | 19,881,549 | 23,827,176 | 25,660,998 | 26,302,523 | 26,960,086 | 27,634,089 |
| Cumulative gross taxpayer savings per year | | 1,438,281 | 5,900,686 | 14,874,259 | 29,719,593 | 49,601,143 | 73,428,318 | 99,089,317 | 125,391,840 | 152,351,926 | 179,986,015 |
| | | | | | | | | | | | |
| Fixed cost amoritization | | (1,438,281) | (3,947,021) | (6,871,146) | (9,576,550) | (9,896,565) | (8,441,116) | (5,092,229) | (1,974,958) | (412,714) | 0 |
| Years for fixed cost adjustment | 3 | | | | | | | | | | |
| Grant funds to state | | 10,114,548 | 10,322,150 | 10,348,914 | 15,214,088 | - | - | - | - | - | - |
| **Net Annual Taxpayer Savings** | | **10,114,548** | **10,837,534** | **12,451,341** | **20,482,873** | **9,984,984** | **15,386,060** | **20,568,770** | **24,327,565** | **26,547,372** | **27,634,089** |
| | | | | | | | | | | | |
| **Net Cummulative Taxpayer Savings** | | **10,114,548** | **20,952,082** | **33,403,423** | **53,886,295** | **63,871,279** | **79,257,339** | **99,826,108** | **124,153,674** | **150,701,046** | **178,335,134** |

New Hampshire Department of Education
Long-term Comprehensive Modeling Analysis
New Hampshire Charter School Grant

**Shared Savings Model; Historical Student Growth**

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Traditional Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 6,152 | 6,306 | 6,463 | 6,625 | 6,791 | 6,960 | 7,134 | 7,313 | 7,496 | 7,683 |
| Federal Taxpayer Contribution | | 1,006 | 1,031 | 1,057 | 1,083 | 1,110 | 1,138 | 1,167 | 1,196 | 1,226 | 1,256 |
| Local Taxpayer Contribution | | 12,246 | 12,552 | 12,866 | 13,188 | 13,517 | 13,855 | 14,202 | 14,557 | 14,921 | 15,294 |
| Other | | 316 | 324 | 332 | 340 | 349 | 358 | 366 | 376 | 385 | 395 |
| | | 19,720 | 20,213 | 20,718 | 21,236 | 21,767 | 22,311 | 22,869 | 23,441 | 24,027 | 24,628 |
| Less Special Edcuation Costs Per Student | | 4,671 | 4,788 | 4,907 | 5,030 | 5,156 | 5,285 | 5,417 | 5,552 | 5,691 | 5,833 |
| Less Tuition and Transportation Per Student | | 44 | 45 | 47 | 48 | 49 | 50 | 51 | 53 | 54 | 55 |
| Total | | 15,005 | 15,380 | 15,764 | 16,159 | 16,563 | 16,977 | 17,401 | 17,836 | 18,282 | 18,739 |
| | | | | | | | | | | | |
| **Charter Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 8,601 | 8,816 | 9,036 | 9,262 | 9,494 | 9,731 | 9,975 | 10,224 | 10,479 | 10,741 |
| Federal Taxpayer Contribution | | 209 | 214 | 220 | 225 | 231 | 236 | 242 | 248 | 255 | 261 |
| Other | | 663 | 680 | 697 | 714 | 732 | 750 | 769 | 788 | 808 | 828 |
| | | 9,473 | 9,710 | 9,953 | 10,201 | 10,456 | 10,718 | 10,986 | 11,260 | 11,542 | 11,830 |
| | | | | | | | | | | | |
| Difference | | 5,532 | 5,670 | 5,812 | 5,957 | 6,106 | 6,259 | 6,415 | 6,576 | 6,740 | 6,909 |
| Inflation factor | 2.50% | 1.000 | 1.025 | 1.051 | 1.077 | 1.104 | 1.131 | 1.160 | 1.189 | 1.218 | 1.249 |
| | | | | | | | | | | | |
| New students per year | | 260 | 516 | 676 | 696 | 656 | 531 | 445 | 220 | - | - |
| Cumulative number of students | | 260 | 776 | 1,452 | 2,148 | 2,804 | 3,335 | 3,780 | 4,000 | 4,000 | 4,000 |
| | | | | | | | | | | | |
| Gross taxpayer savings per year | | 1,438,281 | 4,400,033 | 8,438,878 | 12,796,059 | 17,121,580 | 20,873,032 | 24,249,643 | 26,302,523 | 26,960,086 | 27,634,089 |
| Cumulative gross taxpayer savings per year | | 1,438,281 | 5,838,314 | 14,277,192 | 27,073,251 | 44,194,831 | 65,067,863 | 89,317,506 | 115,620,029 | 142,580,116 | 170,214,204 |
| | | | | | | | | | | | |
| Fixed cost amoritization | | (1,438,281) | (3,884,649) | (6,358,801) | (7,740,704) | (8,079,373) | (7,375,895) | (6,405,601) | (4,457,634) | (2,398,234) | (1,446,639) |
| Years for fixed cost adjustment | 3 | | | | | | | | | | |
| Grant funds to state | | 10,114,548 | 10,322,150 | 10,348,914 | 15,214,088 | - | - | - | - | - | - |
| **Net Annual Taxpayer Savings** | | **10,114,548** | **10,837,534** | **12,428,991** | **20,269,444** | **9,042,207** | **13,497,137** | **17,844,043** | **21,844,890** | **24,561,852** | **26,187,450** |
| | | | | | | | | | | | |
| **Net Cummulative Taxpayer Savings** | | **10,114,548** | **20,952,082** | **33,381,073** | **53,650,516** | **62,692,723** | **76,189,860** | **94,033,903** | **115,878,792** | **140,440,645** | **166,628,094** |

New Hampshire Department of Education
Long-term Comprehensive Modeling Analysis
New Hampshire Charter School Grant

**Shared Savings Model; Conservative Student Growth**

| | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Traditional Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 6,152 | 6,306 | 6,463 | 6,625 | 6,791 | 6,960 | 7,134 | 7,313 | 7,496 | 7,683 |
| Federal Taxpayer Contribution | | 1,006 | 1,031 | 1,057 | 1,083 | 1,110 | 1,138 | 1,167 | 1,196 | 1,226 | 1,256 |
| Local Taxpayer Contribution | | 12,246 | 12,552 | 12,866 | 13,188 | 13,517 | 13,855 | 14,202 | 14,557 | 14,921 | 15,294 |
| Other | | 316 | 324 | 332 | 340 | 349 | 358 | 366 | 376 | 385 | 395 |
| | | 19,720 | 20,213 | 20,718 | 21,236 | 21,767 | 22,311 | 22,869 | 23,441 | 24,027 | 24,628 |
| Less Special Edcuation Costs Per Student | | 4,671 | 4,788 | 4,907 | 5,030 | 5,156 | 5,285 | 5,417 | 5,552 | 5,691 | 5,833 |
| Less Tuition and Transportation Per Student | | 44 | 45 | 47 | 48 | 49 | 50 | 51 | 53 | 54 | 55 |
| Total | | 15,005 | 15,380 | 15,764 | 16,159 | 16,563 | 16,977 | 17,401 | 17,836 | 18,282 | 18,739 |
| | | | | | | | | | | | |
| **Charter Public School** | | | | | | | | | | | |
| State Taxpayer Contribution | | 8,601 | 8,816 | 9,036 | 9,262 | 9,494 | 9,731 | 9,975 | 10,224 | 10,479 | 10,741 |
| Federal Taxpayer Contribution | | 209 | 214 | 220 | 225 | 231 | 236 | 242 | 248 | 255 | 261 |
| Other | | 663 | 680 | 697 | 714 | 732 | 750 | 769 | 788 | 808 | 828 |
| | | 9,473 | 9,710 | 9,953 | 10,201 | 10,456 | 10,718 | 10,986 | 11,260 | 11,542 | 11,830 |
| | | | | | | | | | | | |
| Difference | | 5,532 | 5,670 | 5,812 | 5,957 | 6,106 | 6,259 | 6,415 | 6,576 | 6,740 | 6,909 |
| Inflation factor | 2.50% | 1.000 | 1.025 | 1.051 | 1.077 | 1.104 | 1.131 | 1.160 | 1.189 | 1.218 | 1.249 |
| | | | | | | | | | | | |
| New students per year | | 260 | 390 | 429 | 368 | 301 | 174 | 193 | 211 | 233 | 256 |
| Cumulative number of students | | 260 | 650 | 1,079 | 1,447 | 1,748 | 1,922 | 2,115 | 2,326 | 2,559 | 2,815 |
| | | | | | | | | | | | |
| Gross taxpayer savings per year | | 1,438,281 | 3,685,595 | 6,271,040 | 8,620,064 | 10,673,510 | 12,029,375 | 13,568,253 | 15,294,917 | 17,247,715 | 19,447,490 |
| Cumulative gross taxpayer savings per year | | 1,438,281 | 5,123,876 | 11,394,915 | 20,014,979 | 30,688,489 | 42,717,864 | 56,286,117 | 71,581,035 | 88,828,750 | 108,276,240 |
| | | | | | | | | | | | |
| Fixed cost amoritization | | (1,438,281) | (3,170,211) | (4,446,970) | (4,591,571) | (4,130,545) | (3,045,073) | (2,576,810) | (2,575,896) | (3,370,598) | (4,726,465) |
| Years for fixed cost adjustment | 3 | | | | | | | | | | |
| Grant funds to state | | 10,114,548 | 10,322,150 | 10,348,914 | 15,214,088 | - | - | - | - | - | - |
| **Net Annual Taxpayer Savings** | | **10,114,548** | **10,837,534** | **12,172,984** | **19,242,581** | **6,542,965** | **8,984,302** | **10,991,443** | **12,719,021** | **13,877,118** | **14,721,025** |
| | | | | | | | | | | | |
| **Net Cummulative Taxpayer Savings** | | **10,114,548** | **20,952,082** | **33,125,066** | **52,367,647** | **58,910,612** | **67,894,914** | **78,886,357** | **91,605,378** | **105,482,496** | **120,203,521** |