



STATE OF TENNESSEE  
**COMPTROLLER OF THE TREASURY**  
State Capitol  
Nashville, Tennessee 37243-9034  
(615) 741-2501

Justin P. Wilson  
Comptroller

December 6, 2011

The Honorable Kevin Huffman  
Commissioner, Department of Education  
6<sup>th</sup> Floor Andrew Johnson Tower  
710 James Robertson Parkway  
Nashville, Tennessee 37243

The Honorable Dolores Gresham  
Chair, Senate Education Committee  
301 6th Ave. North  
Suite 308, War Memorial Building  
Nashville, Tennessee 37243

The Honorable B. Fielding Rolston  
Chairman, State Board of Education  
9<sup>th</sup> Floor Andrew Johnson Tower  
710 James Robertson Parkway  
Nashville, Tennessee 37243

The Honorable Richard Montgomery  
Chair, House Education Committee  
301 6th Ave. North  
Suite 109, War Memorial Building  
Nashville, Tennessee 37243

Dear Sirs and Madam:

Under our constitution, “the State of Tennessee recognizes the inherent value of education...” and mandates that “The General Assembly shall provide for the maintenance, support and eligibility standards of a system of free public education.”

In 1993, our Supreme Court determined that the General Assembly failed to meet its constitutional obligation and ruled that the state’s previous educational funding program was not adequately funding public education. The General Assembly had responded to the pending litigation with the Educational Improvement Act of 1992, which contains the Basic Education Program (BEP) formula used to satisfy public education obligations by calculating the amount of funding sufficient to provide a basic level of education for Tennessee students.

The BEP funding formula has developed piecemeal for nearly two decades. Part comes from specific language in the Tennessee Code, part from appropriation acts over the years, and part from administrative decisions. Errors were corrected, inadequacies addressed, and reforms made. Much of the history related to the evolution of the BEP formula is unclear. The BEP consumes approximately \$3.8 billion, or 37% of the taxes in the general and education funds. Clearly the formula used to calculate an amount of this magnitude must be transparent, understandable, and verifiable.

We have looked at various components of the BEP formula. Our overriding concern is that discrepancies can and do occur in the formula and its components without the knowledge, approval, or understanding of state officials, oversight boards, or legislators. In our review of the insurance component (attachment A), we determined that the insurance funding was not in line with external expectations, and two months of education insurance expense were not funded. In another review focusing on attendance reporting (attachment B), we found that Local Education Agencies (LEAs) self-report the attendance figures that determine funding levels, and these representations are not verified by the State Department of Education. We identified discrepancies in these reported figures.

Because of these differences within the data and within the formula, we are raising awareness of the complexities in the formula. Our goal is to increase transparency and to ensure that lawmakers have the information needed to ensure the long-term fiscal health of the State of Tennessee. Not only does this calculation affect the budget of the state, but if the calculations are not understandable and consistent, there may also be increased risk of intervention from the courts.

### **Results of our reviews**

Due to the significance to the state budget and the consequences of improper BEP allocations, our office has performed the aforementioned reviews. Our first concern, noted during the analysis of the BEP prepared by the Offices of Research and Education Accountability, is the complexity of the formula. The formula consists of at least 45 cost components derived from many sources. Only a few in the Department of Education appear to have a working knowledge of the formula, and several calculations and worksheets come from different departments, limiting the comprehensive understanding of even those few. There is no written protocol regarding how the formula is or should be calculated. This piecemeal approach, without a written protocol, reduces the transparency of the formula and makes it difficult, if not impossible, to verify BEP funding.

There are several ways changes are made to the formula. The general practice is for the BEP review committee to make recommendations for changes. Those suggestions are considered by the General Assembly and may or may not become a part of state statute. The changes may also be reflected in the appropriations bill. There are built-in, automatic changes, such as the maintenance of effort requirement, and changes that are based on cost, such as capital and transportation. Because the formula is less transparent and less verifiable than it should be, the formula could be manipulated administratively, either through intent or error.

One administrative adjustment made in this piecemeal approach to modifying the BEP formula became apparent in our insurance review. We noted that insurance had been calculated differently than had been commonly understood for years. The common understanding was that the state covered an average of 45% of insurance premiums, but in fact, the state only calculated 45% for 10 of the 12 months of required insurance premiums. The LEAs have had to absorb the additional portion.

Finally, in our most recent review of attendance reporting, we discovered serious control deficiencies in the processes used by the Department of Education to collect information regarding attendance, and to calculate and allocate BEP funding. While we identified unexplained differences, the scope of our work did not allow us to determine the overall effect such differences would have on BEP funding.

The BEP funding formula is affected by numerous variables, but is primarily driven by the average daily membership (ADM) numbers reported by the LEAs. Our review endeavored to outline the reporting process and the controls in place to ensure that LEAs were accurately reporting ADM numbers. We found that LEAs self-report their attendance figures without appropriate controls. The internal memo regarding this limited ADM review contains several recommended actions and is included as attachment B. While much of the review focused on controls surrounding the ADM figures, we noted potential problems with the overall calculation of the BEP. This reinforced our understanding that the BEP calculations were complex and without a written protocol. The principal recommendations of the internal memorandum are condensed as follows:

- The department should prepare written explanations of the BEP formula's design and provide detailed instruction for the calculation of BEP funding, including supporting worksheets.
- A process should be developed to ensure that the formula functions according to its intended design.
- The department should allocate resources for on-site visits to LEAs for ADM reviews.
- The department should simplify the attendance reporting process.

The attendance calculation itself is complex. The department uses ADM (a representation of the average number of days students are enrolled) as a variable for many calculations, including BEP funding. It uses average daily attendance (a representation of the average number of days students were present in class) as the variable for several types of revenues and debt proceeds. This inconsistency results from differences in state statute, and requires the LEAs to maintain both statistics rather than a standard attendance figure that could be verified by the Department of Education.

### **Concluding thoughts**

Our reviews have been limited in scope, yet each review has heightened our concerns. Experience has shown that when questions arise regarding the fairness of the BEP formula, the response has been to add more complexity to the calculation. The changes to the formula have made it harder and harder to understand, or question the formula's basic support and foundation.

It is in the best interest of all Tennesseans that the BEP formula be transparent, understandable, and verifiable. The Department of Education should determine the best way to preserve the integrity of the formula through written protocols. Steps should be taken to determine the best process for reviewing the formula each year and ensuring that any changes to

the formula have full approval, whether through internal policy or through legislation. Approved changes should be written into the formula and protocol to provide an updated representation of the BEP formula.

The responsibility to determine how to increase the accuracy, understandability, and verifiability of the BEP formula rests squarely on the shoulders of the Department of Education. It is essential that the Department of Education work with the General Assembly to deal with the constitutional mandate and establish more control and transparency over billions of dollars of the state's budget.

Sincerely,

A handwritten signature in black ink, appearing to read "Justin P. Wilson". The signature is fluid and cursive, with a long, thin vertical stroke extending downwards from the end of the name.

Justin P. Wilson  
Comptroller of the Treasury

Attachments A and B

JPW/kja



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**COMPTROLLER OF THE TREASURY**  
State Capitol  
Nashville, Tennessee 37243-9034  
(615) 741-2501

**Justin P. Wilson**  
Comptroller

March 28, 2011

The Honorable Mark Emkes  
Commissioner, Department of Finance and Administration  
State Capitol  
Nashville, Tennessee 37243  
And  
The Honorable Patrick Smith  
Acting Commissioner, Department of Education  
Andrew Johnson Tower  
Nashville, Tennessee 37243

Re: Basic Education Program Insurance Premiums

Gentlemen:

Our office recently received information that indicated that the state share of the insurance premium component of the Basic Education Program (BEP) is calculated in a manner that perhaps differs from external expectations.

The component of the BEP formula at issue relates to teachers' and other employees' health insurance premiums. Currently, the appropriations bill states that the State of Tennessee funds an amount not to exceed 45% of the total statewide cost of participation in the insurance plans for instruction and classroom positions funded through the BEP formula. The calculation is based on average monthly insurance premiums for all individuals participating in the state insurance plan.

During our interviews with various individuals in state government and the education community, we found the common understanding is that the state covers an average of 45% of annual health insurance premiums for these categories of employees. As such, the expectation is that the local education agencies (LEAs) must in turn be responsible for at least 45% of the insurance premiums for such employees who choose to have health insurance. Section 8-27-303(j)(1), *Tennessee Code Annotated*, states each LEA shall pay, as a minimum, the percentage specified in the appropriation act.

The BEP formula, however, only considers 10 of 12 months of insurance premiums. Therefore, the state's formula is, in effect, funding 45% of 10 of the 12 months of insurance premiums, resulting in an actual annual average percentage nearer 37.5%. The state does not fund 45% of the aggregate annual average insurance premium amount. LEAs, in contrast, are required to pay insurance premiums for each of the 12 months in a year, and to cover the 2 months not funded by the state. The extra 2 months are not part of the formula, even though the BEP formula is intended to estimate a sufficient amount of funds to provide a basic level of education for Tennessee students.

After extensive interviewing efforts, we were not able to get a definitive answer to the reasons why the calculation would only cover 10 months of insurance premiums that have to be paid for 12 months when the other components of teachers' compensation, such as salary, Social Security, and retirement, would be considered in the formula in total.

During our interviews, we determined that actual knowledge of the 10-month calculation was sparse and mostly concentrated in the Department of Finance and Administration (F&A). Some Department of Education employees became aware of the mechanics of the calculation in 2007. At that time, F&A staff had discussed phasing in funding for the remaining two months, but indicated the department was unable to initiate a phase-in plan due to lack of funding in the declining economy. From these discussions, the Education employees were under the impression that the 10-month calculation was an error but that there was not currently money available to fix the error.

According to F&A's Budget Office Director, the calculation of health insurance premiums on a 10-month basis began in 1993, was a policy decision in development of the BEP formula, was revisited and not changed in later years, and was continued in every subsequent appropriations bill, including the appropriations bill for fiscal year 2010-2011.

The Budget Office Director said that the logic of calculation premiums on a 10-month basis is that salaries are funded for 10 months of work and that other benefits (retirement contribution and FICA, or social security and Medicare contributions, which are a percentage of salary) also are based on 10 months.

The views of the Budget Director are consistent with speculations by, and recollections of, some current and former F&A employees, that when the formula was initially developed in the 1990s, the state made a policy decision to include the funding for insurance premiums for only 10 months each year, since at the time most teachers only worked 10 months out of the year. Another rationale provided was that funding constraints were considered in making an adjustment to this BEP component.

The Budget Office Director also stated that even if funding of a state share of health insurance benefits on a 10-month basis were viewed as a mistake, rather than a policy decision, the provisions of law limiting the distribution of BEP funds to the appropriation made and providing a prorating method in such cases, would have resulted in no greater distribution of BEP funds to the local education agencies in each year. The Budget Office Director stated, however, that this was a policy decision, remains a policy decision, and that, in his opinion, the BEP formula has been and is at full funding.

March 28, 2011

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F&A's Budget Office Director told us that the appropriations bill being drafted for 2011-2012 reflects the calculation of the state share of the health insurance premiums on a 10-month basis, continuing the policy decision of the last 19 years. The Budget Office Director estimates that an additional annual outlay of \$58 million would be required to fund the extra 2 months for fiscal year 2011-2012.

The mechanics of the BEP formula are a policy matter. Because the intricacies of the BEP funding formula are not necessarily transparent to the education community or members of the General Assembly, and because the state share of the insurance premium component is a significant aspect of BEP funding, we believe that it is important, and timely, to draw attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Justin P. Wilson". The signature is written in a cursive style with a large initial "J" and "W".

Justin P. Wilson  
Comptroller of the Treasury

cc: The Honorable Randy McNally, Chair, Senate Finance, Ways and Means  
The Honorable Charles Sargent, Chair, House Finance, Ways and Means  
The Honorable Dolores Gresham, Chair, Senate Education  
The Honorable Richard Montgomery, Chair, House Education



STATE OF TENNESSEE  
**COMPTROLLER OF THE TREASURY**  
DEPARTMENT OF AUDIT  
DIVISION OF COUNTY AUDIT  
SUITE 1500  
JAMES K. POLK STATE OFFICE BUILDING  
NASHVILLE, TENNESSEE 37243-1402  
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September 28, 2011

MEMORANDUM

TO: Richard Norment, Assistant to the Comptroller  
Jim Arnette, Director, Division of County Audit  
Kathy Anderson, Assistant Director of State Audit

FROM: Joe Kimery, Assistant Director, County Audit  
Jerry Durham, Technical Manager, County Audit

SUBJECT: Reasonableness of Average Daily Membership (ADM) Numbers Reported by  
Local Education Agencies (LEAs) for Basic Education Program (BEP)  
Calculations

We conducted several fact finding interviews and site visits in an attempt to determine the reasonableness of information provided by LEAs to the Tennessee Department of Education (TDOE) for use in calculating BEP funding levels. We interviewed Wesley Robertson, former TDOE director of local finance; TDOE internal audit and attendance personnel Chris Steppe, Mike McNabb, and Debbie McMillan; Brad Davis, TDOE field representative; and Karen Weidemann, an employee with TDOE local finance. We also visited with the Bedford, Coffee, and Marshall County attendance supervisors to review their ADM reporting backup data for a selected month. The information provided by these divergent sources was consistent.

Although there does not appear to be a serious problem in the reasonableness of ADM reporting; as we progressed with our work, we made several general observations based on these interviews, site visits, and various documents provided by those interviewed. As a result of these general observations, we proposed several actions to improve internal control for officials to consider.

## **General Observations:**

1. The BEP formula is very complex and involves many variables reported from many different sources. This point is illustrated by the following facts: (1) ADM numbers are utilized in various BEP formula calculations approximately 52 times. ADM figures are supplied by LEAs through a TDOE web-based application. (2) Employee position ratios are utilized approximately 29 times. We were advised that employee position ratios are established by State Board of Education rules and do not typically change. (3) Dollar ratios are utilized approximately 18 times. Dollar ratios are determined from unaudited annual financial reports submitted by the 136 different LEAs through the TDOE e-reporting system. Each dollar ratio is composed of a three-year average of expenditures that may or may not be adjusted by an inflation factor. Therefore, the accuracy of each dollar ratio is dependent on the proper coding of expenditures by each of the 136 school systems. The accuracy of the TDOE in-house Excel worksheets where this information is input after having been aggregated from the 136 annual financial reports by a computer application must also be considered. This level of complexity makes it very difficult to determine whether the formula and supporting worksheets are working as intended.
2. There are no written guidelines or instructions for calculating BEP funding and aggregating the supporting worksheets that gather the data for the numerous variables. The BEP formula is maintained in an Excel worksheet by TDOE office of local finance. The main calculation worksheet is supported by various other Excel worksheets. None of the experts we interviewed could demonstrate that the BEP formula and/or supporting worksheets actually work as intended. All parties involved merely assumed the formula and worksheets utilized the variables correctly. We were advised that the state Department of Finance and Administration, TDOE office of local finance, and TDOE internal audit occasionally run test numbers independently to see if they get the same BEP formula result, but that does not prove the formula is actually working as state statutes intend.
3. We were only able to ascertain that two or three people at TDOE have a good working knowledge of the BEP formula and its supporting worksheets.
4. One key component of the BEP formula is ADM. The ADM variable is manually input by each LEA into a TDOE web-based application. This is true even though TDOE also requires LEAs to input student attendance/membership data into the Star Student Management System (SSMS) or other similar attendance computer software applications. The SSMS data is uploaded by TDOE into the state Education Information System (EIS) database. The manually input web-based application data can be manipulated; therefore, this step could be a potential problem. We were advised that TDOE allowed the manual input because of complaints from LEAs about difficulty in using the SSMS and suspected errors in the SSMS. After discussing SSMS with attendance personnel at three LEAs, we are inclined to agree that the SSMS system is difficult to work with. We were also concerned of the effectiveness of training attendance personnel receive before attempting to use the SSMS system. In our judgment, one contributing factor to the potential for inaccurate reporting by LEAs is a lack of effective training or certification for those

preparing and entering attendance/membership data. Reporting is a complicated matter.

One simple example of a way to manipulate ADM data is to not report a student as withdrawn when the student leaves and is no longer enrolled in the school system. This could be accomplished when students withdraw and move to another state. However, this would only affect the calculation of growth money and the allocation of state revenues for the current year. The general BEP calculation is based on enrollment numbers from the prior year using the weighted averages for the second, third, sixth, and seventh reporting periods.

5. Looking at the situation from strictly a technology standpoint, not utilizing SSMS for purposes of determining and reporting ADM appears to be a weakness in ADM reporting. The original intent was to use SSMS for ADM data reporting for the BEP formula; however, the current practice is to use the web-based application.
6. Currently, LEAs are not required to formally reconcile reported ADM numbers between the SSMS system and the manually reported web-based application numbers. In addition, there are no penalties for inaccurate reporting. Discrepancies routinely exist between these numbers and corrections are constantly being performed by both the LEAs and TDOE. Because of this, it is difficult to conceive of a method to audit ADM numbers for accuracy. However, TDOE indicated that they perform certain analytics to monitor ADM reporting. The TDOE office of local finance routinely compares the current-month ADM with the prior-month ADM and compares the year-end ADM with the prior-year ADM. TDOE internal audit also indicated that they perform analytics and reviews when an anomaly is brought to their attention.
7. ADM and various ratios are primary drivers for determining BEP funding levels for LEAs. BEP funding is material to both the State of Tennessee and to county governments. We were advised that one ADM from the state share of the BEP had an estimated value of between \$3,500 and \$4,000 to LEAs. However, no one from TDOE performs focused audits of the numbers reported by the LEAs. In prior years (i.e., 2004 and before), auditors from TDOE performed on-site visits to audit ADA/ADM numbers at LEAs. However, we were advised that a lack of resources has prevented TDOE from performing the on-site audits for the last several years. Instead, TDOE local finance and internal audit indicated that they rely on certain analytical procedures.
8. There appears to be no state-wide standard for grades K-12 for determining when (e.g., what class period or at the beginning or end of the day) or how often (e.g., daily or by class period) attendance (ADA) is taken by the LEA. This is also true when it comes to the person authorized to enter attendance data into the electronic system. Sometimes teachers enter the data and sometimes a clerk in the principal's office enters the data. All of this varies school by school and county by county. ADA and ADM do have a relationship and can be compared for analytical purposes.
9. Several types of revenues/debt proceeds are allocated by statute using ADA rather than ADM. BEP is allocated by statute using ADM. None of the persons we

interviewed could provide an adequate explanation as to why this statutory inconsistency exists.

### **Actions to Consider:**

1. The complexity of the BEP formula is derived from both state statutes and litigation involving revenue equalization. Therefore, the BEP formula would be difficult to change. However, at a minimum, written explanations of the BEP formula and detailed instructions for calculating BEP funding and the supporting worksheets should be developed. A set of template variables should be developed and utilized to periodically test the BEP formula and worksheets. More than two or three people within TDOE should have a working knowledge of the mechanics of the BEP formula and supporting worksheets. TDOE internal audit should test the BEP formula and supporting worksheets for accuracy on at least an annual basis.
2. In prior years, TDOE performed field audits of LEA's ADA/ADM data. TDOE should allocate resources to once again provide its experts in ADA/ADM reporting to make a few on-site visits each year at randomly selected LEAs. These random audits would act both as a deterrent against inaccurate reporting and provide an educational tool for the LEA. TDOE representatives should also visit any specific LEA where questions arise concerning the reliability of ADA/ADM numbers.
3. TDOE should either discontinue the use of the manual web-based reporting system and utilize the ADA/ADM information uploaded electronically from SSMS and similar attendance software applications to EIS or LEAs should be required to submit formal reconciliations for any differences between manually reported web-based application ADM numbers and the attendance software application numbers. This reconciliation should be submitted along with the manually submitted reports. Penalties could be implemented for LEAs who routinely fail to submit accurate information or make corrections on a timely basis.
4. TDOE should consider implementing standard reporting guidelines for when and how often attendance information should be determined by LEAs for grades K-12.
5. TDOE should develop methods to evaluate the proficiency of LEA personnel involved in the ADA/ADM reporting process. TDOE should consider providing mandatory supplemental training for attendance personnel in any county that does not accurately submit ADA/ADM data on a consistent basis.

### **Conclusion:**

Based on our interviews and site visits, it does not appear that LEAs are intentionally over-reporting ADM numbers for the purpose of achieving greater BEP funding; however, there is always the possibility of isolated errors/abuses. For an LEA to over-report ADM by any material amount, it appears that collusion would have to occur between the person who inputs data and upper level management. Data manipulation could occur; however, TDOE office of local finance runs certain analytics to monitor ADM anomalies. In addition, the EIS system was designed to identify dual reporting of students by comparing state-wide

data. Finally, there does not appear to be any personal incentive for employees of TDOE to inflate ADM numbers.

We believe that it is TDOE's inherent responsibility to ensure that each LEA is accurately reporting all variables used in the BEP formula. TDOE recognizes that responsibility since it has previously audited LEAs ADA/ADM numbers and is currently monitoring the accuracy of ADA/ADM numbers by performing analytical procedures. We believe that TDOE, working with LEAs, should consider implementing the actions noted above.