

**JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION  
OF THE VIRGINIA GENERAL ASSEMBLY**

**Special Report:  
Recent Errors in the  
Sales Tax Allocation for  
Local School Divisions**

**August 2006  
Revised**

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Philip A. Leone

### **JLARC Staff for This Report**

Glen S. Tittermary, Deputy Director

Walter L. Smiley, Fiscal Analysis Section Manager

Dr. Gregory J. Rest, Chief Methodologist



# COMMONWEALTH of VIRGINIA

*Joint Legislative Audit and Review Commission*

*Philip A. Leone*  
*Director*

*Suite 1100, General Assembly Building, Capitol Square*  
*Richmond, Virginia 23219*

*(804) 786-1258*

August 23, 2006

The Honorable Vincent F. Callahan, Jr.  
Chairman, House Appropriations Committee  
9th Floor, General Assembly Building  
Capitol Square  
Richmond, Virginia 23219

Dear Delegate Callahan:

This revised special report is in response to your July 24, 2006, request to the Chairman of the Joint Legislative Audit and Review Commission (JLARC). You asked that staff initially review the State's methodology for forecasting sales tax and for calculating the amounts distributed to school divisions, the Transportation Trust Fund, and the State's general fund. You also asked for a review of the State's General Fund forecasting process, which will be the subject of a later report. This revision incorporates some new material (chiefly on pages 5 and 6 and new Appendix C) and clarifies several points.

JLARC staff reviewed information and data and met with personnel from several State agencies, including the Departments of Taxation and Planning and Budget. We conclude that careless errors were made in the calculation of sales tax distribution and that these errors led to an overstatement of the sales tax revenue in Item 135 of the Appropriation Act. These errors did not affect the forecast of sales tax revenue, nor the Transportation Trust Fund, but did impact the distribution of sales tax revenue to the State's Standards of Quality (SOQ) program.

Checks and balances to verify the calculations were not followed or were not in place. We recommend that the Commissioner of the Department of Taxation exercise greater oversight of the forecast function and establish additional internal reviews prior to any future release of data on the distribution of tax revenue. A panel of reviewers, including staff from other finance agencies and the Auditor of Public Accounts, could participate in such a review. The review would provide another level of verification that the final numbers issued by the department correctly incorporate statutory formulas and adjustments and that the calculations are correct for each fiscal year.

On behalf of Commission staff, I would like to thank staff at the Auditor of Public Accounts, and the Departments of Taxation, Education, and Planning and Budget for their assistance during this review.

Sincerely,

A handwritten signature in black ink that reads "Philip A. Leone".

Philip A. Leone  
Director

PAL/wls

cc: Members, Joint Legislative Audit and Review Commission



# Special Report: Recent Errors in the Sales Tax Allocation for Local School Divisions

This report is in response to the July 24, 2006, letter of the Chairman of the House Appropriations Committee to the Chairman of the Joint Legislative Audit and Review Commission (JLARC). The letter requests that JLARC staff review the methodology used to forecast sales tax collections and to calculate the amounts distributed to school divisions, the Transportation Trust Fund (TTF), and the General Fund. A copy of the letter is included as Appendix A. In response, JLARC staff reviewed data and interviewed personnel from the Departments of Taxation (TAX), Planning and Budget (DPB), Education (DOE), and the Auditor of Public Accounts (APA).

## BACKGROUND

Errors in the allocation of sales tax revenue became public in July 2006 when staff from Fairfax County public schools noticed a discrepancy between FY 2006 State aid tables from two State agencies, TAX and DOE. In Fairfax's case, the discrepancy amounted to approximately \$9.3 million in FY 2007, with DOE showing the higher number. Statewide, the discrepancy totaled \$137.2 million.

These errors were in calculating the distribution of sales tax revenue to the local school divisions, *not* in the sales tax forecast. A quick review of the sales tax forecasting methodology by JLARC and APA staff identified no substantive concerns. In a second phase of this project, JLARC staff will review the General Fund forecasting methodology.

Once the budget bill is signed by the Governor, both DOE and TAX are required by statute to inform localities about the amount of sales tax revenue they will receive. DOE provides each local school division with a table detailing funding for basic aid to education, incentive and categorical programs, and school facilities. TAX provides data on various tax revenue streams that go to localities, such as the local option sales and use tax, the State sales and use tax, the recordation and grantor's tax, and others. The errors became apparent because TAX adjusted the total sales tax collection numbers prior to distributing the data to localities, while DOE used the sales tax appropriations printed in the Appropriation Act as its basis for local distributions. The Appropriation Act contains the errors that are the subject of this report.

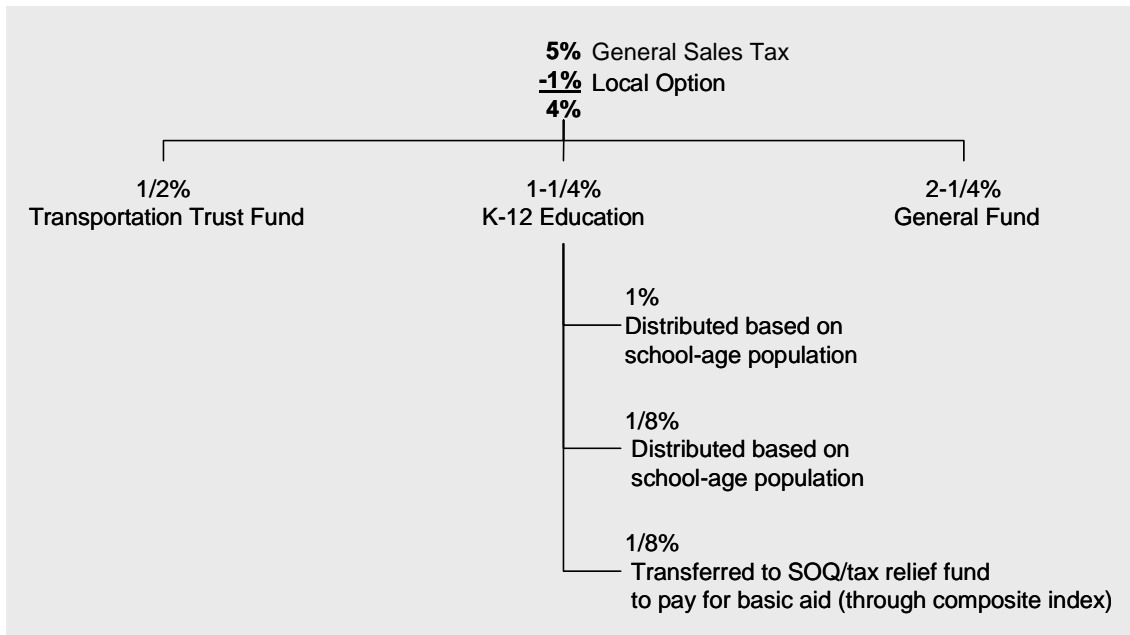
TAX retained two consultants to examine the errors in the formula for distributing sales tax revenues to education. The Tax Commissioner provided a letter to the consultants on July 25, 2006, with supporting spreadsheets documenting the original and the revised calculations. This report relies extensively on these spreadsheets.

## HOW SALES TAX REVENUE IS DISTRIBUTED

The *Code of Virginia* stipulates how general sales tax revenue is allocated (Figure 1). Of the total 5 percent general sales tax paid by the consumer, 1 percent is a local option sales tax that is returned to the localities. One-half percent then is deposited into the Transportation Trust Fund (TTF). Of the 3-1/2 percent remaining, 1-1/4 percent is distributed to localities — 1 percent for education based on school-age population, 1/8 percent going to localities based on school-age population, and another 1/8 percent based on the composite index. The final 2-1/4 percent is deposited into the General Fund.

A key factor is that the sales tax has been adjusted several times in recent years. In particular, the State sales tax on food purchased for human consumption was 4 percent until July 1, 2005, when it dropped to 2-1/2 percent. As shown in Figure 2, the current 2-1/2 percent rate consists of the 1 percent local option sales

**Figure 1: Distribution of General Sales Tax Revenue**

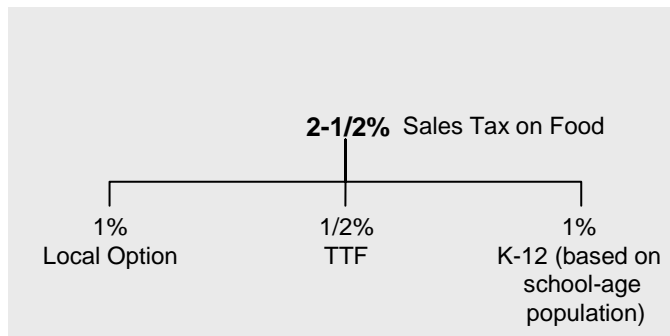


Source: *Code of Virginia*.

tax, the 1 percent portion of the State sales tax redistributed to localities on the basis of school-age population, and the 1/2 percent tax allocation to the TTF.

The distribution of sales tax revenue starts with an estimate of sales tax collections, generated as part of the official December forecast of General Fund revenues. Because these estimates are based on actual collections from prior years, TAX staff make adjustments in tax rates and other policy actions of the General Assembly. In the fall of 2005, two errors were made in these adjustments.

**Figure 2: Distribution of Revenue From the Sales Tax on Food**



Source: Code of Virginia.

### **FIRST ERROR: ADDING INSTEAD OF SUBTRACTING**

In line with the reduction in the State sales tax on food, TAX staff made an adjustment to estimated FY 2007 State sales tax collections to reduce food tax revenue. The first mistake occurred when TAX staff added an estimate of taxable food sales instead of subtracting the estimate. By adding this amount, the projected collections from the general sales tax were wrongly increased (Table 1).

The error is readily apparent when one compares the top and bottom lines across the three columns. In the FY 2006 column, the adjusted sales tax estimate (bottom line) is less than the original estimate (top line). In the FY 2007 and 2008 columns, the bottom line *exceeds* the top line in both cases.

The adjusted sales tax collection number, shown in the bottom line of Table 1, is subsequently used to calculate a base of total taxable sales, to which the percentages in Figure 1 are then applied. Because the adjusted collections for FYs 2007 and 2008 were too high, estimated payments to local school divisions were also too high.

**Table 1: Adjustments to General Sales Tax Collection Estimates, FYs 2006-2008**

	Estimates (\$ in millions)		
	FY 2006	FY 2007	FY 2008
Estimate of Total Sales Tax Collections	\$3,091.9	\$3,252.7	\$3,412.1
Less ABC & TTF Adjustments	22.9	23.9	25.1
Less Food Tax Adjustment	128.1	119.8*	125.6*
Adjusted General Sales Tax Collections	\$2,940.9	\$3,348.5	\$3,512.6

Note: ABC refers to the Alcoholic Beverage Control sales tax revenues; TTF is the Transportation Trust Fund.

\*These numbers were added instead of being subtracted.

Source: Adapted from Attachment B of Tax Commissioner's letter to Drs. John Knapp and Roy Webb, July 25, 2006.

Two factors appear to have contributed to this careless error. First, TAX reports that the process for checking the spreadsheets used to calculate the sales tax distribution involves a review by a forecasting analyst and a subsequent review by the supervisor of the TAX forecasting section. There is no external quality control review. Second, TAX reports that it was under pressure to quickly provide the estimates. The haste to complete the estimates may have contributed to inadequate review of the calculations. Apparently, the spreadsheets were not fully reviewed even after the data were finalized.

## **SECOND ERROR: PROJECTING AN INFLATED SALES TAX BASE INTO FUTURE YEARS**

Projecting sales tax collections for FYs 2006, 2007, 2008, and beyond was especially difficult in 2005 because the sales tax rate on food was changing. A second error occurred when the projections for future years were based on the assumption that the sales tax on food would continue at the FY 2005 rate. An additional adjustment was needed, but not initially made, to the projections to account fully for the decrease in the tax rate in subsequent years.

As a result, projections for general sales tax collections were inflated, and consequently the projected general sales tax revenues for education for FYs 2006, 2007, and beyond were inflated for a second time. The details of this error and the subsequent adjustment are discussed more fully in Appendix B.

## **CONSEQUENCES OF THE ERRORS**

Because neither of these errors was identified or corrected by TAX during the budget development stage in the fall of 2005, incorrect

sales tax revenue numbers were included in DOE's section of the budget bill introduced by the Governor. Specifically, the sales tax figures in Item 135 of the budget bill (HB/SB 30) were erroneous. The FY 2007 amount was too high by \$137.2 million, and the FY 2008 amount was too high by \$151.5 million (Table 2).

**Table 2: Different Sales Tax Revenue Allocation Methodologies**

	Estimates (\$ in millions)	
	FY 2007	FY 2008
Old Method	\$1,266.5	\$1,336.5
New Method	1,129.3	1,185.0
Difference	\$137.2	\$151.5

Note: Appendix C of this report discusses in more detail the differences between the "New Method" and the "Old Method." "Difference" is the gross error; the actual effect on basic school aid is less. The amount of any budget amendment should incorporate actual FY 2006 receipts, and thus may differ from these calculations which were completed prior to the end of FY 2006.

Source: Adapted from Attachments A, B, C and C-1 of Tax Commissioner's letter to Drs. John Knapp and Roy Webb, July 25, 2006.

TAX staff indicate that they routinely provide copies of the sales tax allocation spreadsheets to DPB. DPB staff indicated that they noticed the first of these errors (adding instead of subtracting) in December 2005, after the budget bill was printed. DPB staff notified the Secretary of Finance, who in turn notified TAX staff of the error. This error amounted to \$75.7 million in FY 2007 and \$86.6 million in FY 2008, according to TAX.

Because in December 2005 the introduced budget had already been finalized and printed, the then-Secretary of Finance and the DPB director decided to defer correcting the error at that time. The former Secretary notes that

"... in the transition between governors, the outgoing governor has no opportunity to correct or amend the introduced budget. His last chance to craft the budget ends when the budget is printed for introduction. Any executive amendments submitted to the introduced budget fall to the incoming administration. Therefore, the budget process provided no avenue at that time to correct the error."

Other reasons for the decision to defer the correction included that the State share of the initial error was considered technical and modest, according to the DPB director, who indicated that the FY 2007 amount appeared to be approximately \$30 million. Also, it was thought there would be more opportunities to make the correction — for example, as a result of the usual mid-Session update to the revenue forecast. However, the 2006 General Assembly



made no adjustments to the sales tax item appearing in DOE's budget — the number in Item 135 of the budget signed by the Governor is the same as in the introduced budget bill.

Another factor in the decision to defer corrections, according to the DPB director, was that language in the Appropriation Act (Item 135.C.27) indicates that the sales tax numbers printed in the item are "sum sufficient." This means that they are estimates, they are not binding on the State, and the actual amount paid to localities varies based on actual sales tax collections.

In the process of identifying the first error in late December 2005, the former Secretary of Finance, the DPB director, and TAX staff became concerned that there might be a potential flaw in the methodology for projecting the sales tax base. The exact nature of the problem was not yet understood, so no adjustment was made to the sales tax item printed in the budget bill. The lack of follow-up to seek an immediate resolution of these concerns, to inform the incoming Governor and legislative budget committees, and not to recommend an immediate adjustment, proved inappropriate considering the ultimate magnitude of the errors. This second error therefore remained undisclosed. Correction of the methodology was apparently not a Taxation Department priority.

The erroneous numbers were carried forward through the various iterations of the budget bill and were included in the final version of HB 5002 adopted by Special Session I, which was signed by the Governor on June 30, 2006. DOE subsequently calculated each local school division's share of the sales tax revenue listed in Item 135 of the Appropriation Act and provided the data to the local schools. As noted earlier, staff with Fairfax public schools compared this DOE data to data from TAX and noticed the problem.

When the errors were subsequently brought to the Governor's attention in July 2006, he indicated that localities would be held harmless and receive funding based on the higher (though incorrectly calculated) amount included in the Appropriation Act for FY 2007. Local school divisions would thus not be penalized for the State's error.

JLARC staff requested DOE to prepare a table showing the effects of the errors and of the necessary corrections by locality. DOE staff indicate that this information will be provided after the Secretary of Finance provides the final adjusted sales tax figures.

## **CONCLUSIONS AND RECOMMENDATIONS**

Following are key findings from JLARC staff's review:

- The errors in the sales tax allocation affect only the education and general fund distribution, not the Transportation Trust Fund or local option amounts.
- The errors in the sales tax allocation were the result of human error and an inadequate quality control process for the development of the estimates at the Department of Taxation.
- During the protracted circumstances leading to the adoption of the 2006-2008 budget bill, the Department of Taxation had ample time to identify and disclose the magnitude of both errors. Adequate time was also available to make the necessary adjustments to the general fund revenue stream and to the sales tax revenue estimate in Item 135 of the Appropriation Act.
- The decision by the Secretary of Finance and the DPB director to defer action to correct the erroneous sales tax allocations resulted in the General Assembly appropriating amounts in excess of the revenues actually available for distribution to the school divisions.
- The FY 2007 revenue remains in the unappropriated balance. As a result, funds are available to cover the FY 2007 sales tax numbers included in Item 135 of the Act. Correction of the error in the FY 2008 DOE sales tax item should also be made although this adjustment could be made during the 2007 General Assembly.

Two recommendations address these findings:

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***Recommendation (1).*** The Commissioner of the Department of Taxation should exercise greater oversight of the forecast function and should strengthen the process for ensuring the accuracy of the estimation and allocation of sales tax revenues to various statutory accounts. For example, a panel of reviewers including staff from other finance agencies and the Auditor of Public Accounts could verify that the estimates correctly incorporate policy changes embodied in statutory formulas and adjustments, and that the formulas and other calculations are correct for each fiscal year. The Department of Taxation and the Department of Education should compare the data to be distributed to local school divisions prior to their release.

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***Recommendation (2).*** The Governor should consider establishing by executive order a process for disclosure and correction of significant errors or adjustments in the State revenue estimates after introduction of the budget bill. The process should include a threshold amount of an error when disclosure and correction would be

mandatory, a requirement for notification of the chairmen of the House Appropriation and Senate Finance Committees of the General Assembly, and time limits on disclosure to ensure prompt notification.

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# A

## Study Mandate

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Letter dated July 24, 2006, from Delegate Callahan to the Chairman of the Joint Legislative Audit and Review Commission requesting this review.



**COMMONWEALTH OF VIRGINIA  
HOUSE OF DELEGATES  
RICHMOND**

**APPROPRIATIONS COMMITTEE**  
CHAIRMAN  
9<sup>TH</sup> FLOOR, GENERAL ASSEMBLY BUILDING  
CAPITOL SQUARE  
POST OFFICE BOX 406  
RICHMOND, VIRGINIA 23218  
804-698-1590

VINCENT F. CALLAHAN, JR.,

July 24, 2006

The Honorable Thomas K. Norment, Jr., Chairman  
The Honorable Leo C. Wardrup, Vice-Chairman  
Joint Legislative Audit and Review Commission  
Suite 1100, General Assembly Building  
Richmond, Virginia 23219

Dear Tommy and Leo:

Last week Governor Kaine informed me that there is an error in the sales tax distribution for school divisions. This error was in the budget as introduced by Governor Warner and was not discovered until Fairfax County noticed a discrepancy in the anticipated sales tax distribution as reported separately by both the Tax Department and the Department of Education.

Apparently a formula error in the spreadsheet used to calculate that portion of the sales tax dedicated to public schools inadvertently overstated the sales tax base. The overstatement was a result of adjustments made by the Tax Department to the forecast to account for food tax relief. The removal of the sales tax on groceries does not apply to the sales tax dedicated to public schools or to the Transportation Trust Fund. Of course, the Department of Education's distribution tracked back to the amount approved by the General Assembly in Chapter 3, 2006 Acts of Assembly Special Session I. From what I understand at this point, it does not appear that the faulty methodology impacted the distribution to the Transportation Trust Fund.

The Honorable Thomas K. Norment, Jr.  
The Honorable Leo C. Wardrup  
July 24, 2006  
Page Two

In total, the sales tax distribution for public schools was overstated by approximately \$130 million in fiscal year 2007 and \$150 million in fiscal year 2008 or about 10 percent of the total anticipated sales tax distributed annually. Conversely, the portion of the state sales tax that accrues to the general fund was understated by a like amount.

As a result of this error, it will be necessary for the General Assembly to amend the recently approved budget in August. However, prior to the General Assembly taking action, I would like to ask JLARC staff to review the methodology in forecasting sales tax and the amounts distributed to school divisions, the Transportation Trust Fund and the amount that accrues to the state's general fund. I would appreciate if the JLARC staff could complete their review by August 18<sup>th</sup>, which would ensure sufficient time for the money committees to review prior to taking legislative action to amend the budget.

In addition to reviewing the sales tax methodology, I believe it is equally important that the JLARC staff examine the entire forecasting process. During the course of the 2006 Session and Special Session, the general fund revenue forecast was adjusted 3 times, resulting in positive revenue adjustments totaling over \$300 million. At the same time, we learned in May that the forecast for Car Tax relief was short by approximately \$31 million, an amount that was included in the "Caboose" budget.

In light of these issues, I believe there is a compelling need for a complete review of the forecasting process undertaken by the Department of Taxation. As such, I am respectfully requesting that you appoint a special subcommittee to review the process, of which I would like to be a member.

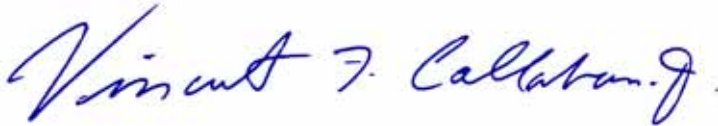
This review should also include the role of the various advisory boards and councils that are set forth in the Code of Virginia. Finally, I would like for the JLARC staff to review the feasibility of creating a revenue forecasting unit within the General Assembly, or how greater legislative oversight can be obtained within the current forecasting process.

The Honorable Thomas K. Norment, Jr.  
The Honorable Leo C. Wardrup  
July 24, 2006  
Page Three

I believe it would be beneficial to have this work completed by November in order to provide input and recommendations to the Governor as part of his re-forecasting of revenues for the 2007 General Assembly.

In closing, it is my understanding that Secretary Wagner is in the process of hiring an outside consultant to examine the forecasting process. I believe that this independent review is a responsible action on her part, but at the same time, I believe the General Assembly has the fiduciary responsibility to examine the process as well.

Sincerely,

A handwritten signature in blue ink that reads "Vincent F. Callahan, Jr." The signature is written in a cursive style with a large initial 'V' and a trailing flourish.

Vincent F. Callahan, Jr.  
Chairman

Cc: The Honorable William J. Howell, Speaker of the House  
Members, Appropriations Committee  
Members, Joint Legislative Audit and Review Commission

## The Second Error and the Subsequent Adjustment

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This appendix describes in more detail (1) the calculations that provide the context for the inflated projections of sales tax collections and how a projection of sales tax collections that is too high affects the projection of sales tax revenues to be distributed to education; (2) the error itself and the adjustment for it; and (3) why the error is unlikely to occur again.

In late 2005, sales tax revenue estimates for FYs 2006, 2007, 2008, and beyond were projections, based on the most recent actual collections, which were from FY 2005. FY 2005 was a more difficult year to project from because the sales tax on food changed from FY 2005 to FY 2006, and this change had to be accounted for when projecting from FY 2005 to future years. The original calculations (with the overstatement) did not take this change into account, whereas the subsequent adjustment by Department of Taxation (TAX) staff does.

### DESCRIPTION OF CALCULATIONS

A key objective of the calculations is to estimate taxable sales for future years, to which different sales tax rates could be applied. Taxable sales must be inferred from sales tax revenue collections, which can be difficult when the rates are changing. It is important to keep track of what is and is not included in "the most recent actual sales tax collections for a fiscal year" because that forms the base for what gets projected for future years. Anything affecting the base would also be carried into future year projections.

A starting point is "the most recent actual sales tax collections for a fiscal year" (from FY 2005, in this case), as shown on Line 1 of Table B.1. It includes sales tax revenues that would go toward education and the General Fund. It does not include sales tax revenues in the "local option" category or that go into the Transportation Trust Fund (TTF). TAX receives sales tax collections, subtracts local option and TTF sales tax revenues off the top, and puts each into separate accounts. The additional 1/4 percent sales tax revenues earmarked for education (effective as of October 1, 2004) are also put into separate accounts by TAX so that these monies are not included in the \$2,946.1 million total.



The \$2,946.1 million shown on Line 1 of Table B.1 is the remaining sales tax revenues going to education and the General Fund, from the following sources: the food sales tax, Alcoholic Beverage Control (ABC) sales tax, general sales tax, vending machine sales tax, the accelerated sales tax (AST), and the 1/4 percent increase in general sales tax that goes into the General Fund that was initiated on October 1, 2004.

**Table B1: Projected Sales Tax Revenues, FYs 2006-2012, Based on FY 2005 Sales Tax Collections (\$ in Millions)**

		Base	Projected Revenues						
		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
1	Sales Tax Total (actual collections)	\$2,946.1							
2	Less Net Accelerated Sales Tax (AST) <sup>a</sup>	-38.0							
3	Sales Tax Growth Rate (percent) <sup>b</sup>		5.4%	5.2	4.9	4.9	4.5	4.4	4.2
4	Sales Tax Collections Without AST <sup>c</sup>	\$2,953.1	3,111.8	3,273.6	3,434.0	3,602.3	3,764.4	3,930.1	4,096.1

<sup>a</sup> AST payment in June of the prior FY due in July with Transportation Trust Fund (TTF) minus the AST payment in June of the current FY for the following July with TTF.

<sup>b</sup> Sales tax growth rates from TAX's sales tax revenue forecast model.

<sup>c</sup> FY 2005 is adjusted upward by \$45 million to account for the three months that the 1/4 percent rate increase was not in effect. Projections for FY 2006 and beyond are at the economic-base growth rate.

Source: Adapted from Attachment D of Tax Commissioner's letter to Drs. John Knapp and Roy Webb, July 25, 2006.

Several adjustments are made to the base so that some factors are not carried over into future year projections of the general sales tax base. One factor that is subtracted out is that of the accelerated sales tax (AST, line 2 of Table B.1).

The growth in sales tax collections is forecasted by TAX staff. The forecasted growth rate for a given fiscal year is multiplied by the base (adjusted for AST), as shown in line 3 of Table B.1. In this case, everything in the base for FY 2005 is projected to grow 5.4 percent in FY 2006, the \$3,111.8 million in FY 2006 is forecasted to grow by 5.2 percent in FY 2007, and so on.

These estimated and projected sales tax collections on line 4 include revenue from different sources to which different sales tax

rates apply. The most striking difference is between the tax on food and other sources for the general sales tax. In FY 2005, the sales tax on food allocated to education and the General Fund was 2.5 percent, when the comparable general sales tax rate was 3.25 percent. In FY 2006 on, the sales tax on food allocated to the General Fund was eliminated and the sales tax on food allocated to education remained at 1 percent, while the comparable general sales tax would be 3.25 percent.

Because the tax rate on food is different from the general sales tax rate, it is necessary to separate out the collections attributable to food. For example, in FY 2005, \$271.9 million in sales tax collections were attributable to food, so in Table B.2 that amount was subtracted from the total sales tax collections shown for that fiscal year (line 5). Two other small items that complicate the estimation are also subtracted out, including the ABC sales tax and the TTF portion of the AST payment made in June that will be transferred in July (line 6).

From this point onward, taxable sales to which the general sales tax rate applies are calculated. The remainder on line 7 of Table B.2 represents an estimate of collections attributable to the general sales tax. This remainder not only applies to FY 2005 but also now includes projections for future years. The taxable sales base is derived on line 8, and after some refinements, the amount shown on line 9 is used to generate estimates of the sales tax going to education on lines 10 and 12. An estimate of the taxable sales base is multiplied by the general sales tax earmarked for education and distributed by school-age population: the historical 1 percent (corresponding to line 10) and the newer additional 1/8 percent (corresponding to line 12). The revenues attributable to the 1 percent sales tax on food are derived elsewhere, and is taken as given on line 11.

**Table B.2: Calculations Including Erroneously Projected Food Sales Tax Collections for Distribution of Sales Tax Revenues to Education, FYs 2006-2012 (\$ in Millions)**

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	
4	Sales Tax Collections Without AST	\$2,953.1	\$3,111.8	\$3,273.6	\$3,434.0	\$3,602.3	\$3,764.4	\$3,930.1	\$4,095.1
5	Less Food Sales Tax <sup>a</sup>	271.9	114.6	120.6	126.5	132.7	138.6	144.7	150.8
6	Less ABC Sales Tax and TTF Distribution <sup>b</sup>	45.3	23.0	24.1	25.2	26.3	27.3	28.4	29.6
7	Adjusted Sales Tax Collections	2,635.9	2,974.2	3,128.9	3,282.4	3,443.3	3,598.5	3,756.9	3,914.8
8	Taxable Sales Base (line 7 divided by 3.25%)	81,105.5	91,518.8	96,275.1	100,996.3	105,948.7	110,721.8	115,596.6	120,454.0
9	Lagged Taxable Sales <sup>c</sup>	90,595.2	95,854.8	100,579.7	105,511.6	110,300.5	115,166.4	120,025.3	
10	1% for Education from General Sales Tax (1% of line 9)		906.0	958.5	1,005.8	1,055.1	1,103.0	1,151.7	1,200.3
11	1% for Education from Food Sales Tax		114.6	120.6	126.5	132.7	138.6	144.7	150.8
12	1/8% for Education from General Sales Tax (1/8% of line 9)		113.2	119.8	125.7	131.9	137.9	144.0	150.0
13	<b>Education Distribution (1%)</b> (sum of lines 10 and 11)		<b>\$1,020.6</b>	<b>\$1,079.1</b>	<b>\$1,132.3</b>	<b>\$1,187.8</b>	<b>\$1,241.6</b>	<b>\$1,296.4</b>	<b>\$1,351.1</b>
14	<b>Total Education Distribution (1 + 1/8%)</b> (sum of lines 12 and 13)		<b>\$1,133.8</b>	<b>\$1,199.0</b>	<b>\$1,258.0</b>	<b>\$1,319.7</b>	<b>\$1,379.5</b>	<b>\$1,440.3</b>	<b>\$1,501.1</b>

<sup>a</sup> Sales tax rate on food going to education and the General Fund was at 2-1/2% in FY 2005 and at 1% in all other FYs.

<sup>b</sup> Estimate of ABC sales tax and TTF portion of AST payment made in June that will be transferred in July.

<sup>c</sup> Taxable sales lagged by one month to account for the transfer delay. (Calculation to account for transfer delay not shown here.)

Source: Adapted from Attachments C and D of Tax Commissioner's letter to Drs. John Knapp and Roy Webb, July 25, 2006.

**Table B.3: Adjusted Calculations for Distribution of Sales Tax Revenues to Education, FYs 2006-2012 (\$ in Millions)**

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
4 Sales Tax Collections Without AST	\$2,953.1	\$3,111.8	\$3,273.6	\$3,434.0	\$3,602.3	\$3,764.4	\$3,930.1	\$4,095.1
5 Less Food Sales Tax <sup>a</sup>	271.9	286.5	301.4	316.1	331.6	346.6	361.8	377.0
6 Less ABC Sales Tax and TTF Distribution <sup>b</sup>	45.3	23.0	24.1	25.2	26.3	27.3	28.4	29.6
7 Adjusted Sales Tax Collections	2,635.9	2,802.3	2,948.2	3,092.7	3,244.4	3,390.5	3,539.8	3,688.6
8 Taxable Sales Base (line 7 divided by 3.25%)	81,105.5	86,225.2	90,712.7	95,161.1	99,827.6	104,323.0	108,916.4	113,493.9
9 Lagged Taxable Sales <sup>c</sup>		85,773.4	90,316.6	94,768.5	99,415.7	103,926.3	108,511.0	113,089.9
10 1% for Education from General Sales Tax (1% of line 9)		857.7	903.2	947.7	994.2	1,039.3	1,085.1	1,130.9
11 1% for Education from Food Sales Tax		114.6	120.6	126.5	132.7	138.6	144.7	150.8
12 1/8% for Education from General Sales Tax (1/8% of line 9)		107.2	112.9	118.5	124.3	129.9	135.6	141.4
13 <b>Education Distribution (1%)</b> (sum of lines 10 and 11)		<b>\$972.3</b>	<b>\$1,023.7</b>	<b>\$1,074.1</b>	<b>\$1,126.8</b>	<b>\$1,177.9</b>	<b>\$1,229.8</b>	<b>\$1,281.7</b>
14 <b>Total Education Distribution (1 + 1/8%)</b> (sum of lines 12 and 13)		<b>\$1,079.5</b>	<b>\$1,136.6</b>	<b>\$1,192.6</b>	<b>\$1,251.1</b>	<b>\$1,307.8</b>	<b>\$1,365.5</b>	<b>\$1,423.1</b>

<sup>a</sup> Sales tax rate on food going to education and the General Fund was at 2-1/2% in FY 2005 and at 1% in all other FYs. However, the sales tax collections projected for FY 2006 and beyond assumed food is taxed at the FY 2005 rate.

<sup>b</sup> Estimate of ABC sales tax and TTF portion of AST payment made in June that will be transferred in July.

<sup>c</sup> Taxable sales lagged by one month to account for the transfer delay. (Calculation to account for transfer delay not shown here.)

Source: Adapted from Attachment D of Tax Commissioner's letter to Drs. John Knapp and Roy Webb, July 25, 2006.

## **THE ORIGINAL ERROR IN THE CALCULATIONS AND THE ADJUSTMENT**

The problem occurred when total sales tax revenues were projected from FY 2005 to FY 2006, and the assumption built into the projection was that the sales tax on food would stay at the same FY 2005 rate of 2-1/2 percent (line 5 of Table B.2). The base amounts projected for FYs 2006, 2007, 2008, and so on are therefore assuming a 2-1/2 percent sales tax rate, when the new sales tax on food from FY 2006 on would actually be 1 percent. Originally, the projections of food sales tax collections at the 1 percent level were entered on line 5, resulting in a remainder on line 7 that was too high. Consequently, the estimates of the taxable sales bases for the general sales tax (lines 8 and 9) were too high, and the resulting projected general sales tax revenue collections for education (lines 10 and 12) were too high.

Once TAX staff recognized the error, an appropriate adjustment was made. The food sales tax collections were changed to amounts assuming the 2-1/2 percent tax rates continue, as shown in Table B.3. Once these amounts were subtracted, the remaining general sales tax base was at a more appropriate level. However, projected food sales tax revenues for education (line 11) already were based on the appropriate 1 percent tax rate assumption.

## **WHY THE ERROR IS UNLIKELY TO RECUR**

The calculations that will be made for the next revenue forecasting cycle will be based on the most recent actual collections from FY 2006 rather than FY 2005. The base year therefore will have a food sales tax component going to education of 1 percent driving the sales tax revenues collected, instead of a 2-1/2 percent tax rate. Consequently, there will no longer be a "shadow" food sales tax revenue component of future years' projections reflecting the old, higher tax rate, and no adjustment reflecting a higher base will be necessary.

## Differences Between Appropriation Act Estimates and Revised Estimates

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Two types of changes occurred from the time when the estimates of sales tax revenues for education (with errors) contained in the Appropriation Act were derived to the time when the corrected and revised estimates were calculated: (1) errors were corrected when going from the "old method" to the "new method" and (2) revisions were made to the inputs (forecasted sales tax collections in future years) to the calculations. Both changes impacted the sales tax allocations to local school divisions.

### **"NEW METHOD" CORRECTED ERRORS AND CHANGED THE SALES TAX ALLOCATIONS TO SCHOOL DIVISIONS**

Three spreadsheets from the Department of Taxation (Attachments B, C, and C-1) are included herein as Exhibit 1. (These attachments were included in the Tax Commissioner's letter of July 25, 2006, to consultants retained to examine the errors in the sales tax allocation to school divisions.)

Attachment B shows the original calculations, which include both errors described in this report (adding instead of subtracting taxable food sales estimates and projecting an inflated sales tax base into the future). These calculations result in \$1,266.5 million in FY 2007 and \$1,336.5 million in FY 2008 of the projected sales tax collections being allocated to the local school divisions. These amounts are the "old method" estimates shown in Table 2 of this report and also are the estimates in the 2006 Appropriation Act. The line-by-line calculations in Attachment B (as well as in Attachments C and C-1) are similar to those shown and discussed in Appendix B of this report. The shaded area in Attachment B is where the errors occurred in calculations for FYs 2007 and 2008.

Attachment C shows the calculations if only the first error (adding instead of subtracting an estimate of taxable food sales) is corrected. Correcting only this error causes a decrease in the amount of sales tax collections allocated to local school divisions to \$1,190.8 million in FY 2007 and \$1,249.9 million in FY 2008, a difference of \$75.7 million and \$86.6 million, respectively.

Attachment C-1 shows the calculations if both errors are corrected. The amount of sales tax collections allocated to local school divisions would decrease further to \$1,129.3 million in FY 2007 and \$1,184.9 million in FY 2008 (shown as "new method" estimates in Table 2 of this report). The corresponding differences between the "old method" and "new method" estimates are \$137.2 million for FY 2007 and \$151.4 million for FY 2008.

### **REVISED SALES TAX COLLECTION FORECASTS ALSO CHANGED THE SALES TAX ALLOCATIONS TO SCHOOL DIVISIONS**

As the forecast extends further out in time, forecast errors will be bigger. Therefore, periodic revisions to the revenue forecast are appropriate. Line 1 on Attachments B, C, and C-1 all contain the same forecasted "estimate of [sales tax] collections," which was the best forecast as of November 2005. However, over time, revisions to the November 2005 forecast estimates were available, presumably more accurate, and appropriate to use. The calculations shown in Appendix B were made by the Department of Taxation when revisions to the November 2005 forecasts were available, so the numbers in lines 4, 5, 6, and 11 of Tables B.2 and B.3 are different from the corresponding numbers in Attachments B, C, and C-1.

Because of revisions to forecasts that are used as inputs to the calculations, recent projections of sales tax collections to be allocated to local school divisions may vary from the "new method" amounts shown in Attachment C-1. For example, in Table B.3, the corresponding amounts are \$1,136.6 million for FY 2007 and \$1,192.6 million for FY 2008, which are each about \$7.7 million higher than the amounts shown in Attachment C-1. This difference is attributable to forecast revision and is well within the bounds of normal forecast error.

## Exhibit 1: Three Spreadsheets from the Department of Taxation

### ATTACHMENT B

#### Estimates of One Cent Sales Tax Distributed to Localities for Education

\*\*\*\*\* Estimate of Collections without ABC \*\*\*\*\*

*Estimate based on November 2005 GACRE*

	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Estimate of Collections (1)	3,091.9	3,252.7	3,412.1	3,579.2	3,740.3	3,904.9
Less: ABC (2)	20.0	21.0	22.1	23.1	24.2	25.3
Less: TTF Distribution (3)	2.9	2.9	3.0	3.0	3.0	3.0
Less: 1% Food Tax (4)	128.1	119.8	125.6	131.8	137.7	143.8
Sales Tax base ex Food, ABC, and TTF (5)	2,940.9	3,348.5	3,512.6	3,685.0	3,850.8	4,020.3
Determine Taxable Sales ex Food/ABC/TTF* (6)	90,489.0	103,032.0	108,079.8	113,383.2	118,485.8	123,702.6
Multiply: by 1-June% (7)	91.17%	91.17%	91.17%	91.17%	91.17%	91.17%
Equals: \$ Distrib. Aug.-June (8)	82,502.7	93,938.7	98,541.0	103,376.3	108,028.6	112,784.9
Add: Prior June (Distrib. in July)	6,852.4	7,986.3	9,093.3	9,538.8	10,006.9	10,457.2
<b>Total Taxable Sales ex Food/ABC/TTF</b>	<b>89,355.1</b>	<b>101,925.0</b>	<b>107,634.3</b>	<b>112,915.1</b>	<b>118,035.5</b>	<b>123,242.2</b>
1% Education from Gen Sales	893.6	1,019.3	1,076.3	1,129.2	1,180.4	1,232.4
1/8 Sales Tax Increase	111.7	127.4	134.5	141.1	147.5	154.1
1% Education from Food	128.1	119.8	125.6	131.8	137.7	143.8
<b>Total Distribution in FY</b>	<b>1,133.3</b>	<b>1,266.5</b>	<b>1,336.5</b>	<b>1,402.1</b>	<b>1,465.6</b>	<b>1,530.3</b>
Chapter 951 Amount	1,091.0					

\* FY06 Taxable Sales base has been adjusted for the three months before the new food tax rate reduction affects education distribution.

1. Actual sales tax collections with net Accelerated Sales Tax removed.  
FY05 base is adjusted upward by \$45 million to reflect the three months that the 0.25% rate increase was not in effect. Rate was increased on 9/1/04. FY06 and beyond are grown at economic-based growth rates.
2. Estimate of ABC sales tax.
3. TTF portion of AST payment made in June that will be transferred in July.
4. Estimate of food sales tax at 1%.
5. Collections base less food, ABC, and TTF sales tax collections.
6. Taxable sales base derived by dividing the sales tax collections base by 3.25%.
7. Mechanism to lag the taxable sales base by one month to account for the transfer delay.



**ATTACHMENT C**

**Estimates of One Cent Sales Tax Distributed  
to Localities for Education**

\*\*\*\*\* Estimate of Collections without ABC \*\*\*\*\*

*Estimate based on November 2005 GACRE CORRECTED*

	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Estimate of Collections (1)	3,091.9	3,252.7	3,412.1	3,579.2	3,740.3	3,904.9
Less: ABC (2)	20.0	21.0	22.1	23.1	24.2	25.3
Less: TTF Distribution (3)	2.9	2.9	3.0	3.0	3.0	3.0
Less: 1% Food Tax (4)	128.1	119.8	125.6	131.8	137.7	143.8
Sales Tax base ex Food, ABC, and TTF (5)	2,940.9	3,108.9	3,261.4	3,421.4	3,575.4	3,732.7
Determine Taxable Sales ex Food/ABC/TTF* (6)	90,489.0	95,659.7	100,350.6	105,272.4	110,012.0	114,853.3
Multiply: by 1-June% (7)	91.17%	91.17%	91.17%	91.17%	91.17%	91.17%
Equals: \$ Distrib. Aug.-June (8)	82,502.7	87,217.1	91,493.9	95,981.4	100,302.6	104,716.7
Add: Prior June (Distrib. in July)	6,852.4	7,986.3	8,442.7	8,856.7	9,291.1	9,709.4
<b>Total Taxable Sales ex Food/ABC/TTF</b>	<b>89,355.1</b>	<b>95,203.4</b>	<b>99,936.6</b>	<b>104,838.0</b>	<b>109,593.7</b>	<b>114,426.1</b>
1% Education from Gen Sales	893.6	952.0	999.4	1,048.4	1,095.9	1,144.3
1/8 Sales Tax Increase	111.7	119.0	124.9	131.0	137.0	143.0
1% Education from Food	128.1	119.8	125.6	131.8	137.7	143.8
<b>Total Distribution in FY</b>	<b>1,133.3</b>	<b>1,190.8</b>	<b>1,249.9</b>	<b>1,311.2</b>	<b>1,370.6</b>	<b>1,431.1</b>
Chapter 951 Amount	1,091.0					

\* FY06 Taxable Sales base has been adjusted for the three months before the new food tax rate reduction affects education distribution.

1. Actual sales tax collections with net Accelerated Sales Tax removed.  
FY05 base is adjusted upward by \$45 million to reflect the three months that the 0.25% rate increase was not in effect. Rate was increased on 9/1/04. FY06 and beyond are grown at economic-based growth rates.
2. Estimate of ABC sales tax.
3. TTF portion of AST payment made in June that will be transferred in July.
4. Estimate of food sales tax at 1%.
5. Collections base less food, ABC, and TTF sales tax collections.
6. Taxable sales base derived by dividing the sales tax collections base by 3.25%.
7. Mechanism to lag the taxable sales base by one month to account for the transfer delay.

**ATTACHMENT C-1**

**Estimates of One Cent Sales Tax Distributed  
to Localities for Education**

\*\*\*\*\* Estimate of Collections without ABC \*\*\*\*\*

*Estimate based on November 2005 GACRE CORRECTED for Formula and Food tax*

	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
Estimate of Collections (1)	3,091.9	3,252.7	3,412.1	3,579.2	3,740.3	3,904.9
Less: ABC (2)	20.0	21.0	22.1	23.1	24.2	25.3
Less: TTF Distribution (3)	2.9	2.9	3.0	3.0	3.0	3.0
Less: 2.5% Food Tax (4)	284.6	299.4	314.1	329.5	344.3	359.5
Sales Tax base ex Food, ABC, and TTF (5)	2,784.4	2,929.3	3,072.9	3,223.6	3,368.8	3,517.0
Determine Taxable Sales ex Food/ABC/TTF* (6)	85,673.6	90,132.2	94,550.0	99,189.0	103,653.9	108,216.7
Multiply: by 1-June% (7)	91.17%	91.17%	91.17%	91.17%	91.17%	91.17%
Equals: \$ Distrib. Aug.-June (8)	78,112.3	82,177.3	86,205.2	90,434.9	94,505.7	98,665.8
Add: Prior June (Distrib. in July)	7,158.2	7,561.3	7,954.8	8,344.7	8,754.1	9,148.2
<b>Total Taxable Sales ex Food/ABC/TTF</b>	<b>85,270.5</b>	<b>89,738.7</b>	<b>94,160.1</b>	<b>98,779.6</b>	<b>103,259.8</b>	<b>107,814.0</b>
1% Education from Gen Sales	852.7	897.4	941.6	987.8	1,032.6	1,078.1
1/8 Sales Tax Increase	106.6	112.2	117.7	123.5	129.1	134.8
1% Education from Food	113.8	119.8	125.6	131.8	137.7	143.8
<b>Total Distribution in FY</b>	<b>1,073.1</b>	<b>1,129.3</b>	<b>1,184.9</b>	<b>1,243.1</b>	<b>1,299.4</b>	<b>1,356.7</b>
Chapter 951 Amount	1,091.0					

\* FY06 Taxable Sales base has been adjusted for the three months before the new food tax rate reduction affects education distribution.

1. Actual sales tax collections with net Accelerated Sales Tax removed.  
FY05 base is adjusted upward by \$45 million to reflect the three months that the 0.25% rate increase was not in effect. Rate was increased on 9/1/04. FY06 and beyond are grown at economic-based growth rates.
2. Estimate of ABC sales tax.
3. TTF portion of AST payment made in June that will be transferred in July.
4. Estimate of food sales tax at 2.5%. The state rate stood at 2.5% for all of FY05 so the economic-base sales estimate for FY06 and beyond includes food at this rate. This adjustment will not be necessary next year.
5. Collections base less food, ABC, and TTF sales tax collections.
6. Taxable sales base derived by dividing the sales tax collections base by 3.25%.
7. Mechanism to lag the taxable sales base by one month to account for the transfer delay.

Source: Attachments B, C, and C-1 of Tax Commissioner's letter to Drs. John Knapp and Roy Webb, July 25, 2006.

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