NAVJEET BAL
COMMISSIONER

The Commonwealth of Massachusetts
Department of Revenue
Office of the Commissioner
P.O. Box 9550
Boston, MA 02114-9550

December 29, 2010

Mr. Martin Benison
Comptroller
Commonwealth of Massachusetts
1 Ashburton Place, 9th Floor
Boston, MA 02108

Re: Sales Tax Holiday for August 14 & 15, 2010.

Dear Mr. Benison:

Pursuant to St. 2010, c. 240, the Department of Revenue hereby certifies the amount of forgone sales tax revenue as a result of the sales tax holiday that occurred on August 14 & 15, 2010.

Based on our analysis of the available data, DOR estimates that the amount of forgone sales tax revenue was approximately $19.9 million. DOR estimates that this forgone revenue had no impact on the MBTA State and Local Contribution Fund, but impacted the amounts going to the School Modernization and Reconstruction Trust Fund ($3.2 million), Commonwealth Transportation Fund ($1.2 million), and Substance Abuse Fund ($0.5 million). Further, DOR estimates that the revenue impact on the Convention Center Fund was less than $17,000. The remainder of the revenue impact of the sales tax holiday was a revenue loss from the General Fund. The DOR also estimates (although with less certainty) that the indirectly raised revenues (income, corporate, and other) due to increased economic activity was less than $1.98 million.

Attached is a copy of our analysis explaining how we arrived at these estimates and caveats. If you have any questions concerning this matter, please contact me (at 626-2201) or Kazim P. Ozyurt, Acting Director of the Office of Tax Policy Analysis (at 626-2100).

Sincerely,

Navjeet K. Bal

Navjeet Bal
Commissioner

cc: Jay Gonzalez, Secretary of Administration and Finance

The Honorable Charles A. Murphy, House Committee on Ways and Means
The Honorable Steven C. Panagiotakos, Chair, Senate Committee on Ways and Means
The Honorable Representative Jay R. Kaufman, Joint Committee on Revenue
The Honorable Senator Benjamin B. Downing, Joint Committee on Revenue

Massachusetts Department of Revenue
Revenue Impact Analysis

Title: Sales Tax Holiday for August 14 & 15, 2010

Legal Reference: St. 2010, c. 240

Overview: Generally, the state imposes a sales and use tax at the rate of 6.25% on the purchase price of many "tangible" goods, utilities and telecommunications services, and on meals served at restaurants. Residential electricity, gas, steam, and certain telecommunications charges are exempt from the sales tax under current law. The sales/use tax statutes also contain various other product-based exemptions, *i.e.*, food, medicines on prescription and certain medical products, and clothing with a sales price of up to $175.

The sales tax holiday legislation waived the sales tax on otherwise taxable non-businesses purchases made on August 14 and 15, 2010, except purchases of telecommunications services, gas, steam, electricity, motor vehicles, motorboats, meals, and any single item the price of which was in excess of $2,500. Similar to the 2008 sales tax holiday, the *exclusion* of prior sales and layaway sales was in effect during the 2010 sales tax holiday.

Methodology/Data Source/History: The Department of Revenue does not collect data on the amount of taxable purchases made by businesses versus non-businesses, nor does it track sales of individual items. As a result, we extrapolated estimates using aggregated data that we were able to obtain. We did this in two separate ways: (1) based on monthly sales tax returns; and (2) credit card and sales tax collections data.

Under the first methodology, we used DOR sales tax return data to generate an estimate of the amount of exempt sales on the dates of the holiday. Generally, sales data are reported by retailers on a monthly basis, so we do not know how much they had in sales on any given day of a particular month. The appropriate place for sales tax filers to report their exempt sales from the sales tax holiday is on line 2 of the sales tax return[1], labeled "Sales for Resale/Exempt Sales or Other Adjustments". We analyzed the returns of taxpayers identifying themselves by NAICS[2] code as part of the broad category of retailers, although this does leave out some retail sales made by other businesses. By focusing on retailers, we know that the result from this methodology somewhat understates the amount of forgone revenues.

The sales tax holiday was not in effect last year (August 2009), and so the increase in taxes foregone in 2010 compared to 2009 should be due 'largely' to the impact from the sales tax holiday in 2010. We began by comparing the amounts these taxpayers listed on line 2 of their August 2009 tax returns with what those same taxpayers listed on their August 2010 returns.[3] We found that about 22,253 retailers met these conditions, and they reported exempt sales of about $3,770.5 million for August 2009 and $4,370.1 million for August 2010. Thus, the difference in exempt sales between those two Augusts is $599.6

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[1] See form ST-9, available on DOR's website: http://www.mass.gov/Ador/docs/dor/Forms/Wage_Rpt/PDFs/st9.pdf.

[2] NAICS is the North American Industrial Classification System, under which businesses are supposed to identify their principal industry.

[3] For monthly taxpayers, the August returns represent sales that occurred during August, and are due and payable by the twentieth day of the following month. In carrying out this part of the comparison, we ignored taxpayers that only filed returns for one of the two periods, or filed a "zero sales" return, stating that they had no sales during the month.

million. However, not all of this is attributable to the sales tax holiday – some of the increase may have been due to more sales for resale (due to greater economic activity), more sales to exempt organizations, or a variety of other adjustments. To find out how much exempt sales appeared to be increasing from 2009 to 2010, we looked at those reported for the three-month period immediately preceding August of each year. The increase in exempt sales reported for May, June, and July 2010 versus the same months in 2009 averaged $385.1 million[4] per month, so we subtracted that amount from the increase in August. The result showed an increase in exempt sales of $214.5 million for August 2010 versus August 2009.

We next needed to account for taxpayers that did not provide NAICS codes on their tax returns. Only 0.9% of the sales tax reported on August 2010 tax returns was paid by businesses in this category. In addition, 55% of the sales tax reported on August tax returns was paid by retail trade businesses. Assuming that the percentage distribution pattern among industries remain the same in this category as well, 0.9% x 55% = 0.495% of the increase in exempted sales ($214.5) was added to the amount of increased exempt sales to reflect sales from these businesses, resulting in a new figure of $215.6 million in increased exempt sales.

We also needed to account for filers that were not "matched", meaning that they filed a tax return for either sales in August 2009 or August 2010, but not both. Comparing the dollar amount of tax paid on matched returns with actual collections, we found that almost all (99.0%) had been paid by matched filers. Hence, we divided the $215.6 million by 0.99 to arrive at a final estimate of $217.8 million in increased exempt sales among businesses identifying themselves as or assumed to be retailers. At the 6.25% sales tax rate, these sales would equal a $13.6 million sales tax loss (or foregone sales tax collections) for 2010. Since there was no tax holiday in 2009, $13.6 million is the tax revenue forgone due to the tax holiday in August, 2010.

Since this estimate ignores businesses that identify themselves in a NAICS category other than principally making retail sales, this methodology understates the correct amount of forgone revenue. To account for this and to provide a confirmation of this estimate, we needed to use a second methodology.

Under the second methodology, we attempted to obtain data on credit card sales transactions occurring in Massachusetts from a major credit card company for the month of August 2010 in order to determine the percentage of credit card sales volume attributable to transactions during the sales tax holiday weekend compared to the total transactions for the month as a whole. Unfortunately, we do not have the data for 2010. However, we do have data from them for August 2005 which also had a two-day tax holiday. We assumed that the proportion of sales transactions during the sales tax holiday weekend to monthly sales did not change from 2005 (10.11%). Although not all sales were exempt on the sales tax holiday weekend, for the purposes of this analysis we assumed that they were, and thus our estimate under this methodology would somewhat overstate the amount of forgone revenue. (Examples of sales that would not have been exempt would be items purchased by businesses and items costing more than $2,500.). We then applied this share to DOR's sales tax collections for that month. The estimated total exempted amount using this method represented $419.8 million in exempt sales, for a maximum tax impact of about $26.2 million for this year.

[4] This figure is adjusted for an increase in the number of "matched" filers resulting from using a three-month average, as opposed to focusing on just a single month. For matched filers in May/June/July, they needed to match only once in that period, and not each month.

The mid-point value of these two methodologies is our final mid-point estimate of $19.9 million. The static revenue loss figures reported in the table in the following section appear to represent a reasonable range of values for the amount of forgone revenue attributable to the August 14 & 15 sales tax holiday in 2010.

State Fiscal Year Static Revenue Loss Estimate: Since under current law the sales tax holiday is scheduled as a one-time event, occurring only during state fiscal year 2011, the estimate below shows a revenue loss impact only for that fiscal year.

Sales Tax Revenue Forgone Due to Sales Tax Holiday ($ millions)

	Lower Bound	Midpoint	Upper Bound
FY 2011	13.6	19.9	26.2

Revenues Forgone by Fund:

Sales tax revenue is currently deposited into the General Fund, the MBTA State and Local Contribution Fund[5], the School Modernization and Reconstruction Trust Fund[6], Commonwealth Transportation Fund[7], Substance Abuse Fund[8], and the Convention Center Fund[9]. Under the relevant statutes and formulae, we estimate that the sales tax holiday did not lower the amount going to the MBTA State and Local Contribution Fund, but it did lower the amounts going to the School Modernization and Reconstruction Trust Fund ($3.2 million), Commonwealth Transportation Fund ($1.2 million), and Substance Abuse Fund ($0.5 million). The impact on the Convention Center Fund was less than $17,000. The remainder of the impact was on the General Fund.

Additional Revenues Collected Due to Increased Sales Activity

DOR is required by the statute to provide an estimate of new revenues raised from personal and corporate income taxes and other sources as a result of the sales tax holiday.

It is possible that sales tax holidays increase overall economic activity. Although this activity may have, for example, increased employment due to increased sales, DOR does not have direct data to estimate this impact. Also, the literature and studies conducted on the topic do not provide any definitive guidance in

[5] See Chapter 127 of the Acts of 1999.
[6] See Chapter 210 of the Acts of 2004.
[7] See Chapter 35 of the Acts of 2009.
[8] See Chapter 131 of the Acts of 2010.
[9] See Chapter 152 of the Acts of 1997, as amended.

estimating such an impact. Although we attempted to indirectly determine the impact of the sales tax holiday on economic activity based on the literature research, marketing studies, the US Census figures on the average sales per retail employee, and studies on elasticity[10], our findings are not definitive. We estimate that the maximum impact of indirectly generated additional revenues due to the sales tax holiday would probably be about $1.98 million. However, the true value of the indirectly raised revenues is probably much less than this amount. According to a 2003 study of a Florida sales tax holiday[11] (most relevant study we could find), retailers tend to offer less-generous markdowns and may charge higher prices during the holiday than they would in the absence of one, which means that net price reductions to consumers may have been less than the 6.25% tax reduction resulting from the holiday. Because of these reasons, the $1.98 million indirect impact figure should be used with caution.

Confidence Level: The after-the-fact static sales tax revenue impact figures are generally close to the forecast estimate we conducted prior to the implementation of the sales tax holiday. We are reasonably confident that the true amount of forgone sales revenue lies within the range provided.

As mentioned above, there is a much greater uncertainty as to how sales tax holidays affect economic activity, and the existing literature and studies do not provide a clear guidance on estimating such indirect impacts. It appears that there is a need for further academic and marketing studies to be conducted in the future. Therefore the maximum indirectly-raised revenue figure mentioned above should be used with caution.

[10] Consumers' response to a decrease in price (*price elasticity of demand)*, and their response to advertising (*elasticity of advertising*).
[11] Harper, Hawkins, Martin, and Sjolander, *Price Effects around a Sales Tax Holiday: An Exploratory Study*, Public Budgeting & Finance, Winter 2003.