NAVJEET BAL
COMMISSIONER

The Commonwealth of Massachusetts
Department of Revenue
Office of the Commissioner

P.O. Box 9550
Boston, MA 02114-9550

December 31, 2008

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

Re: Sales Tax Holiday for August 16 & 17, 2008.

Dear Mr. Benison:

Pursuant to Chapter 211 of the Statutes of 2008, 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 16 & 17, 2008.

Based on our analysis of the available data, DOR estimates that the amount of forgone sales tax revenue was approximately $14.9 million. The reduction from last year's estimate of $15.9 million in revenue foregone is due to reduced economic activity as reflected in the recent weakness of sales tax collections generally. DOR estimates that this forgone revenue had no impact on either the MBTA State and Local Contribution Fund or the School Modernization and Reconstruction Trust Fund. Further, DOR estimates that the revenue impact on the Convention Center Fund was less than $5,000. 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 $1.8 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 Howard Merkowitz, Director of the Office of Tax Policy Analysis (at 626-2100).

Sincerely,

Navjeet K. Bal

Navjeet Bal
Commissioner

cc: Leslie A. Kirwan, Secretary of Administration and Finance
The Honorable Robert A. DeLeo, House Committee on Ways and Means
The Honorable Steven C. Panagiotakos, Chair, Senate Committee on Ways and Means
The Honorable Representative John J. Binienda, Joint Committee on Revenue
The Honorable Senator Cynthia Stone Creem, Joint Committee on Revenue

Massachusetts Department of Revenue
Revenue Impact Analysis

<u>Title</u>: Sales Tax Holiday for August 16 & 17, 2008

<u>Legal Reference</u>: St. 2008, c. 211

<u>Overview</u>: Generally, the state imposes a sales and use tax at the rate of 5% 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 tax holiday legislation waived the sales tax on otherwise taxable non-businesses purchases made on August 16 and 17, 2008, except purchases of telecommunications services, gas, steam, electricity, motor vehicles, boats, meals, or any single item the price of which was in excess of $2,500. Similar to the 2007 sales tax holiday, the exclusion of prior sales and layaway sales was in effect during the 2008 sales tax holiday.

Prior to the occurrence of the holiday, DOR estimated that this change would result in the state forgoing revenues in the range of $13 million to $19.5 million with a midpoint of $16.2 million. DOR is required to certify the amount estimated to have been forgone by each relevant fund on or before December 31, 2008.

<u>Methodology/Data Source/History:</u> 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.

For this analysis, we needed to estimate the increase in taxes foregone in 2008, compared to the prior year (2007). We began by comparing the amounts these taxpayers listed on line 2 of their August 2007 tax returns with what those same taxpayers listed on their August 2008 returns, as long as those taxpayers

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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.

filed returns in both 2007 and 2008.[3] We found that retailers meeting these conditions reported exempt sales of $3,822.3 million for August 2007 and $3,830.7 million for August 2008[4]. Thus, the difference in exempt sales between those two Augusts is $8.4 million. However, the change in exempt sales from 2007 to 2008 is attributable not only to the sales tax holiday but also to changes in sales for resale, sales to exempt organizations, and a variety of other adjustments. To filter out the exempt sales due to factors other than the sales tax holiday, we looked at exempt sales reported for the three-month period immediately preceding August of each year, when there was no sales tax holiday in effect. Exempt sales reported for May, June, and July 2008 versus the same months in 2007 averaged $71.6 million[5] more per month, so we subtracted that amount from the increase in August. The result showed a decrease in exempt sales of $63.2 million for August 2008 versus August 2007. This decrease is consistent with the overall decline in overall sales tax revenue experienced during the summer of 2008 due to the ongoing recession.

We also needed to account for filers that were not "matched", meaning that they filed a sales tax return for either August 2007 or August 2008, but not both, and were therefore omitted from the analysis of matched filers described in the previous paragraph. Comparing the dollar amount of tax paid on matched returns with actual collections, we found that 95% was paid by matched filers. Hence, we divided the $63.2 million by 95% to arrive at a final estimate of $66.8 million decrease exempt sales among businesses identifying themselves as or assumed to be retailers. At the 5% sales tax rate, these sales would equal a $3.3 million decrease in sales tax loss for 2008 compared to 2007. Using a similar analysis, DOR reported last year that the August 2007 sales tax holiday resulted in a FY08 revenue loss of $10.5 million which was based on the first methodology described above. Subtracting the $3.3 million change from the FY08 estimate loss of $10.5 million, the estimated tax loss for August 2008 is $7.1 million. Since this estimate ignores businesses that identify themselves in a NAICS category other than principally retailer, this methodology understates the correct amount of forgone revenue. To account for this and to provide a confirmation of this estimate, we used 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 2008 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, the credit card company was not able to provide the data for 2008. However, we do have data from this company for a prior year (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 overstates 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

[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.
[4] Adjusted for filers who did not provide NAICS codes on their returns.
[5] 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.

month, excluding tax on services, utilities, and other categories that did not qualify for the holiday. Using this method showed estimated exempt sales of $453.0 million, for a maximum tax impact of about $22.7 million for this year.

The mid-point value of these two methodologies is our final mid-point estimate of **$14.9** 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 16 & 17 sales tax holiday in 2008.

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 2009, 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 2009	7.1	14.9	22.7

Revenues Forgone by Fund:

Sales tax revenue is currently deposited into the General Fund, the MBTA State and Local Contribution Fund[6], the School Modernization and Reconstruction Trust Fund[7], and the Convention Center Fund[8]. Under the relevant statutes and formulae, contributions to both the "MBTA State and Local Contribution Fund" and the "School Modernization and Reconstruction Trust Fund" are already at their statutory minimums for FY 2009; therefore the sales tax holiday did not lower the amount going to either of these funds. We further estimate that the impact on the Convention Center Fund was less than $5,000. 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

[6] See Chapter 127 of the Acts of 1999.
[7] See Chapter 210 of the Acts of 2004.
[8] 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 research literature, marketing studies, the US Census figures on average sales per retail employee, and studies on the responsiveness of consumers to changes in prices and advertising[9], our findings are not definitive. We estimate that the maximum impact of indirectly generated additional revenues due to the sales tax holiday is approximately $1.8 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[10] (the most relevant study we could find), retailers tend to offer less-generous markdowns and may charge higher prices during a sales tax holiday than they would in the absence of one, which means that net price reductions to consumers may have been less than the 5% tax reduction resulting form the holiday. Because the elasticity figures mentioned in the literature and in marketing studies are not adjusted for the fact that retailers have different mark-down and pricing strategies during the sales tax holidays as indicated by the Florida study, and some of the increased sales volume during the sales tax holiday may have been shifted from the surrounding days (before and after the holiday), the $1.8 million indirect impact figure should be used with caution.

Confidence Level: The after-the-fact static sales tax revenue impact figures are lower than the forecast estimate we conducted prior to the implementation of the sales tax holiday. This appears to have been caused by the falloff in retail activity in August. We are reasonably confident that the true amount of forgone sales revenue lies within the range provided.

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

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