

NUVEEN MASSACHUSETTS PREMIUM INCOME MUNICIPAL FUND  
Form N-23C-2  
January 20, 2011

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Securities and Exchange Commission  
Washington, DC 20549  
Rule 23c-2 Notice of Intention to  
Redeem Securities

of

Nuveen Massachusetts Premium Income Municipal Fund  
333 West Wacker Drive  
Chicago, Illinois 60606

under the

Investment Company Act of 1940

Investment Company Act File No. 811-07484

The undersigned registered closed-end investment company hereby notifies the Securities and Exchange Commission that it intends to redeem securities of which it is the issuer, as set forth below in accordance with the requirements of Rule 23c-2 under the Investment Company Act of 1940 (the "Act"), and states that it is filing this notice with the Commission pursuant to permission granted by the Commission staff fewer than 30 days prior to the date set for the redemption.

- (1) Title of the class of securities of Nuveen Massachusetts Premium Income Municipal Fund (the "Fund") to be redeemed:

Municipal Auction Rate Cumulative Preferred Shares, Liquidation Preference \$25,000 per share, Series TH (CUSIP 67061E203) (the "MuniPreferred Shares").

- (2) Date on which the securities are to be called or redeemed:

Series    Date  
TH    February 16,  
          2011

- (3) Applicable provisions of the governing instrument pursuant to which the securities are to be redeemed:

The MuniPreferred Shares are to be redeemed pursuant to Section 11(a)(i) of the Statement Establishing and Fixing the Rights and Preferences of Municipal Auction Rate Cumulative Preferred Shares of the Fund.

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(4) The number of shares to be redeemed and the basis upon which the shares to be redeemed are to be selected:

The Fund intends to redeem all of the outstanding MuniPreferred Shares, as set forth below:

| Series | Number<br>of<br>Shares |
|--------|------------------------|
| TH     | 576                    |

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SIGNATURE

Pursuant to the requirement of Rule 23c-2 under the Investment Company Act of 1940, the Fund has duly caused this Notice of Intention to Redeem Securities to be signed on its behalf by the undersigned on this 20th day of January, 2011.

NUVEEN MASSACHUSETTS PREMIUM INCOME  
MUNICIPAL FUND

By: /s/Mark L. Winget  
Name: Mark L. Winget  
Title: Vice President and Assistant  
Secretary

