

NUVEEN MASSACHUSETTS PREMIUM INCOME MUNICIPAL FUND
Form N-Q
April 27, 2007

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549**

FORM N-Q

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT COMPANY

Investment Company Act file number 811-7484

Nuveen Massachusetts Premium Income Municipal Fund

(Exact name of registrant as specified in charter)

Nuveen Investments

333 West Wacker Drive, Chicago, Illinois 60606

(Address of principal executive offices) (Zip code)

Jessica R. Droeger Vice President and Secretary

333 West Wacker Drive, Chicago, Illinois 60606

(Name and address of agent for service)

Registrant's telephone number, including area code: 312-917-7700

Date of fiscal year end: 5/31

Date of reporting period: 2/28/07

Form N-Q is to be used by management investment companies, other than small business investment companies registered on Form N-5 (§§ 239.24 and 274.5 of this chapter), to file reports with the Commission, not later than 60 days after the close of the first and third fiscal quarters, pursuant to rule 30b1-5 under the Investment Company Act of 1940 (17 CFR 270.30b1-5). The Commission may use the information provided on Form N-Q in its regulatory, disclosure review, inspection, and policymaking roles.

A registrant is required to disclose the information specified by Form N-Q, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-Q unless the Form displays a currently valid Office of Management and Budget (OMB) control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. § 3507.

Item 1. Schedule of Investments

Portfolio of Investments (Unaudited)

Nuveen Massachusetts Premium Income Municipal Fund (NMT)

February 28, 2007

Principal	Amount (000)	Description (1)	Optiona
			Provision

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Consumer Discretionary □ 2.2% (1.5% of Total Investments)

\$	1,485	Boston Industrial Development Financing Authority, Massachusetts, Senior Revenue Bonds, Crosstown Center Project, Series 2002, 6.500%, 9/01/35 (Alternative Minimum Tax)	9/12 at 1
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Consumer Staples □ 0.9% (0.6% of Total Investments)

	550	Guam Economic Development Authority, Tobacco Settlement Asset-Backed Bonds, Series 2001B, 5.500%, 5/15/41	5/11 at 1
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Education and Civic Organizations □ 32.2% (22.0% of Total Investments)

	750	Massachusetts Development Finance Agency, Revenue Bonds, Western New England College, Series 2005A, 5.000%, 9/01/33 □ AGC Insured	9/15 at 1
	500	Massachusetts Development Finance Authority, Revenue Bonds, Belmont Hills School, Series 2001, 5.375%, 9/01/23	9/11 at 1
	890	Massachusetts Development Finance Authority, Revenue Bonds, Curry College, Series 2000A, 6.000%, 3/01/20 □ ACA Insured	3/09 at 1
	1,000	Massachusetts Development Finance Authority, Revenue Bonds, Massachusetts College of Pharmacy and Allied Health Sciences, Series 2003C, 5.750%, 7/01/33	7/13 at 1
	1,745	Massachusetts Development Finance Authority, Revenue Bonds, Massachusetts College of Pharmacy and Allied Health Sciences, Series 2005D, 5.000%, 7/01/27 □ AGC Insured	7/15 at 1
	750	Massachusetts Development Finance Authority, Revenue Bonds, Milton Academy, Series 2003A, 5.000%, 9/01/19	9/13 at 1
	1,090	Massachusetts Development Finance Authority, Revenue Refunding Bonds, Boston University, Series 1999P, 6.000%, 5/15/29	No Opt
	85	Massachusetts Education Loan Authority, Student Loan Revenue Bonds, Issue E, Series 1995, 6.150%, 7/01/10 □ AMBAC Insured (Alternative Minimum Tax)	7/07 at 1
	1,550	Massachusetts Educational Finance Authority, Educational Loan Revenue Bonds, Series 2002E, 5.000%, 1/01/13 □ AMBAC Insured (Alternative Minimum Tax)	1/12 at 1
	2,000	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Boston College, Series 2003N, 5.250%, 6/01/18	6/13 at 1
	500	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Wellesley College, Series 2003H, 5.000%, 7/01/26	7/13 at 1
	555	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Williams College, Series 2003H, 5.000%, 7/01/21	7/13 at 1
	1,380	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Williams College, Series 2007L, 5.000%, 7/01/31	7/16 at 1
	500	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Worcester State College, Series 2002, 5.000%, 11/01/32 □ AMBAC Insured	11/12 at 1
	2,300	Massachusetts Industrial Finance Agency, Revenue Bonds, Belmont Hill School, Series 1998, 5.250%, 9/01/28	9/08 at 1
	1,645	Massachusetts Industrial Finance Agency, Revenue Bonds, Whitehead Institute for Biomedical Research, Series 1993, 5.125%, 7/01/26	7/07 at 1
	4,000	New England Education Loan Marketing Corporation, Massachusetts, Student Loan Revenue Bonds, Subordinate Series 1992H, 6.900%, 11/01/09 (Alternative Minimum Tax)	No Opt
	375	Puerto Rico Industrial, Tourist, Educational, Medical and Environmental Control Facilities Financing Authority, Higher Education Revenue Bonds, Ana G. Mendez University System, Series 1999, 5.375%, 2/01/19	2/09 at 1

21,615 Total Education and Civic Organizations

Health Care □ 17.7% (12.0% of Total Investments)

1,250	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Berkshire Health System, Series 2001E, 6.250%, 10/01/31	10/11 at 1
1,000	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Cape Cod Health Care Inc., Series 2001C, 5.250%, 11/15/31 □ RAAI Insured	11/11 at 1
1,000	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Caritas Christi Obligated Group, Series 2002B, 6.250%, 7/01/22	7/12 at 1
935	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Emerson Hospital, Series 2005E, 5.000%, 8/15/35 □ RAAI Insured	8/15 at 1
1,000	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Lahey Clinic Medical Center, Series 2005C, 5.000%, 8/15/21 □ FGIC Insured	8/15 at 1
585	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Milford Regional Medical Center, Series 2007E, 5.000%, 7/15/32	7/17 at 1
1,000	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Milton Hospital Project, Series 2005D, 5.250%, 7/01/30	7/15 at 1
1,500	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, New England Medical Center Hospitals, Series 1993G-1, 5.375%, 7/01/24 □ MBIA Insured	7/07 at 1
600	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, New England Medical Center Hospitals, Series 2002H, 5.375%, 5/15/19 □ FGIC Insured	5/12 at 1
2,000	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Partners HealthCare System Inc., Series 2001C, 5.750%, 7/01/32	7/11 at 1
375	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, UMass Memorial Health Care, Series 2001C, 6.625%, 7/01/32	7/11 at 1
615	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, UMass Memorial Health Care, Series 2005D, 5.000%, 7/01/33	7/15 at 1

11,860 Total Health Care

Housing/Multifamily □ 6.0% (4.1% of Total Investments)

1,890	Massachusetts Development Financing Authority, Assisted Living Revenue Bonds, Prospect House Apartments, Series 1999, 7.000%, 12/01/31	12/09 at 1
335	Massachusetts Housing Finance Agency, Housing Bonds, Series 2006A, 5.100%, 12/01/37 (Alternative Minimum Tax)	6/15 at 1
500	Massachusetts Housing Finance Agency, Housing Revenue Bonds, Series 2003S, 5.050%, 12/01/23 (Alternative Minimum Tax)	6/13 at 1
385	Massachusetts Housing Finance Agency, Rental Housing Mortgage Revenue Bonds, Series 1999D, 5.500%, 7/01/13 □ AMBAC Insured (Alternative Minimum Tax)	7/10 at 1
1,000	Somerville Housing Authority, Massachusetts, GNMA Collateralized Mortgage Revenue Bonds, Clarendon Hill Towers, Series 2002, 5.200%, 11/20/22	5/12 at 1

4,110 Total Housing/Multifamily

Housing/Single Family □ 3.5% (2.4% of Total Investments)

990	Massachusetts Housing Finance Agency, Single Family Housing Revenue Bonds, Series 2006-122, 4.875%, 12/01/37 (Alternative Minimum Tax)	6/15 at 1
1,500	Massachusetts Housing Finance Agency, Single Family Housing Revenue Bonds, Series 2006-126, 4.625%, 6/01/32 (Alternative Minimum Tax)	6/16 at 1

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2,490 Total Housing/Single Family

Industrials □ 1.2% (0.8% of Total Investments)

415	Massachusetts Development Finance Agency, Pioneer Valley Resource Recovery Revenue Bonds, Eco/Springfield LLC, Series 2006, 5.875%, 7/01/14 (Alternative Minimum Tax)	No Opt
400	Massachusetts Development Finance Agency, Solid Waste Disposal Revenue Bonds, Waste Management Inc., Series 2003, 5.450%, 6/01/14	No Opt

815 Total Industrials

Long-Term Care □ 9.3% (6.4% of Total Investments)

1,270	Boston, Massachusetts, FHA-Insured Mortgage Revenue Bonds, Deutsches Altenheim Inc., Series 1998A, 6.125%, 10/01/31	10/08 at 1
1,500	Massachusetts Development Finance Authority, GNMA Collateralized Assisted Living Facility Revenue Bonds, Arbors at Chicopee, Series 2001A, 6.250%, 9/20/42 (Alternative Minimum Tax)	3/12 at 1
2,500	Massachusetts Development Finance Authority, GNMA Collateralized Revenue Bonds, VOA Concord Assisted Living Inc., Series 2000A, 6.900%, 10/20/41	10/11 at 1
355	Massachusetts Industrial Finance Agency, FHA-Insured Project Revenue Bonds, Heights Crossing LP, Series 1995, 6.000%, 2/01/15 (Alternative Minimum Tax)	8/07 at 1
400	Massachusetts Industrial Finance Agency, First Mortgage Revenue Bonds, Berkshire Retirement Community, Series 1994B, 4.750%, 7/01/17	1/11 at 1

6,025 Total Long-Term Care

Tax Obligation/General □ 16.0% (10.9% of Total Investments)

500	Ashland, Massachusetts, General Obligation Bonds, Series 2004, 5.250%, 5/15/23 □ AMBAC Insured	5/15 at 1
1,250	Boston, Massachusetts, General Obligation Bonds, Series 2005A, 5.000%, 1/01/17	1/15 at 1
1,000	Fall River, Massachusetts, General Obligation Bonds, Series 2003, 5.000%, 2/01/21 □ FSA Insured	2/13 at 1
2,500	Massachusetts Bay Transportation Authority, General Obligation Transportation System Bonds, Series 1991A, 7.000%, 3/01/21	No Opt
1,275	Massachusetts, General Obligation Bonds, Consolidated Loan, Series 2001D, 6.000%, 11/01/13 □ MBIA Insured	No Opt
980	Monson, Massachusetts, General Obligation Bonds, Series 2002, 5.250%, 5/15/22 □ AMBAC Insured	5/12 at 1
1,260	Norwell, Massachusetts, General Obligation Bonds, Series 2003, 5.000%, 11/15/20 □ FGIC Insured	No Opt
1,220	Worcester, Massachusetts, General Obligation Bonds, Series 2005A, 5.000%, 7/01/19 □ FGIC Insured	7/15 at 1

9,985 Total Tax Obligation/General

Tax Obligation/Limited □ 15.0% (10.2% of Total Investments)

210	Martha's Vineyard Land Bank, Massachusetts, Revenue Bonds, Series 2004, 5.000%, 5/01/26 □ AMBAC Insured	5/14 at 1
940	Massachusetts Bay Transportation Authority, Assessment Bonds, Series 2005A, 5.000%, 7/01/18	7/15 at 1
385	Massachusetts Bay Transportation Authority, Senior Lien Sales Tax Revenue Refunding Bonds, Series 2004C, 5.250%, 7/01/21	No Opt
1,000	Massachusetts Bay Transportation Authority, Senior Sales Tax Revenue Bonds, Series 2006, 5.000%, 7/01/26	7/18 at 1

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550	Massachusetts College Building Authority, Project Revenue Bonds, Series 2004A, 5.000%, 5/01/19 □ MBIA Insured	5/14 at 1
325	Massachusetts College Building Authority, Project Revenue Bonds, Series 2006A, 5.000%, 5/01/31 □ AMBAC Insured	5/16 at 1
1,000	Massachusetts College Building Authority, Project Revenue Refunding Bonds, Series 2003B, 5.375%, 5/01/23 □ XLCA Insured	No Opt
1,300	Massachusetts School Building Authority, Dedicated Sales Tax Revenue Bonds, Series 2005A, 5.000%, 8/15/20 □ FSA Insured	8/15 at 1
540	Massachusetts, Special Obligation Dedicated Tax Revenue Bonds, Series 2005, 5.000%, 1/01/20 □ FGIC Insured	No Opt
1,000	Massachusetts, Special Obligation Refunding Notes, Federal Highway Grant Anticipation Note Program, Series 2003A, 5.000%, 12/15/13 □ FSA Insured	No Opt
1,000	Puerto Rico Highway and Transportation Authority, Highway Revenue Bonds, Series 2007N, 5.250%, 7/01/30 (WI/DD, Settling 3/06/07) □ AMBAC Insured	No Opt
1,300	Puerto Rico, Highway Revenue Bonds, Highway and Transportation Authority, Series 2003AA, 5.500%, 7/01/19 □ MBIA Insured	No Opt

9,550 Total Tax Obligation/Limited

Transportation □ 11.3% (7.7% of Total Investments)

2,000	Massachusetts Port Authority, Revenue Bonds, Series 2003A, 5.000%, 7/01/33 □ MBIA Insured	7/13 at 1
1,700	Massachusetts Port Authority, Revenue Bonds, Series 2005A, 5.000%, 7/01/23 □ AMBAC Insured	7/15 at 1
4,000	Massachusetts Port Authority, Special Facilities Revenue Bonds, US Airways Group Inc., Series 1996A, 5.750%, 9/01/16 □ MBIA Insured (Alternative Minimum Tax)	3/07 at 1

7,700 Total Transportation

U.S. Guaranteed □ 17.4% (11.9% of Total Investments) (4)

410	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, CareGroup Inc., Series 1998A, 5.000%, 7/01/25 (Pre-refunded 7/01/21) □ MBIA Insured	7/21 at 1
1,500	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, University of Massachusetts □ Worcester Campus, Series 2001B, 5.250%, 10/01/31 (Pre-refunded 10/01/11) □ FGIC Insured	10/11 at 1
780	Massachusetts Port Authority, Revenue Bonds, Series 1982, 13.000%, 7/01/13 (ETM)	7/07 at 1
1,440	Massachusetts Water Pollution Abatement Trust, Pooled Loan Program Bonds, Series 9, 5.000%, 8/01/22 (Pre-refunded 8/01/13)	8/13 at 1
1,250	Massachusetts, General Obligation Bonds, Consolidated Loan, Series 2004B, 5.000%, 8/01/24 (Pre-refunded 8/01/14)	8/14 at 1
1,500	Massachusetts, Special Obligation Dedicated Tax Revenue Bonds, Series 2004, 5.250%, 1/01/25 (Pre-refunded 1/01/14) □ FGIC Insured	1/14 at 1
	Springfield, Massachusetts, General Obligation Bonds, Series 2003:	
530	5.250%, 1/15/15 (Pre-refunded 1/15/13) □ MBIA Insured	1/13 at 1
1,615	5.250%, 1/15/23 (Pre-refunded 1/15/13) □ MBIA Insured	1/13 at 1
1,200	University of Massachusetts Building Authority, Senior Lien Project Revenue Bonds, Series 2003-1, 5.250%, 11/01/18 (Pre-refunded 11/01/13) □ AMBAC Insured	11/13 at 1
1,000	University of Massachusetts Building Authority, Senior Lien Project Revenue Bonds, Series 2004-1, 5.250%, 11/01/24 (Pre-refunded 11/01/14) □ AMBAC Insured	11/14 at 1

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11,225 Total U.S. Guaranteed

Utilities □ 3.0% (2.0% of Total Investments)

1,000	Massachusetts Development Finance Agency, Resource Recovery Revenue Bonds, SEMass System, Series 2001A, 5.625%, 1/01/16 □ MBIA Insured	1/12 at 1
1,000	Massachusetts Industrial Finance Agency, Resource Recovery Revenue Refunding Bonds, Ogden Haverhill Project, Series 1998A, 5.600%, 12/01/19 (Alternative Minimum Tax)	12/08 at 1

2,000 Total Utilities

Water and Sewer □ 11.0% (7.5% of Total Investments)

2,000	Boston Water and Sewerage Commission, Massachusetts, General Revenue Bonds, Senior Series 2004A, 5.000%, 11/01/25	11/14 at 1
285	Massachusetts Water Pollution Abatement Trust, Pooled Loan Program Bonds, Series 10, 5.000%, 8/01/26	8/14 at 1
750	Massachusetts Water Pollution Abatement Trust, Pooled Loan Program Bonds, Series 11, 4.500%, 8/01/29	8/15 at 1
1,000	Massachusetts Water Pollution Abatement Trust, Pooled Loan Program Bonds, Series 12, 4.375%, 8/01/31	8/16 at 1
60	Massachusetts Water Pollution Abatement Trust, Pooled Loan Program Bonds, Series 9, 5.000%, 8/01/22	8/13 at 1
1,250	Massachusetts Water Pollution Abatement Trust, Revenue Bonds, MWRA Loan Program, Series 2002A, 5.250%, 8/01/20	8/12 at 1
1,500	Massachusetts Water Resources Authority, General Revenue Bonds, Series 2005A, 5.000%, 8/01/28 □ MBIA Insured	8/17 at 1
625	Massachusetts Water Resources Authority, General Revenue Bonds, Series 2006A, 4.000%, 8/01/46	8/16 at 1

7,470 Total Water and Sewer

\$ 96,880 Total Investments (cost \$99,397,512) □ 146.7%

Other Assets Less Liabilities □ 1.2%

Preferred Shares, at Liquidation Value □ (47.9)%

Net Assets Applicable to Common Shares □ 100%

- (1) All percentages shown in the Portfolio of Investments are based on net assets applicable to Common shares unless otherwise noted.
- (2) Optional Call Provisions: Dates (month and year) and prices of the earliest optional call or redemption. There may be other call provisions at varying prices at later dates. Certain mortgage-backed securities may be subject to periodic principal paydowns.
- (3) Ratings: Using the higher of Standard & Poor's or Moody's rating. Ratings below BBB by Standard & Poor's Group or Baa by Moody's Investor Service, Inc. are considered to be below investment grade.
- (4) Backed by an escrow or trust containing sufficient U.S. Government or U.S. Government agency securities

which ensure the timely payment of principal and interest. Such investments are normally considered to be equivalent to AAA rated securities.

- N/R Not rated.
- WI/DD Purchased on a when-issued or delayed delivery basis.
- (ETM) Escrowed to maturity.

Income Tax Information

The following information is presented on an income tax basis. Differences between amounts for financial statement and federal income tax purposes are primarily due to the treatment of paydown gains and losses, timing differences in recognizing taxable market discount and timing differences in recognizing certain gains and losses on investment transactions.

At February 28, 2007, the cost of investments was \$99,327,598.

Gross unrealized appreciation and gross unrealized depreciation of investments at February 28, 2007, were as follows:

Gross unrealized:	
Appreciation	\$4,886,825
Depreciation	(21,673)
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Net unrealized appreciation (depreciation) of investments	\$4,865,152

Item 2. Controls and Procedures.

- a. The registrant's principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the "1940 Act") (17 CFR 270.30a-3(c))) are effective, as of a date within 90 days of the filing date of this report that includes the disclosure required by this paragraph, based on their evaluation of the controls and procedures required by Rule 30a-3(b) under the 1940 Act (17 CFR 270.30a-3(b)) and Rule 13a-15(b) or 15d-15(b) under the Securities Exchange Act of 1934 (17 CFR 240.13a-15(b) or 240.15d-15(b)).
- b. There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act (17 CFR 270.30a-3(d))) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3. Exhibits.

File as exhibits as part of this Form a separate certification for each principal executive officer and principal financial officer of the registrant as required by Rule 30a-2(a) under the 1940 Act (17 CFR 270.30a-2(a)), exactly as set forth below: EX-99 CERT Attached hereto.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

(Registrant) Nuveen Massachusetts Premium Income Municipal Fund

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By (Signature and Title)* /s/ Jessica R. Droeger
Jessica R. Droeger
Vice President and Secretary

Date April 27, 2007

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By (Signature and Title)* /s/ Gifford R. Zimmerman
Gifford R. Zimmerman
Chief Administrative Officer (principal executive officer)

Date April 27, 2007

By (Signature and Title)* /s/ Stephen D. Foy
Stephen D. Foy
Vice President and Controller (principal financial officer)

Date April 27, 2007

* Print the name and title of each signing officer under his or her signature.