

NUVEEN MASSACHUSETTS PREMIUM INCOME MUNICIPAL FUND

Form N-Q

April 29, 2016

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 811-07484

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)

Kevin J. McCarthy
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: 2/29/16

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

Nuveen Massachusetts Premium Income
Municipal Fund (NMT)
February 29, 2016 (Unaudited)

Principal Amount (000)	Description (1)	Optional Call Provisions (2)	Ratings (3)	Value
	LONG-TERM INVESTMENTS – 149.9% (100.0% of Total Investments)			
	MUNICIPAL BONDS – 149.9% (100.0% of Total Investments)			
	Consumer Discretionary – 1.0% (0.6% of Total Investments)			
\$ 1,905	Boston Industrial Development Financing Authority, Massachusetts, Senior Revenue Bonds, Crosstown Center Project, Series 2002, 6.500%, 9/01/35 (Alternative Minimum Tax) Education and Civic Organizations – 41.3% (27.5% of Total Investments) Massachusetts Development Finance Agency, Revenue Bonds, Boston University, Tender Option Bond Trust 1163:	5/16 at 100.00	Caa3	\$ 1,351,826
1,880	17.217%, 10/01/48 (IF) (4)	10/23 at 100.00	A+	2,943,196
575	17.117%, 10/01/48 (IF) (4)	10/23 at 100.00	A+	899,777
2,150	Massachusetts Development Finance Agency Revenue Bonds, Lesley University Issue Series B-1 and B-2, 5.250%, 7/01/33 – AGM Insured	7/21 at 100.00	AA	2,451,108
2,200	Massachusetts Development Finance Agency, Revenue Bonds, Boston College Issue, Series 2013S, 5.000%, 7/01/38	7/23 at 100.00	AA–	2,547,446
750	Massachusetts Development Finance Agency, Revenue Bonds, Boston University, Series 2009V-1, 5.000%, 10/01/29	10/19 at 100.00	A+	858,705
1,400		1/20 at 100.00	BBB+	1,487,178

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	Massachusetts Development Finance Agency, Revenue Bonds, Emerson College, Series 2010A, 5.000%, 1/01/40			
450	Massachusetts Development Finance Agency, Revenue Bonds, MCPHS University Issue, Series 2015H: 3.500%, 7/01/35	7/25 at 100.00	AA-	462,321
190	5.000%, 7/01/37	7/25 at 100.00	AA-	220,744
550	Massachusetts Development Finance Agency, Revenue Bonds, Northeastern University, Series 2012, 5.000%, 10/01/31	No Opt. Call	A2	644,303
875	Massachusetts Development Finance Agency, Revenue Bonds, Northeastern University, Series 2014A: 5.000%, 3/01/39	3/24 at 100.00	A2	993,388
1,400	5.000%, 3/01/44	3/24 at 100.00	A2	1,577,786
500	Massachusetts Development Finance Agency, Revenue Bonds, Simmons College, Series 2013J, 5.250%, 10/01/39	No Opt. Call	BBB+	559,980
1,000	Massachusetts Development Finance Agency, Revenue Bonds, Sterling and Francine Clark Art Institute, Series 2011A, 5.000%, 7/01/41	7/21 at 100.00	AA	1,103,660
1,230	Massachusetts Development Finance Agency, Revenue Bonds, Sterling and Francine Clark Art Institute, Series 2015, 5.000%, 7/01/33	7/25 at 100.00	AA	1,450,970
3,000	Massachusetts Development Finance Agency, Revenue Bonds, The Broad Institute, Series 2011A, 5.250%, 4/01/37	4/21 at 100.00	AA-	3,488,819
875	Massachusetts Development Finance Agency, Revenue Bonds, Tufts University, Series 2015Q, 5.000%, 8/15/38	8/25 at 100.00	Aa2	1,033,218
2,095	Massachusetts Development Finance Agency, Revenue Bonds, Worcester Polytechnic Institute, Series 2007, 5.000%, 9/01/37 – NPMG Insured	9/17 at 100.00	AA-	2,209,869
1,365	Massachusetts Development Finance Agency, Revenue Bonds, Worcester Polytechnic Institute, Series 2012, 5.000%, 9/01/50	9/22 at 100.00	A+	1,525,251
3,000	Massachusetts Development Finance Authority, Revenue Bonds, WGBH Educational Foundation, Series 2002A, 5.750%, 1/01/42 – AMBAC Insured	No Opt. Call	A	3,844,529

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9,950	Massachusetts Development Finance Authority, Revenue Bonds, WGBH Educational Foundation, Series 2008A, 5.000%, 1/01/42 – AGC Insured	1/18 at 100.00	AA	10,573,464
1,090	Massachusetts Development Finance Authority, Revenue Refunding Bonds, Boston University, Series 1999P: 6.000%, 5/15/29	No Opt. Call	A1	1,383,166
1,000	6.000%, 5/15/59	5/29 at 105.00	A1	1,271,130
315	Massachusetts Educational Financing Authority, Education Loan Revenue Bonds, Series 2008H, 6.350%, 1/01/30 – AGC Insured (Alternative Minimum Tax)	1/18 at 100.00	AA	331,468
720	Massachusetts Educational Financing Authority, Educational Loan Revenue, Series 2011J, 5.625%, 7/01/33 (Alternative Minimum Tax)	7/21 at 100.00	AA	793,145
255	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Northeastern University, Series 2010A, 4.875%, 10/01/35	10/20 at 100.00	A2	286,480
1,500	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Springfield College, Series 2010, 5.500%, 10/15/31	10/19 at 100.00	Baa1	1,662,585
2,030	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Wheaton College Issues, Series 2010F, 5.000%, 1/01/41	1/20 at 100.00	A2	2,257,888
75	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Williams College, Series 2007L, 5.000%, 7/01/31	7/16 at 100.00	AA+	76,079
500	Massachusetts Health and Educational Facilities Authority, Revenue Refunding Bonds, Suffolk University Issue, Series 2009A, 5.750%, 7/01/39	7/19 at 100.00	BBB	559,230
2,000	University of Massachusetts Building Authority, Project Revenue Bonds, Senior Series 2014-1, 5.000%, 11/01/44	11/24 at 100.00	Aa2	2,313,280
4,000	University of Massachusetts Building Authority, Project Revenue Bonds, Senior Series 2015-1, 5.000%, 11/01/40	11/25 at 100.00	Aa2	4,692,839
1,510	University of Massachusetts Building Authority, Senior Lien Project Revenue Bonds, Series	No Opt. Call	Aa2	1,678,592

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50,430	2009-1, 5.000%, 5/01/39 Total Education and Civic Organizations Health Care – 28.5% (19.0% of Total Investments)				58,181,594
1,000	Massachusetts Development Finance Agency Revenue Bonds, Bay state Medical Center Issue, Series	7/24 at 100.00	A+	1,125,720	
1,000	2014N, 5.000%, 7/01/44 Massachusetts Development Finance Agency Revenue Bonds, Children’s Hospital Issue, Series	10/24 at 100.00	AA	1,156,980	
1,410	2014P, 5.000%, 10/01/46 Massachusetts Development Finance Agency, Hospital Revenue Bonds, Cape Cod Healthcare Obligated Group, Series 2013, 5.250%, 11/15/41	11/23 at 100.00	A	1,619,047	
895	Massachusetts Development Finance Agency, Revenue Bonds, Berkshire Health Systems, Series 2012G: 5.000%, 10/01/29	10/21 at 100.00	A	1,005,300	
700	5.000%, 10/01/31 Massachusetts Development Finance Agency, Revenue Bonds, CareGroup Issue, Series 2015H-1:	10/21 at 100.00	A	780,101	
900	5.000%, 7/01/30	7/25 at 100.00	A–	1,050,813	
1,000	5.000%, 7/01/32	7/25 at 100.00	A–	1,152,560	
500	5.000%, 7/01/33	7/25 at 100.00	A–	574,095	
1,000	Massachusetts Development Finance Agency, Revenue Bonds, Covenant Health System Obligated Group, Series 2012, 5.000%, 7/01/31	7/22 at 100.00	A	1,113,110	
2,500	Massachusetts Development Finance Agency, Revenue Bonds, Lahey Health System Obligated Group Issue, Series 2015F, 5.000%, 8/15/45	8/25 at 100.00	A+	2,844,025	
1,080	Massachusetts Development Finance Agency, Revenue Bonds, Milford Regional Medical Center Issue, Series 2014F, 5.750%, 7/15/43	7/23 at 100.00	BBB–	1,202,947	
2,200	Massachusetts Development Finance Agency, Revenue Bonds, Partners HealthCare System, Series 2011K-6, 5.375%, 7/01/41	7/20 at 100.00	AA	2,502,148	
1,000	Massachusetts Development Finance Agency, Revenue Bonds, Partners HealthCare System, Series 2012L, 5.000%, 7/01/36	7/21 at 100.00	AA	1,153,360	
820	Massachusetts Development Finance Agency, Revenue Bonds, Southcoast Health System	7/23 at 100.00	A–	931,618	

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	Obligated			
	Group Issue, Series 2013F, 5.000%, 7/01/37			
	Massachusetts Development Finance Agency,			
	Revenue Bonds, The Lowell General Hospital,			
	Series 2013G:			
1,000	5.000%, 7/01/37	7/23 at 100.00	BBB+	1,088,530
2,200	5.000%, 7/01/44	7/23 at 100.00	BBB+	2,372,700
	Massachusetts Development Finance Agency,			
	Revenue Bonds, UMass Memorial Health,			
500	Series 2011H,	7/21 at 100.00	BBB+	565,040
	5.500%, 7/01/31			
	Massachusetts Development Finance Agency,			
	Revenue Bonds, UMass Memorial Healthcare,			
445	Refunding	7/26 at 100.00	A-	509,325
	Series 2016I, 5.000%, 7/01/36			
	Massachusetts Health and Educational			
	Facilities Authority Revenue Bonds, Quincy			
500	Medical Center	1/18 at 100.00	N/R	1,220
	Issue, Series 2008A, 6.500%, 1/15/38 (5)			
	Massachusetts Health and Educational			
	Facilities Authority, Partners HealthCare			
945	System Inc.,	7/17 at 100.00	AA	994,943
	Series 2007G, 5.000%, 7/01/32			
	Massachusetts Health and Educational			
	Facilities Authority, Revenue Bonds, Bay state			
160	Medical	7/19 at 100.00	A+	180,109
	Center, Series 2009I, 5.750%, 7/01/36			
	Massachusetts Health and Educational			
	Facilities Authority, Revenue Bonds, Cape Cod			
500	Healthcare	11/19 at 100.00	AA	563,440
	Obligated Group, Series 2004D, 5.125%,			
	11/15/35 – AGC Insured			
	Massachusetts Health and Educational			
	Facilities Authority, Revenue Bonds,			
	Caregroup Inc.,			
	Series B1 Capital Asset Program Converted			
	June 13,2008:			
3,380	5.375%, 2/01/26 – NPFG Insured	8/18 at 100.00	AA-	3,713,233
600	5.375%, 2/01/27 – NPFG Insured	8/18 at 100.00	AA-	659,154
770	5.375%, 2/01/28 – NPFG Insured	8/18 at 100.00	AA-	843,974
	Massachusetts Health and Educational			
	Facilities Authority, Revenue Bonds,			
	Caregroup Inc.,			
	Series B2, Capital Asset Program, Converted			
	June 9, 2009:			
2,000	5.375%, 2/01/27 – NPFG Insured	8/18 at 100.00	AA-	2,208,820
1,500	5.375%, 2/01/28 – NPFG Insured	8/18 at 100.00	AA-	1,654,335
	Massachusetts Health and Educational			
	Facilities Authority, Revenue Bonds, Children's			
2,000	Hospital,	12/19 at 100.00	AA	2,271,000
	Series 2009M, 5.500%, 12/01/39			

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2,500	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Dana-Farber Cancer Institute, Series 2008K, 5.000%, 12/01/37	12/18 at 100.00	A1	2,724,650
1,495	Massachusetts Health and Educational Facilities Authority, Revenue Bonds, Milford Regional Medical Center, Series 2007E, 5.000%, 7/15/32	7/17 at 100.00	BBB-	1,544,544
36,500	Total Health Care Housing/Multifamily – 3.6% (2.4% of Total Investments)			40,106,841
500	Boston Housing Authority, Massachusetts, Capital Program Revenue Bonds, Series 2008, 5.000%, 4/01/20 – AGM Insured	4/18 at 100.00	AA	543,440
2,495	Massachusetts Development Finance Authority, Multifamily Housing Revenue Bonds, Emerson Manor Project, Series 2007, 4.800%, 7/20/48	7/17 at 100.00	BB-	2,532,151
2,000	Massachusetts Housing Finance Agency, Housing Bonds, Series 2003H, 5.125%, 6/01/43	5/16 at 100.00	AA-	2,002,220
4,995	Total Housing/Multifamily Housing/Single Family – 1.5% (1.0% of Total Investments)			5,077,811
2,150	Massachusetts Housing Finance Agency, Single Family Housing Revenue Bonds, Series 2006-126, 4.625%, 6/01/32 (Alternative Minimum Tax) Long-Term Care – 3.5% (2.4% of Total Investments)	6/16 at 100.00	AA	2,157,203
460	Massachusetts Development Finance Agency, Revenue Bonds, Berkshire Retirement Community Lennox, Series 2015, 5.000%, 7/01/31	No Opt. Call	A-	529,777
285	Massachusetts Development Finance Agency, Revenue Bonds, Carleton-Willard Village, Series 2010, 5.625%, 12/01/30	12/19 at 100.00	A-	320,978
1,000	Massachusetts Development Finance Agency, Revenue Bonds, Loomis Communities, Series 2013A, 5.250%, 1/01/26	1/23 at 100.00	BBB-	1,131,210
500	Massachusetts Development Finance Agency, Revenue Bonds, North Hill Communities Issue, Series 2013A, 6.250%, 11/15/28	11/23 at 100.00	N/R	548,925
2,410	Massachusetts Development Finance Agency, Revenue Bonds, Orchard Cove, Series 2007, 5.250%, 10/01/26	4/16 at 101.00	N/R	2,436,534
4,655	Total Long-Term Care			4,967,424

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	Tax Obligation/General – 15.8% (10.5% of Total Investments)			
	Hampden-Wilbraham Regional School District, Hampden County, Massachusetts, General			
2,000	Obligation	2/21 at 100.00	Aa3	2,257,960
	Bonds, Series 2011, 5.000%, 2/15/41			
	Hudson, Massachusetts, General Obligation			
1,250	Bonds, Municipal Purpose Loan Series 2011,	2/20 at 100.00	AA	1,410,000
	5.000%, 2/15/32			
	Massachusetts Bay Transportation Authority, General Obligation Transportation System			
1,010	Bonds,	No Opt. Call	AA+	1,204,991
	Series 1991A, 7.000%, 3/01/21			
	Massachusetts State, General Obligation			
2,440	Bonds, Consolidated Loan, Refunding Series 2014C,	No Opt. Call	AA+	2,995,783
	5.000%, 8/01/22			
	Massachusetts State, General Obligation			
1,500	Bonds, Consolidated Loan, Series 2004B,	No Opt. Call	AA+	1,829,265
	5.250%, 8/01/21 – AGM Insured			
	Massachusetts State, General Obligation			
2,000	Bonds, Consolidated Loan, Series 2015C,	7/25 at 100.00	AA+	2,336,040
	5.000%, 7/01/45			
	Newburyport, Massachusetts, General			
1,000	Obligation Bonds, Municipal Purpose Loan,	1/23 at 100.00	AAA	1,091,580
	Refunding Series 2013, 4.000%, 1/15/30			
	North Reading, Massachusetts, General			
1,775	Obligation Bonds, Municipal Purpose Loan	5/22 at 100.00	Aa2	2,069,845
	Series 2012, 5.000%, 5/15/35 – AMBAC Insured			
	Norwell, Massachusetts, General Obligation			
1,760	Bonds, Series 2003, 5.000%, 11/15/20 – FGIC	No Opt. Call	AAA	2,045,014
	Insured			
	Quincy, Massachusetts, General Obligation			
	Bonds, State Qualified Municipal Purpose			
	Loan			
	Series 2011:			
1,280	5.125%, 12/01/33	12/20 at 100.00	Aa2	1,463,834
2,000	5.250%, 12/01/38	12/20 at 100.00	Aa2	2,303,440
1,220	Worcester, Massachusetts, General Obligation	5/16 at 100.00	AA–	1,254,660
	Bonds, Series 2005A, 5.000%, 7/01/19 – FGIC Insured			
19,235	Total Tax Obligation/General			22,262,412
	Tax Obligation/Limited – 18.8% (12.6% of Total Investments)			
	Government of Guam, Business Privilege Tax			
	Bonds, Series 2011A:			

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2,000	5.250%, 1/01/36	1/22 at 100.00	A	2,227,960
1,310	5.125%, 1/01/42	1/22 at 100.00	A	1,436,703
	Government of Guam, Business Privilege Tax			
	Bonds, Series 2012B-1:			
400				