

PIONEER MUNICIPAL HIGH INCOME TRUST

Form NSAR-B

June 29, 2011

PAGE 1  
000 B000000 04/30/2011  
000 C000000 0001223026  
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000 E000000 NF  
000 F000000 Y  
000 G000000 N  
000 H000000 N  
000 I000000 6.1  
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001 B000000 811-21321  
001 C000000 6177427825  
002 A000000 60 STATE STREET  
002 B000000 BOSTON  
002 C000000 MA  
002 D010000 02109  
003 000000 N  
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007 C010600 6  
007 C010700 7  
007 C010800 8  
007 C010900 9  
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008 A000001 PIONEER INVESTMENT MANAGEMENT, INC.  
008 B000001 A  
008 C000001 801-8255  
008 D010001 BOSTON  
008 D020001 MA  
008 D030001 02109  
010 A000001 PIONEER INVESTMENT MANAGEMENT, INC.  
010 B000001 801-8255  
010 C010001 BOSTON  
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010 A000002 STATE STREET BANK & TRUST COMPANY  
010 C010002 BOSTON  
010 C020002 MA  
010 C030002 02101  
011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.  
011 B000001 8-12345678  
011 C010001 BOSTON  
011 C020001 MA  
PAGE 2  
011 C030001 02109  
011 A000002 UBS INVESTMENT BANK  
011 B000002 8-022651  
011 C010002 STAMFORD  
011 C020002 CT  
011 C030002 06901

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011 A000003 RBC CAPITAL MARKETS CORP.  
011 B000003 8-045411  
011 C010003 MINNEAPOLIS  
011 C020003 MN  
011 C030003 55402  
011 C040003 4422  
011 A000004 ADVEST, INC.  
011 B000004 8-21409  
011 C010004 HARTFORD  
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011 C030004 06103  
011 A000005 JANNEY MONTGOMERY SCOTT, LLC  
011 B000005 8-462  
011 C010005 PHILADELPHIA  
011 C020005 PA  
011 C030005 19103  
011 C040005 1675  
011 A000006 MCDONALD INVESTMENTS, INC.  
011 B000006 8-30177  
011 C010006 CLEVELAND  
011 C020006 OH  
011 C030006 44114  
011 C040006 2603  
011 A000007 STIFEL, NICOLAUS & CO., INC.  
011 B000007 8-001447  
011 C010007 ST. LOUIS  
011 C020007 MO  
011 C030007 63102  
012 A000001 PIONEER INVEST. MGT. SHAREHOLDER SVCS., INC.  
012 B000001 85-01359  
012 C010001 BOSTON  
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012 A000002 AMERICAN STOCK TRANSFER & TRUST CO. (COMMON)  
012 B000002 85-00000  
012 C010002 BROOKLYN  
012 C020002 NY  
012 C030002 11219  
012 A000003 DEUTSCHE BANK TRUST COMPANY AMERICAS (PREF.)  
012 B000003 85-00000  
012 C010003 NEW YORK  
012 C020003 NY  
012 C030003 10005  
013 A000001 ERNST & YOUNG LLP  
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PAGE 3  
013 B020001 MA  
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013 B040001 5072  
015 A000001 BROWN BROTHERS HARRIMAN & CO.  
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 022 B000002 39-0727640  
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 022 A000003 JEFFERIES & COMPANY, INC.  
 022 B000003 95-2622900  
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 022 A000004 FIRST TRYON SECURITIES LLC  
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 022 B000005 41-0953246  
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 022 A000006 J.P. MORGAN SECURITIES INC.  
 022 B000006 13-3299429  
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 022 A000007 MESIROW FINANCIAL, INC.  
 022 C000007 2606  
 022 D000007 0  
 022 A000008 RAYMOND JAMES & ASSOCIATES, INC.  
 PAGE 4  
 022 B000008 56-1237041  
 022 C000008 1495  
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 022 A000009 FMSBONDS, INC.  
 022 B000009 59-1842344  
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 022 A000010 DOUGHERTY & COMPANY LLC  
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074 R040000 335  
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087	B010000	PREFERRED STOCK - SERIES A
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087	C010000	PREFERRED STOCK - SERIES B
087	C020000	723763306
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088 B000000 N

088 C000000 N

088 D000000 Y

SIGNATURE MARK E. BRADLEY

TITLE TREASURER