

PIONEER MUNICIPAL HIGH INCOME TRUST

Form NSAR-B

June 27, 2008

PAGE 1
000 B000000 04/30/2008
000 C000000 0001223026
000 D000000 N
000 E000000 NF
000 F000000 Y
000 G000000 N
000 H000000 N
000 I000000 6.1
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001 C000000 6177427825
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002 D010000 02109
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008 B000001 A
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008 D020001 MA
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010 A000002 PRINCETON ADMINISTRATORS, LLC
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011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.
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PAGE 2
011 C020001 MA
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011 A000002 UBS INVESTMENT BANK
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011 C010002 STAMFORD
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011 C030002 06901
011 A000003 RBC CAPITAL MARKETS CORP.
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011 A000004 ADVEST, INC.
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011 A000005 JANNEY MONTGOMERY SCOTT, LLC
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011 C010005 PHILADELPHIA
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011 C030005 19103
011 C040005 1675
011 A000006 MCDONALD INVESTMENTS, INC.
011 B000006 8-30177
011 C010006 CLEVELAND
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011 A000007 STIFEL, NICOLAUS & CO., INC.
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012 A000001 PIONEER INVEST. MGT. SHAREHOLDER SVCS., INC.
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012 A000002 AMERICAN STOCK TRANSFER & TRUST CO. (COMMON)
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012 A000003 DEUTSCHE BANK TRUST COMPANY AMERICAS (PREF.)
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013 A000001 ERNST & YOUNG LLP
PAGE 3
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 022 A000007 HERBERT J. SIMS & CO., INC.
 022 B000007 13-5213180
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 022 B000008 11-2418191
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087	B010000	PREFERRED STOCK - SERIES A
087	B020000	723763207
087	C010000	PREFERRED STOCK - SERIES B
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088 A000000 N

088 B000000 N

088 C000000 N

088 D000000 Y

SIGNATURE MARY KELLERMANN

TITLE ACCOUNTING MANAGER