

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
000 J000000 A
001 A000000 PIONEER MUNICIPAL HIGH INCOME TRUST
001 B000000 811-21321
001 C000000 6177427825
002 A000000 60 STATE STREET
002 B000000 BOSTON
002 C000000 MA
002 D010000 02109
003 000000 N
004 000000 N
005 000000 N
006 000000 N
007 A000000 N
007 B000000 0
007 C010100 1
007 C010200 2
007 C010300 3
007 C010400 4
007 C010500 5
007 C010600 6
007 C010700 7
007 C010800 8
007 C010900 9
007 C011000 10
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
010 C020001 MA
010 C030001 02109
010 A000002 PRINCETON ADMINISTRATORS, LLC
010 C010002 PRINCETON
010 C020002 NJ
010 C030002 08543
010 C040002 9095
011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.
011 B000001 8-12345678
011 C010001 BOSTON
PAGE 2
011 C020001 MA
011 C030001 02109
011 A000002 UBS INVESTMENT BANK
011 B000002 8-022651
011 C010002 STAMFORD
011 C020002 CT

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME TRUST - Form NSAR-B

011 C030002 06901
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
011 C020004 CT
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
012 C020001 MA
012 C030001 02109
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
PAGE 3
013 B010001 BOSTON
013 B020001 MA
013 B030001 02116
013 B040001 5072
015 A000001 BROWN BROTHERS HARRIMAN & CO.
015 B000001 C
015 C010001 BOSTON
015 C020001 MA
015 C030001 02109
015 E010001 X
018 000000 Y
019 A000000 Y
019 B000000 77
019 C000000 PIONEERFDS
020 C000001 0
020 C000002 0

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME TRUST - Form NSAR-B

020 C000003 0
 020 C000004 0
 020 C000005 0
 020 C000006 0
 020 C000007 0
 020 C000008 0
 020 C000009 0
 020 C000010 0
 021 000000 0
 022 A000001 BLACKROCK INVESTMENTS, INC.
 022 C000001 814356
 022 D000001 0
 022 A000002 LEHMAN BROTHERS, INC.
 022 B000002 13-2518466
 022 C000002 43283
 022 D000002 14575
 022 A000003 CORBY CAPITAL MARKETS, INC.
 022 B000003 52-1037969
 022 C000003 0
 022 D000003 17099
 022 A000004 FIRST TRYON SECURITIES, LLC
 022 B000004 56-1986792
 022 C000004 0
 022 D000004 14811
 022 A000005 PIPER JAFFRAY & CO.
 022 B000005 41-0953246
 022 C000005 7859
 022 D000005 4225
 022 A000006 UBS SECURITIES, LLC
 022 B000006 13-3873456
 022 C000006 4328
 022 D000006 5023
 022 A000007 HERBERT J. SIMS & CO., INC.
 022 B000007 13-5213180
 022 C000007 9019
 PAGE 4
 022 D000007 0
 022 A000008 CITIGROUP GLOBAL MARKETS, INC.
 022 B000008 11-2418191
 022 C000008 2961
 022 D000008 0
 022 A000009 MERRILL LYNCH, PIERCE, FENNER & SMITH, INC.
 022 B000009 13-5674085
 022 C000009 2463
 022 D000009 0
 022 A000010 DEPFA FIRST ALBANY SECURITIES, LLC
 022 B000010 43-2117279
 022 C000010 1666
 022 D000010 0
 023 C000000 888683
 023 D000000 70741
 024 000000 N
 026 A000000 N
 026 B000000 Y
 026 C000000 N
 026 D000000 Y
 026 E000000 N
 026 F000000 N
 026 G010000 N
 026 G020000 N
 026 H000000 N
 027 000000 N

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME TRUST - Form NSAR-B

045	000000	Y	
046	000000	N	
047	000000	Y	
048	000000	0.600	
048	A010000		0
048	A020000	0.000	
048	B010000		0
048	B020000	0.000	
048	C010000		0
048	C020000	0.000	
048	D010000		0
048	D020000	0.000	
048	E010000		0
048	E020000	0.000	
048	F010000		0
048	F020000	0.000	
048	G010000		0
048	G020000	0.000	
048	H010000		0
048	H020000	0.000	
048	I010000		0
048	I020000	0.000	
048	J010000		0
048	J020000	0.000	
048	K010000		0
	PAGE	5	
048	K020000	0.000	
049	000000	N	
050	000000	N	
051	000000	N	
052	000000	N	
053	A000000	N	
054	A000000	Y	
054	B000000	Y	
054	C000000	Y	
054	D000000	N	
054	E000000	N	
054	F000000	N	
054	G000000	N	
054	H000000	Y	
054	I000000	N	
054	J000000	Y	
054	K000000	N	
054	L000000	N	
054	M000000	Y	
054	N000000	N	
054	O000000	N	
055	A000000	Y	
055	B000000	N	
056	000000	Y	
057	000000	N	
058	A000000	N	
059	000000	Y	
060	A000000	Y	
060	B000000	Y	
061	000000		0
062	A000000	Y	
062	B000000	0.0	
062	C000000	0.0	
062	D000000	0.0	
062	E000000	0.0	
062	F000000	0.0	

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME TRUST - Form NSAR-B

062	G000000	0.0
062	H000000	0.0
062	I000000	0.0
062	J000000	0.0
062	K000000	0.0
062	L000000	0.0
062	M000000	0.0
062	N000000	0.0
062	O000000	127.5
062	P000000	0.0
062	Q000000	3.0
062	R000000	0.6
063	A000000	0
063	B000000	12.9
064	A000000	Y
	PAGE	6
064	B000000	N
066	A000000	N
067	000000	N
068	A000000	N
068	B000000	N
069	000000	N
070	A010000	Y
070	A020000	N
070	B010000	N
070	B020000	N
070	C010000	Y
070	C020000	N
070	D010000	N
070	D020000	N
070	E010000	Y
070	E020000	N
070	F010000	N
070	F020000	N
070	G010000	Y
070	G020000	N
070	H010000	N
070	H020000	N
070	I010000	N
070	I020000	N
070	J010000	Y
070	J020000	Y
070	K010000	Y
070	K020000	Y
070	L010000	N
070	L020000	N
070	M010000	N
070	M020000	N
070	N010000	N
070	N020000	N
070	O010000	Y
070	O020000	N
070	P010000	Y
070	P020000	N
070	Q010000	N
070	Q020000	N
070	R010000	N
070	R020000	N
071	A000000	74040
071	B000000	71792
071	C000000	426707
071	D000000	17

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME TRUST - Form NSAR-B

072 A000000 12
 072 B000000 27381
 072 C000000 0
 072 D000000 0
 072 E000000 0

PAGE 7

072 F000000 2610
 072 G000000 381
 072 H000000 0
 072 I000000 301
 072 J000000 29
 072 K000000 0
 072 L000000 21
 072 M000000 11
 072 N000000 24
 072 O000000 0
 072 P000000 0
 072 Q000000 0
 072 R000000 55
 072 S000000 0
 072 T000000 0
 072 U000000 0
 072 V000000 0
 072 W000000 16
 072 X000000 3448
 072 Y000000 0
 072 Z000000 23933
 072AA000000 0
 072BB000000 2754
 072CC010000 0
 072CC020000 42309
 072DD010000 18450
 072DD020000 0
 072EE000000 0
 073 A010000 0.8340
 073 A020000 0.0000
 073 B000000 0.0000
 073 C000000 0.0000
 074 A000000 0
 074 B000000 0
 074 C000000 0
 074 D000000 406164
 074 E000000 0
 074 F000000 1835
 074 G000000 0
 074 H000000 0
 074 I000000 0
 074 J000000 1061
 074 K000000 0
 074 L000000 7745
 074 M000000 31
 074 N000000 416836
 074 O000000 0
 074 P000000 232
 074 Q000000 0
 074 R010000 0
 074 R020000 0

PAGE 8

074 R030000 0
 074 R040000 4334
 074 S000000 101039
 074 T000000 311231

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME TRUST - Form NSAR-B

074	U010000	22128
074	U020000	0
074	V010000	14.07
074	V020000	0.00
074	W000000	0.0000
074	X000000	9096
074	Y000000	0
075	A000000	0
075	B000000	334036
076	000000	13.88
077	A000000	Y
077	B000000	Y
077	C000000	N
077	D000000	N
077	E000000	N
077	F000000	N
077	G000000	N
077	H000000	N
077	I000000	N
077	J000000	N
077	K000000	N
077	L000000	N
077	M000000	N
077	N000000	N
077	O000000	N
077	P000000	N
077	Q010000	N
077	Q020000	N
077	Q030000	N
078	000000	N
080	A000000	ICI MUTUAL INSURANCE CO.
080	C000000	45000
081	A000000	Y
081	B000000	77
082	A000000	N
082	B000000	0
083	A000000	N
083	B000000	0
084	A000000	N
084	B000000	0
085	A000000	Y
085	B000000	N
086	A010000	7
086	A020000	97
086	B010000	0
086	B020000	0
086	C010000	0
	PAGE	9
086	C020000	0
086	D010000	0
086	D020000	0
086	E010000	0
086	E020000	0
086	F010000	0
086	F020000	0
087	A010000	COMMON STOCK
087	A020000	723763108
087	A030000	MHI
087	B010000	PREFERRED STOCK - SERIES A
087	B020000	723763207
087	C010000	PREFERRED STOCK - SERIES B
087	C020000	723763306

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME TRUST - Form NSAR-B

088 A000000 N

088 B000000 N

088 C000000 N

088 D000000 Y

SIGNATURE MARY KELLERMANN

TITLE ACCOUNTING MANAGER