

BLACKROCK APEX MUNICIPAL FUND INC  
Form N-Q  
March 29, 2011  
UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

**FORM N-Q**

**QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT COMPANY**

Investment Company Act file number 811-05227

Name of Fund: BlackRock Apex Municipal Fund, Inc. (APX)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock Apex Municipal Fund, Inc., 55 East 52<sup>nd</sup> Street, New York, NY 10055

Registrant's telephone number, including area code: (800) 882-0052, Option 4

Date of fiscal year end: 04/30/2011

Date of reporting period: 01/31/2011

Item 1 Schedule of Investments

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Schedule of Investments January 31, 2011 (Unaudited)

BlackRock Apex Municipal Fund, Inc. (APX)  
(Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
<b>Alabama 0.7%</b>		
Alabama State Docks Department, Refunding RB, 6.00%, 10/01/40	\$ 880	\$ 860,833
County of Jefferson Alabama, RB, Series A, 5.25%, 1/01/17	365	346,294
		<u>1,207,127</u>
<b>Alaska 1.1%</b>		
Alaska Industrial Development & Export Authority, RB, Williams Lynxs, Alaska Cargoport, AMT, 8.00%, 5/01/23	2,000	1,857,800
<b>Arizona 3.6%</b>		
Maricopa County IDA Arizona, RB, Arizona Charter Schools Project, Series A, 6.63%, 7/01/20	800	609,792
Phoenix IDA Arizona, Refunding RB, America West Airlines Inc. Project, AMT, 6.30%, 4/01/23	2,950	2,420,682
Pima County IDA, RB: Arizona Charter Schools Project, Series E, 7.25%, 7/01/31	935	909,250
Tucson Electric Power Co., Series A, 5.25%, 10/01/40	1,635	1,445,356
University Medical Center Corp. Arizona, RB, 6.25%, 7/01/29	540	550,573
Yavapai County IDA Arizona, RB, Yavapai Regional Medical Center, Series A, 6.00%, 8/01/33	500	478,615
		<u>6,414,268</u>
<b>Arkansas 0.4%</b>		
County of Little River Arkansas, Refunding RB, Georgia-Pacific Corp. Project, AMT, 5.60%, 10/01/26	710	649,664
<b>California 3.2%</b>		
California Statewide Communities Development Authority, Refunding RB: American Baptist Homes of the West, 6.25%, 10/01/39	885	808,332
Senior Living, Southern California, 7.00%, 11/15/29	400	409,684
Senior Living, Southern California, 7.25%, 11/15/41	1,440	1,489,824
City of Fontana California, Special Tax Bonds, Refunding, Community	1,000	868,750

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Facilities District No. 22-Sierra,  
Series H, 6.00%, 9/01/34

Municipal Bonds	Par (000)	Value
<b>California (concluded)</b>		
State of California, GO, Various Purpose, 6.00%, 3/01/33	\$ 2,120	\$ 2,156,973
		<u>5,733,563</u>
<b>Colorado 1.5%</b>		
E-470 Public Highway Authority, Refunding RB, CAB, 7.08%, 9/01/35 (a)	1,505	231,048
Plaza Metropolitan District No. 1 Colorado, Tax Allocation Bonds, Tax Increment:: Public Improvement Fee, , 8.00%, 12/01/25	2,000	1,939,400
Subordinate Public Improvement Fee, 8.13%, 12/01/25	500	442,870
		<u>2,613,318</u>
<b>Connecticut 2.2%</b>		
Harbor Point Infrastructure Improvement District, Tax Allocation Bonds, Harbor Point Project, Series A, 7.88%, 4/01/39	1,610	1,622,027
Mohegan Tribe of Indians of Connecticut, RB, Public Improvement, Priority Distribution: 6.25%, 1/01/31	1,785	1,359,973
5.25%, 1/01/33 (b)	1,500	972,120
		<u>3,954,120</u>
<b>Delaware 0.9%</b>		
Delaware State EDA, RB, Exempt Facilities, Indian River Power, 5.38%, 10/01/45	1,720	1,516,111
<b>District of Columbia 2.2%</b>		
District of Columbia, RB, Methodist Home District of Columbia, Series A: 7.38%, 1/01/30	680	665,380
7.50%, 1/01/39	1,110	1,082,073
District of Columbia Tobacco Settlement Financing Corp., Refunding RB, Asset- Backed, 6.50%, 5/15/33	730	700,917
Metropolitan Washington Airports Authority, RB, CAB, Second Senior Lien, Series B (AGC), 6.76%, 10/01/39 (a)	9,770	1,351,777
		<u>3,800,147</u>

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**Portfolio Abbreviations**

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To simplify the listings of portfolio holdings in the Schedule of Investments, the names and descriptions of many of the securities have been abbreviated according to the following list:

<b>ACA</b>	ACA Financial Guaranty Corp.
<b>AGC</b>	Assured Guaranty Corp.
<b>AGM</b>	Assured Guaranty Municipal Corp.
<b>AMBAC</b>	American Municipal Bond Assurance Corp.
<b>AMT</b>	Alternative Minimum Tax (subject to)
<b>CAB</b>	Capital Appreciation Bonds
<b>EDA</b>	Economic Development Authority
<b>EDC</b>	Economic Development Corp.
<b>ERB</b>	Education Revenue Bonds
<b>GO</b>	General Obligation Bonds
<b>HDA</b>	Housing Development Authority
<b>IDA</b>	Industrial Development Authority
<b>MRB</b>	Mortgage Revenue Bonds
<b>NPFGC</b>	National Public Finance Guarantee Corp.
<b>RB</b>	Revenue Bonds
<b>TE</b>	Tax-Exempt
<b>TIF</b>	Tax Increment Financing

## Schedule of Investments (continued)

BlackRock Apex Municipal Fund, Inc. (APX)  
(Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
<b>Florida 10.5%</b>		
County of Miami-Dade Florida, Refunding RB, Miami International Airport, Series A-1, 5.38%, 10/01/41	\$ 360	\$ 333,896
Hillsborough County IDA, RB, AMT, National Gypsum Co.:		
Series A, 7.13%, 4/01/30	2,500	2,222,325
Series B, 7.13%, 4/01/30	1,560	1,386,731
Jacksonville Economic Development Commission, RB, Gerdau Ameristeel US Inc., AMT, 5.30%, 5/01/37	900	686,025
Jacksonville Economic Development Commission, Refunding RB, Florida Proton Therapy Institute, Series A, 6.00%, 9/01/17	750	749,550
Lee County IDA Florida, RB, Series A, Lee Charter Foundation, 5.38%, 6/15/37	1,810	1,362,260
Mid-Bay Bridge Authority, RB, Series A, 7.25%, 10/01/40 (c)	1,855	1,822,575
Midtown Miami Community Development District, Special Assessment Bonds, Series A:		
6.00%, 5/01/24	1,370	1,268,346
6.25%, 5/01/37	1,350	1,182,371
Palm Beach County Health Facilities Authority, RB, Acts Retirement Life Community, 5.50%, 11/15/33	1,500	1,360,740
Santa Rosa Bay Bridge Authority, RB, 6.25%, 7/01/28	2,140	988,808
Sarasota County Health Facilities Authority, Refunding RB, Village on the Isle Project:		
5.50%, 1/01/27	370	316,894
5.50%, 1/01/32	550	452,755
Sumter Landing Community Development District Florida, RB, Sub- Series B, 5.70%, 10/01/38	1,585	1,185,311
Tampa Palms Open Space & Transportation Community Development District, RB, Capital Improvement, Richmond Place Project, 7.50%, 5/01/18	1,905	1,899,418
Tolomato Community Development District, Special Assessment Bonds, Special Assessment, 6.65%, 5/01/40	1,850	1,226,383
		<u>18,444,388</u>

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**Georgia 3.8%**

City of Atlanta Georgia, Tax Allocation Bonds, Princeton Lakes Project, 5.50%, 1/01/31	395	321,641
Clayton County Development Authority, RB, Delta Air Lines Inc. Project, Series A, 8.75%, 6/01/29	1,375	1,561,918
County of Clayton Georgia, Tax Allocation Bonds, Ellenwood Project, 7.50%, 7/01/33	1,125	999,731
DeKalb County Hospital Authority Georgia, RB, DeKalb Medical Center Inc. Project, 6.13%, 9/01/40	1,805	1,641,990

Municipal Bonds	Par (000)	Value
<b>Georgia (concluded)</b>		
Gainesville & Hall County Development Authority, Refunding RB, Acts Retirement Life Community, Series A-2, 6.63%, 11/15/39	\$ 645	\$ 641,220
Rockdale County Development Authority, RB, Visy Paper Project, Series A, AMT, 6.13%, 1/01/34	1,680	1,466,623
		6,633,123

**Guam 1.5%**

Guam Government Waterworks Authority, Refunding RB, Water, 6.00%, 7/01/25	515	511,292
Territory of Guam, GO, Series A: 6.00%, 11/15/19	250	254,585
6.75%, 11/15/29	440	464,385
7.00%, 11/15/39	455	485,799
Territory of Guam, RB, Section 30, Series A, 5.63%, 12/01/29	1,000	962,300
		2,678,361

**Illinois 6.8%**

City of Chicago Illinois, Refunding RB, American Airlines Inc. Project, 5.50%, 12/01/30	2,860	2,187,071
Illinois Finance Authority, RB: Navistar International, Recovery Zone, 6.50%, 10/15/40	650	646,782
Roosevelt University Project, 6.50%, 4/01/44	1,700	1,683,816
Rush University Medical Center Obligation Group, Series A, 7.25%, 11/01/30	2,000	2,124,880
Illinois Finance Authority, Refunding RB: CAB, Clare Water Tower, Series B, 0.04%, 5/15/50 (a)	615	7,626
Clare Water Tower, Series A-7, 6.13%, 5/15/41	1,435	821,394

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Friendship Village of Schaumburg, 7.25%, 2/15/45	1,630	1,521,654
Primary Health Care Centers Program, 6.60%, 7/01/24	490	411,928
Metropolitan Pier & Exposition Authority, Refunding RB, CAB, McCormick Place Expansion Project, Series B (AGM), 6.25%, 6/15/46 (a)	4,015	350,951
Railsplitter Tobacco Settlement Authority, RB: 5.50%, 6/01/23	570	539,659
6.00%, 6/01/28	485	462,855
Village of Lincolnshire Illinois, Special Tax Bonds, Sedgebrook Project, 6.25%, 3/01/34	755	620,187
Village of Wheeling Illinois, Tax Allocation Bonds, North Milwaukee/Lake-Cook TIF Project, 6.00%, 1/01/25	640	562,413
		11,941,216
<b>Indiana 0.5%</b>		
Vigo County Hospital Authority Indiana, RB, Union Hospital Inc. (b): 5.70%, 9/01/37	440	361,306

## Schedule of Investments (continued)

**BlackRock Apex Municipal Fund, Inc. (APX)**  
(Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
<b>Indiana (concluded)</b>		
Vigo County Hospital Authority Indiana, RB, Union Hospital Inc. (b) (concluded): 5.75%, 9/01/42	\$ 545	\$ 444,666
		805,972
<b>Kentucky 0.3%</b>		
Kentucky Economic Development Finance Authority, Refunding RB, Owensboro Medical Health System, Series A, 6.38%, 6/01/40	645	605,629
<b>Louisiana 1.1%</b>		
Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Projects, 6.75%, 11/01/32	2,000	2,015,000
<b>Maryland 3.2%</b>		
Maryland EDC, RB, Transportation Facilities Project, Series A, 5.75%, 6/01/35	1,470	1,339,332
Maryland EDC, Refunding RB, CNX Marine Terminals, Inc., 5.75%, 9/01/25	1,675	1,559,157
Maryland Health & Higher Educational Facilities Authority, RB, Washington Christian Academy, 5.50%, 7/01/38 (d)(e)	410	163,996
Maryland Health & Higher Educational Facilities Authority, Refunding RB, Doctor s Community Hospital, 5.75%, 7/01/38	1,265	1,063,890
Maryland State Energy Financing Administration, RB, Cogeneration, AES Warrior Run, AMT, 7.40%, 9/01/19	1,500	1,495,635
		5,622,010
<b>Massachusetts 1.8%</b>		
Massachusetts Development Finance Agency, RB: First Mortgage, Overlook Communities, Series A, 6.25%, 7/01/12 (f)	1,845	2,014,518

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Foxborough Regional Charter School, Series A, 7.00%, 7/01/42	415	417,237
Massachusetts Development Finance Agency, Refunding RB, Eastern Nazarene College, 5.63%, 4/01/19	40	38,244
Massachusetts Health & Educational Facilities Authority, RB, Jordan Hospital, Series E, 6.75%, 10/01/33	850	768,536
		3,238,535
<b>Michigan 2.7%</b>		
Advanced Technology Academy, RB, 6.00%, 11/01/37	625	508,806
County of Wayne Michigan, GO, Building Improvement, Series A, 6.75%, 11/01/39	360	360,666
Monroe County Hospital Finance Authority, Refunding RB, Mercy Memorial Hospital Corp. Obligation, 5.50%, 6/01/35	1,260	984,514
	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>Michigan (concluded)</b>		
Royal Oak Hospital Finance Authority Michigan, Refunding RB, William Beaumont Hospital, 8.25%, 9/01/39	\$ 2,575	\$ 2,867,288
		4,721,274
<b>Missouri 0.5%</b>		
Kirkwood IDA Missouri, RB, Aberdeen Heights, Series A, 8.25%, 5/15/39	945	951,492
<b>Multi-State 0.3%</b>		
MuniMae TE Bond Subsidiary LLC, 7.50%, 6/30/49 (b)(g)(h)	643	597,967
<b>Nevada 0.2%</b>		
County of Clark Nevada, Special Assessment Bonds, Special Improvement District No. 142, Local Improvement, 6.38%, 8/01/23	365	328,781
<b>New Hampshire 0.4%</b>		
New Hampshire Health & Education Facilities Authority, RB, Catholic Medical Center, 5.00%, 7/01/36	835	661,921
<b>New Jersey 5.4%</b>		
New Jersey EDA, RB, Continental Airlines Inc. Project, AMT: 6.63%, 9/15/12	3,050	3,067,568
6.25%, 9/15/29	1,000	905,190
New Jersey EDA, Refunding RB, Newark Airport Marriott Hotel, 7.00%,	1,500	1,491,420

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10/01/14		
New Jersey Educational Facilities Authority, Refunding RB, University of Medicine & Dentistry, Series B:		
7.13%, 12/01/23	670	745,864
7.50%, 12/01/32	1,065	1,152,692
New Jersey Health Care Facilities Financing Authority, RB, Pascack Valley Hospital Association, 6.63%, 7/01/36 (d)(e)	1,870	19
New Jersey Health Care Facilities Financing Authority, Refunding RB, St. Joseph's Healthcare System, 6.63%, 7/01/38	1,680	1,647,643
New Jersey Transportation Trust Fund Authority, RB, CAB, Transportation System, Series C (AMBAC), 5.05%, 12/15/35 (a)	2,760	507,978
		9,518,374

**New York 9.2%**

Brooklyn Arena Local Development Corp., RB, Barclays Center Project, 6.38%, 7/15/43	685	666,779
Chautauqua County Industrial Development Agency, RB, NRG Dunkirk Power Project, 5.88%, 4/01/42	1,710	1,611,162
Dutchess County Industrial Development Agency New York, RB, St. Francis Hospital, Series B, 7.50%, 3/01/29	1,000	942,540
Metropolitan Transportation Authority, RB, Series 2008C, 6.50%, 11/15/28	2,000	2,187,340

BLACKROCK APEX MUNICIPAL FUND, INC.

JANUARY 31, 2011

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## Schedule of Investments (continued)

**BlackRock Apex Municipal Fund, Inc. (APX)**  
(Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
<b>New York (concluded)</b>		
New York City Industrial Development Agency, RB:		
American Airlines Inc., JFK International Airport, AMT, 8.00%, 8/01/28 (h)	\$ 720	\$ 757,339
British Airways Plc Project, AMT, 7.63%, 12/01/32	1,730	1,733,425
Series C, 6.80%, 6/01/28	350	359,979
Special Needs Facilities Pooled Program, Series C-1, 6.50%, 7/01/24	610	551,458
New York City Municipal Water Finance Authority, RB, Second General Resolution, Series EE, 5.50%, 6/15/43	3,100	3,139,835
New York Liberty Development Corp., Refunding RB, Second Priority, Bank of America Tower at One Bryant Park Project, 6.38%, 7/15/49	520	522,616
New York State Dormitory Authority, RB: North Shore-Long Island Jewish Health System, Series A, 5.50%, 5/01/37	1,000	950,670
NYU Hospital Center, Series A, 6.00%, 7/01/40	910	887,860
Port Authority of New York & New Jersey, RB, JFK International Air Terminal: 6.00%, 12/01/36	545	522,748
6.00%, 12/01/42	530	500,251
Yonkers Industrial Development Agency New York, RB, Sarah Lawrence College Project, Series A, 6.00%, 6/01/41	850	835,924
		16,169,926
<b>North Carolina 1.9%</b>		
North Carolina Capital Facilities Finance Agency, RB, Duke Energy Carolinas, Series B, 4.38%, 10/01/31	680	606,247
North Carolina Capital Facilities Finance Agency, Refunding RB, Duke Energy Carolinas, Series B, 4.63%, 11/01/40	680	600,073
North Carolina Medical Care Commission, Refunding RB, First Mortgage, Deerfield, Series A, 6.13%, 11/01/38	2,230	2,087,659

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		3,293,979
<b>Ohio 1.5%</b>		
Buckeye Tobacco Settlement Financing Authority, RB, Asset-Backed, Senior Series A-2, 5.13%, 6/01/24	1,105	830,220
State of Ohio, RB, Ford Motor Co. Project, AMT, 5.75%, 4/01/35	1,990	1,792,393
		2,622,613
<b>Pennsylvania 6.8%</b>		
Allegheny County Hospital Development Authority, Refunding RB, Health System, West Penn, Series A, 5.38%, 11/15/40	2,305	1,531,811
Bucks County IDA, RB, Ann s Choice Inc. Facility, Series A, 6.13%, 1/01/25	1,160	1,099,147
	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>Pennsylvania (concluded)</b>		
Cumberland County Municipal Authority, RB, Diakon Lutheran, 6.38%, 1/01/39	\$ 2,510	\$ 2,428,902
Lancaster County Hospital Authority, RB, Brethren Village Project, Series A: 6.25%, 7/01/26	475	452,423
6.50%, 7/01/40	675	601,796
Montgomery County IDA Pennsylvania, MRB, Whitemarsh Continuing Care, 6.25%, 2/01/35	1,700	1,409,674
Philadelphia Authority for Industrial Development, RB, AMT: Commercial Development, 7.75%, 12/01/17	3,000	3,001,380
Subordinate, Air Cargo, Series A, 7.50%, 1/01/25	1,600	1,494,592
		12,019,725
<b>Puerto Rico 0.7%</b>		
Puerto Rico Sales Tax Financing Corp., RB, First Sub-Series A, 6.50%, 8/01/44	1,000	1,034,930
Puerto Rico Sales Tax Financing Corp., Refunding RB, CAB, First Sub-Series C, 6.52%, 8/01/38 (a)	1,815	287,042
		1,321,972
<b>Rhode Island 0.8%</b>		
Central Falls Detention Facility Corp., Refunding RB, 7.25%, 7/15/35	1,750	1,400,298
<b>South Carolina 0.4%</b>		

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Connector 2000 Association Inc., RB, CAB, Senior Series B, 12.48%, 1/01/14 (a)(d)(e)	1,075	123,399
South Carolina Jobs-EDA, Refunding RB, Palmetto Health, 5.50%, 8/01/26	670	634,175
		757,574
<b>Tennessee 0.1%</b>		
Shelby County Health Educational & Housing Facilities Board, RB, Village at Germantown, 6.25%, 12/01/34	245	196,252
<b>Texas 11.6%</b>		
Bexar County Health Facilities Development Corp., RB, Army Retirement Residence Project, 6.20%, 7/01/45	2,055	1,925,186
Brazos River Authority, Refunding RB, Texas Utility Co., Series, AMT, 7.70%, 4/01/33	2,530	879,732
Central Texas Regional Mobility Authority, RB: CAB, 7.48%, 1/01/28 (a)	1,000	301,240
CAB, 7.78%, 1/01/33 (a)	2,150	430,000
CAB, 7.79%, 1/01/34 (a)	4,000	715,960
Senior Lien, 5.75%, 1/01/25	450	433,710
City of Houston Texas, RB, Special Facilities, Continental Airlines, Series E, AMT, 6.75%, 7/01/21	1,865	1,817,368
Danbury Higher Education Authority Inc., RB, A.W. Brown Fellowship Charter, Series A (ACA), 5.13%, 8/15/36	1,000	1,136,640

## Schedule of Investments (continued)

BlackRock Apex Municipal Fund, Inc. (APX)  
(Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
<b>Texas (concluded)</b>		
Harris County Health Facilities Development Corp., Refunding RB, Memorial Hermann Healthcare System, Series B, 7.25%, 12/01/35	\$ 1,110	\$ 1,191,996
Love Field Airport Modernization Corp., RB, Southwest Airlines Co. Project, 5.25%, 11/01/40	1,625	1,428,261
Matagorda County Navigation District No. 1 Texas, Refunding RB, Central Power & Light Co. Project, Series A, 6.30%, 11/01/29	850	859,647
North Texas Tollway Authority, RB, Toll, Second Tier, Series F, 6.13%, 1/01/31	1,650	1,652,310
Tarrant County Cultural Education Facilities Finance Corp., RB, Series A: CC Young Memorial Home, 8.00%, 2/15/38	710	707,622
Senior Living Center Project, 8.25%, 11/15/44	1,710	1,619,096
Texas Private Activity Bond Surface Transportation Corp., RB, Senior Lien: LBJ Infrastructure Group LLC, LBJ Freeway Managed Lanes Project, 7.00%, 6/30/40	1,815	1,827,269
NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	1,605	1,599,880
Texas State Public Finance Authority, Refunding ERB, KIPP Inc., Series A (ACA), 5.00%, 2/15/28	2,250	1,959,750
		<u>20,485,667</u>
<b>U.S. Virgin Islands 1.2%</b>		
United States Virgin Islands, Refunding RB, Senior Secured, Hovensa Coker Project, AMT, 6.50%, 7/01/21	2,100	2,084,670
<b>Utah 1.3%</b>		
County of Carbon Utah, Refunding RB, Laidlaw Environmental, Series A, AMT, 7.45%, 7/01/17	2,240	2,243,987
<b>Vermont 0.3%</b>		
	650	574,022

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Vermont Economic Development  
 Authority, Refunding MRB, Wake  
 Robin Corp. Project, Series A (ACA),  
 6.30%, 3/01/33

**Virginia 1.2%**

Dulles Town Center Community  
 Development Authority, Special  
 Assessment Bonds, Dulles Town  
 Center Project, 6.25%, 3/01/26

2,330 2,174,775

**Wisconsin 2.1%**

Wisconsin Health & Educational  
 Facilities Authority, RB:  
 New Castle Place Project, Series A,  
 7.00%, 12/01/31  
 Wheaton Franciscan Healthcare,  
 5.25%, 8/15/34

1,320 1,043,447  
 2,540 2,138,375

**Municipal Bonds**

**Par  
 (000)**

**Value**

**Wisconsin (concluded)**

Wisconsin Health & Educational  
 Facilities Authority, Refunding RB, St.  
 John's Communities Inc., Series A:  
 7.25%, 9/15/29  
 7.63%, 9/15/39

\$ 175 \$ 172,956  
 350 349,832

3,704,610

**Wyoming 1.3%**

County of Sweetwater Wyoming,  
 Refunding RB, FMC Corp. Project,  
 AMT, 5.60%, 12/01/35

2,500 2,356,150

**Total Municipal Bonds 95.2%**

167,916,381

**Municipal Bonds Transferred to Tender  
 Option Bond Trusts (i)**

**District of Columbia 1.7%**

District of Columbia Water & Sewer  
 Authority, RB, Series A, 6.00%,  
 10/01/35

2,730 2,951,031

**Florida 3.2%**

County of Miami-Dade Florida, RB,  
 Miami International Airport, Series A,  
 AMT (AGC), 5.25%, 10/01/33

6,130 5,634,941

**Virginia 3.2%**

5,710 5,711,884

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Virginia HDA, RB, Sub-Series H-1  
(NPFGC), 5.38%, 7/01/36

<b>Total Municipal Bonds Transferred to Tender Option Bond Trusts</b> 8.1%	14,297,856
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<b>Total Long-Term Investments</b> (Cost \$191,252,877) 103.3%	182,214,237
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Short-Term Securities	Shares	
FFI Institutional Tax-Exempt Fund, 0.15% (j)(k)	1,348,776	1,348,776
<b>Total Short-Term Securities</b> (Cost \$1,348,776) 0.8%		1,348,776
<b>Total Investments</b> (Cost \$192,601,653*) 104.1%		183,563,013
<b>Other Assets Less Liabilities</b> 0.0%		75,404
<b>Liability for Trust Certificates, Including Interest Expense and Fees Payable</b> (4.1%)		(7,291,553)
<b>Net Assets</b> 100.0%		\$ 176,346,864

BLACKROCK APEX MUNICIPAL FUND, INC.

JANUARY 31, 2011

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## Schedule of Investments (concluded)

## BlackRock Apex Municipal Fund, Inc. (APX)

\* The cost and unrealized appreciation (depreciation) of investments as of January 31, 2011, as computed for federal income tax purposes, were as follows:

Aggregate cost	\$ 185,330,999
Gross unrealized appreciation	\$ 6,212,619
Gross unrealized depreciation	(15,266,051)
Net unrealized depreciation	\$ (9,053,432)

- (a) Represents a zero-coupon bond. Rate shown reflects the current yield as of report date.
- (b) Security exempt from registration under Rule 144A of the Securities Act of 1933. These securities may be resold in transactions exempt from registration to qualified institutional investors.
- (c) When-issued security. Unsettled when-issued transactions were as follows:

Counterparty	Value	Unrealized Appreciation
Goldman Sachs & Co.	\$ 1,822,575	\$ 22,705

- (d) Issuer filed for bankruptcy and/or is in default of interest payments.
- (e) Non-income producing security.
- (f) US government securities, held in escrow, are used to pay interest on this security as well as to retire the bond in full at the date indicated, typically at a premium to par.
- (g) Security represents a beneficial interest in a trust. The collateral deposited into the trust is federally tax-exempt revenue bonds issued by various state or local governments, or their respective agencies or authorities. The security is subject to remarketing prior to its stated maturity.
- (h) Variable rate security. Rate shown is as of report date.
- (i) Securities represent bonds transferred to a tender option bond trust in exchange for which the Fund acquired residual interest certificates. These securities serve as collateral in a financing transaction.
- (j) Investments in companies considered to be an affiliate of the Fund during the period, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Affiliate	Shares Held at April 30, 2010	Net Activity	Shares Held at January 31, 2011	Income
FFI Institutional Tax-Exempt Fund	648,958	699,818	1,348,776	\$ 2,244

(k) Represents the current yield as of report date.

Fair Value Measurements - Various inputs are used in determining the fair value of investments, which are as follows:

Level 1 price quotations in active markets/exchanges for identical assets and liabilities

Level 2 other observable inputs (including, but not limited to: quoted prices for similar assets or liabilities in markets that are active, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the assets or liabilities (such as interest rates, yield curves, volatilities, prepayment speeds, loss severities, credit risks and default rates) or other market-corroborated inputs)

Level 3 unobservable inputs based on the best information available in the circumstances, to the extent observable inputs are not available (including the Fund's own assumptions used in determining the fair value of investments)

The inputs or methodologies used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. For information about the Fund's policy regarding valuation of investments and other significant accounting policies, please refer to the Fund's most recent financial statements as contained in its semi-annual report.

The following table summarizes the inputs used as of January 31, 2011 in determining the fair valuation of the Fund's investments:

Valuation Inputs	Level 1	Level 2	Level 3	Total
<b>Assets:</b>				
Investments in Securities:				
Long-Term Investments <sup>1</sup>		\$ 182,214,237		\$ 182,214,237
Short-Term Securities	\$ 1,348,776			1,348,776
<b>Total</b>	\$ 1,348,776	\$ 182,214,237		\$ 183,563,013

<sup>1</sup> See above Schedule of Investments for values in each state or political subdivision.

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Item 2 Controls and Procedures

2(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 )) are effective as of a date within 90 days of the filing of this report based on the evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act and Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended.

2(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) 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

Certifications Attached hereto

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.

BlackRock Apex Municipal Fund, Inc.

By: /s/ John M. Perlowski  
John M. Perlowski  
Chief Executive Officer (principal executive officer) of  
BlackRock Apex Municipal Fund, Inc.

Date: March 25, 2011

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: /s/ John M. Perlowski  
John M. Perlowski  
Chief Executive Officer (principal executive officer) of  
BlackRock Apex Municipal Fund, Inc.

Date: March 25, 2011

By: /s/ Neal J. Andrews  
Neal J. Andrews  
Chief Financial Officer (principal financial officer) of  
BlackRock Apex Municipal Fund, Inc.

Date: March 25, 2011