BLACKROCK APEX MUNICIPAL FUND INC Form N-Q May 29, 2007

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 811-5227

Name of Fund: BlackRock Apex Municipal Fund, Inc.

Fund Address: P.O. Box 9011 Princeton, NJ 08543-9011

Name and address of agent for service: Robert C. Doll, Jr., Chief Executive Officer, BlackRock Apex Municipal Fund, Inc., 800 Scudders Mill Road, Plainsboro, NJ 08536. Mailing address: P.O. Box 9011, Princeton, NJ 08543-9011

Registrant's telephone number, including area code: (609) 282-2800

Date of fiscal year end: 06/30/2006

Date of reporting period: 01/01/07 - 03/31/07

Item 1 - Schedule of Investments

BlackRock Apex Municipal Fund, Inc. Schedule of Investments as of March 31, 2007

State	Face Amount	Municipal Bonds
Alabama - 1.1%	\$ 1,000	Brewton, Alabama, IDB, PCR, Refunding (Container Corporati America-Jefferson Smurfit Corp. Project), 8% due 4/01/2009
	1,255	Tuscaloosa, Alabama, Special Care Facilities Financing Aut Care Facility Revenue Bonds (Capstone Village, Inc. Projec 5.875% due 8/01/2036
Alaska - 1.1%	2,000	
Arizona - 3.4%	900	Maricopa County, Arizona, IDA, Education Revenue Bonds (Ar Schools Project 1), Series A, 6.625% due 7/01/2020
	55	Maricopa County, Arizona, IDA, M/F Housing Revenue Bonds (Project), Series A, 5.875% due 11/01/2008
	20	Maricopa County, Arizona, IDA, M/F Housing Revenue Bonds (Project), Series A, 6% due 11/01/2010
	1,020	Maricopa County, Arizona, IDA, M/F Housing Revenue Bonds (Project), Series A, 6.75% due 5/01/2031
	2,950	Phoenix, Arizona, IDA, Airport Facility, Revenue Refunding

	1,000 500	West Airlines Inc. Project), AMT, 6.30% due 4/01/2023 Pima County, Arizona, IDA, Education Revenue Bonds (Arizon Project), Series E, 7.25% due 7/01/2031 Yavapai County, Arizona, IDA, Hospital Facility Revenue Bo Regional Medical Center), Series A, 6% due 8/01/2033
California - 2.6%	1,800	California State, GO, 5% due 2/01/2014 (a)
	1,300	California State, Various Purpose, GO, 5.25% due 11/01/202
	1,000	Fontana, California, Special Tax, Refunding (Community Fac Number 22 - Sierra), 6% due 9/01/2034
	865	Golden State Tobacco Securitization Corporation, Californi Revenue Refunding Bonds Series A-1, 5.125% due 6/01/2047
 Colorado - 4.2%	450	Colorado Health Facilities Authority, Revenue Refunding Bo Living Communities Project), Series A, 5.75% due 1/01/2026
	2,800	Elk Valley, Colorado, Public Improvement Revenue Bonds (Pu Fee), Series A, 7.30% due 9/01/2022
	1,235	North Range Metropolitan District Number 1, Colorado, GO, due 12/15/2011 (a)

Portfolio Abbreviations

To simplify the listings of BlackRock Apex Municipal Fund, Inc.'s portfolio holdings in the Schedule of Investments, we have abbreviated the names of many of the securities according to the list at right.

AMT	Alternative Minimum Tax (subject to)
EDA	Economic Development Authority
GO	General Obligation Bonds
IDA	Industrial Development Authority
IDB	Industrial Development Board
IDR	Industrial Development Revenue Bonds
M/F	Multi-Family
PCR	Pollution Control Revenue Bonds
VRDN	Variable Rate Demand Notes

BlackRock Apex Municipal Fund, Inc. Schedule of Investments as of March 31, 2007 (i

State	Face Amount	Municipal Bonds
	\$ 2,000	Plaza Metropolitan District Number 1, Colorado, Tax Alloca (Public Improvement Fees), 8% due 12/01/2025
	500	Plaza Metropolitan District Number 1, Colorado, Tax Alloca (Public Improvement Fees), 8.125% due 12/01/2025
	830	Southlands, Colorado, Medical District, GO (Metropolitan D 7.125% due 12/01/2034
Connecticut - 0.3%	490	Connecticut State Development Authority, Airport Facility (Learjet Inc. Project), AMT, 7.95% due 4/01/2026
 Florida - 8.8%	800	Capital Projects Finance Authority, Florida, Continuing Ca Revenue Bonds (Glenridge on Palmer Ranch), Series A, 8% du
	840	Halifax Hospital Medical Center, Florida, Hospital Revenue

		Series A, 5% due 6/01/2038
	850	Highlands County, Florida, Health Facilities Authority, Ho
	0 500	(Adventist Health System), Series C, 5.25% due 11/15/2036
	2,500	Hillsborough County, Florida, IDA, Exempt Facilities Reven
		Gypsum Company), AMT, Series A, 7.125% due 4/01/2030
	755	Lakewood Ranch, Florida, Community Development District Nu
	1 010	Assessment Revenue Refunding Bonds, Series A, 6.70% due 5/
	1,810	Lee County, Florida IDA, IDR (Lee Charter Foundation), Ser due 6/15/2037
	1,500	Midtown Miami, Florida, Community Development District, Sp Revenue Bonds, Series A, 6% due 5/01/2024
	1,350	Midtown Miami, Florida, Community Development District, Sp
	±,500	Revenue Bonds, Series A, 6.25% due 5/01/2037
	1,555	Orlando, Florida, Urban Community Development District, Ca
		Special Assessment Bonds, Series A, 6.95% due 5/01/2033
	2,140	Santa Rosa Bay Bridge Authority, Florida, Revenue Bonds, 6
	2,515	Tampa Palms, Florida, Open Space and Transportation Commun
		District Revenue Bonds, Capital Improvement (Richmond Plac due 5/01/2018
 Georgia – 4.2%	2,000	Atlanta, Georgia, Tax Allocation Bonds (Atlantic Station P due 12/01/2024
	410	Atlanta, Georgia, Tax Allocation Bonds (Eastside Project), due 1/01/2020
	495	Atlanta, Georgia, Tax Allocation Bonds (Princeton Lakes Pr due 1/01/2031
	830	Brunswick and Glynn County, Georgia, Development Authority Revenue Bonds (Coastal Community Retirement Corporation Pr
		7.125% due 1/01/2025
	1,185	Brunswick and Glynn County, Georgia, Development Authority
		Revenue Bonds (Coastal Community Retirement Corporation Pr 7.25% due 1/01/2035
	1,580	Fulton County, Georgia, Development Authority, PCR (Genera Corporation), Refunding, VRDN, 7.50% due 4/01/2010 (e)

BlackRock Apex Municipal Fund, Inc. Schedule of Investments as of March 31, 2007

State	Face Amount	Municipal Bonds
	\$ 690 830	Gainesville, Georgia, Redevelopment Authority, Educational Refunding Bonds (Riverside Military Academy), 5.125% due 3 Savannah, Georgia, EDA, First Mortgage Revenue Bonds (Mars Series A, 7.40% due 1/01/2034
Idaho - 0.8%	1,470	Idaho Health Facilities Authority, Revenue Refunding Bonds Corporation), Series A, 7.75% due 11/15/2016
Illinois - 7.6%	1,845	Caseyville, Illinois, Senior Tax Increment Revenue Bonds (Project), 7% due 12/30/2022
	3,000	Chicago, Illinois, O'Hare International Airport, Special F Refunding Bonds (American Airlines Inc. Project), 8.20% du
	2,605	Illinois Development Finance Authority Revenue Bonds (Prim Centers Facilities Acquisition Program), 7.75% due 12/01/2
	2,050	Illinois State Finance Authority Revenue Bonds (Clare At W

	430	Series A, 6.125% due 5/15/2038 Illinois State Finance Authority Revenue Bonds (Landing At
		Project), Series A, 6% due 5/15/2037
	490	Illinois State Finance Authority Revenue Bonds (Primary He Program), 6.60% due 7/01/2024
	755	Lincolnshire, Illinois, Special Service Area Number 1, Spe (Sedgebrook Project), 6.25% due 3/01/2034
	2,400	Lombard, Illinois, Public Facilities Corporation, First Ti (Conference Center and Hotel), Series A-1, 7.125% due 1/01
	265	Naperville, Illinois, IDR (General Motors Corporation), Re 7.50% due 12/01/2012 (e)
	760	Village of Wheeling, Illinois, Revenue Bonds (North Milwau Increment Financing (TIF) Redevelopment Project), 6% due 1
 Indiana - 0.4%	820	Vanderburgh County, Indiana, Redevelopment Commission, Red Tax Allocation Bonds, 5.25% due 2/01/2031
 Iowa – 1.7%	2,720	Iowa Finance Authority, Health Care Facilities, Revenue Re Initiatives Project), 9.25% due 7/01/2011 (a)
Kansas - 0.6%	1,230	Wyandotte County, Kansas, Kansas City Unified Government R Bonds (General Motors Corporation Project), 6% due 6/01/20
Louisiana - 0.7%	1,300	Louisiana Public Facilities Authority, Hospital Revenue Bo Missionaries of Our Lady Health System, Inc.), Series A, 5
	840	Maine Finance Authority, Solid Waste Recycling Facilities Northern Paper Project-Bowater), AMT, 7.75% due 10/01/2022
 Maryland - 2.0%	385	Baltimore, Maryland, Convention Center Hotel Revenue Bonds 5.875% due 9/01/2039
	620	Howard County, Maryland, Retirement Community Revenue Refu (Vantage House Facility), Series B, 5.25% due 4/01/2037

BlackRock Apex Municipal Fund, Inc. Schedule of Investments as of March 31, 2007

State	Face Amount	Municipal Bonds
	\$ 1,500	Maryland State Energy Financing Administration, Limited Ob Bonds (Cogeneration-AES Warrior Run), AMT, 7.40% due 9/01/
	1,000	Maryland State Health and Higher Educational Facilities Au Bonds (King Farm Presbyterian Community), Series A, 5.25%
	410	Maryland State Health and Higher Educational Facilities Au Bonds (Washington Christian Academy), 5.50% due 7/01/2038
Massachusetts - 3.5%	1,845	Massachusetts State Development Finance Agency, First Mort (Overlook Communities Inc.), Series A, 6.25% due 7/01/2034
	1,245	Massachusetts State Development Finance Agency, Revenue Re (Eastern Nazarene College), 5.625% due 4/01/2019
	850	Massachusetts State Health and Educational Facilities Auth (Jordan Hospital), Series E, 6.75% due 10/01/2033
	1,245	Massachusetts State Health and Educational Facilities Auth Refunding Bonds (Bay Cove Human Services Issue), Series A,
	500	Massachusetts State Health and Educational Facilities Auth

	1,000	Refunding Bonds (Milton Hospital), Series, 5.50% due 7/01/ Massachusetts State Industrial Finance Agency Revenue Bond (Resource Control Composting), AMT, 9.25% due 6/01/2010
 Michigan - 1.3%	1,150 1,260	Macomb County, Michigan, Hospital Finance Authority, Hospi (Mount Clemens General Hospital), Series B, 5.875% due 11/ Monroe County, Michigan, Hospital Finance Authority, Hospi Refunding Bonds (Mercy Memorial Hospital Corporation), 5.5
Minnesota - 0.7%	1,230	Saint Paul, Minnesota, Port Authority, Hotel Facility, Rev (Radisson Kellogg Project), Series 2, 7.375% due 8/01/2008
Missouri - 1.2%	1,155 1,000	Fenton, Missouri, Tax Increment Revenue Refunding and Impr (Gravois Bluffs), 7% due 10/01/2011 (a) Kansas City, Missouri, IDA, First Mortgage Health Faciliti (Bishop Spencer Place), Series A, 6.50% due 1/01/2035
Nevada - 0.2%	430	Clark County, Nevada, Improvement District Number 142, Spe Bonds, 6.375% due 8/01/2023
New Hampshire - 1.6%	835 2,185	New Hampshire Health and Education Facilities Authority, H Bonds (Catholic Medical Center), 5% due 7/01/2036 New Hampshire State Business Finance Authority, Solid Wast Bonds (Waste Management Inc. Project), 5.20% due 5/01/2027
New Jersey - 13.1%	6,000 2,170	Camden County, New Jersey, Pollution Control Financing Aut Resource Recovery, Revenue Refunding Bonds, AMT, Series A, New Jersey EDA, Cigarette Tax Revenue Bonds, 5.50% due 6/1

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State	Face Amount	Municipal Bonds
	\$ 1,500	New Jersey EDA, IDR, Refunding (Newark Airport Marriott Ho due 10/01/2014
	1,000	New Jersey EDA, Retirement Community Revenue Bonds (Cedar Facility), Series A, 7.25% due 11/15/2011 (a)
	3,700	New Jersey EDA, Retirement Community Revenue Bonds (Seabro Series A, 8.125% due 11/15/2010 (a)
	3,050	New Jersey EDA, Special Facility Revenue Bonds (Continenta Project), AMT, 6.625% due 9/15/2012
	1,000	New Jersey EDA, Special Facility Revenue Bonds (Continenta Project), AMT, 6.25% due 9/15/2029
	1,870	New Jersey Health Care Facilities Financing Authority Reve Valley Hospital Association), 6.625% due 7/01/2036
	2,760	New Jersey State Transportation Trust Fund Authority, Tran Revenue Bonds, Series C, 5.05% due 12/15/2035 (b)(f)
	1,075	Tobacco Settlement Financing Corporation of New Jersey, As Bonds, 7% due 6/01/2013 (a)
	1,245	Tobacco Settlement Financing Corporation of New Jersey, As Bonds, 5.75% due 6/01/2032
	1,270	Tobacco Settlement Financing Corporation of New Jersey, Se due 6/01/2041

New Mexico - 2.6%	5,000	Farmington, New Mexico, PCR, Refunding (Tucson Electric Po Juan Project), Series A, 6.95% due 10/01/2020
New York - 4.1%	1,000	Dutchess County, New York, IDA, Civic Facility Revenue Bon Hospital), Series B, 7.50% due 3/01/2029
	1,890	Erie County, New York, IDA, Revenue Bonds (Orchard Park CC Series A, 6% due 11/15/2036
	350	New York City, New York, City IDA, Civic Facility Revenue 6.80% due 6/01/2028
	830	New York City, New York, City IDA, Civic Facility Revenue Facility Pooled Program), Series C-1, 6.50% due 7/01/2024
	1,730	New York City, New York, City IDA, Special Facility Revenu Airways Plc Project), AMT, 7.625% due 12/01/2032
	630	New York Liberty Development Corporation Revenue Bonds (Na Project), Series A, 6.125% due 2/15/2019
	1,180	Westchester County, New York, IDA, Continuing Care Retirem Revenue Bonds (Kendal on Hudson Project), Series A, 6.50%
North Carolina - 0.7%	250	North Carolina Medical Care Commission, Health Care Facili Revenue Refunding Bonds (Salemtowne Project), 5.10% due 10
	1,000	North Carolina Medical Care Commission, Retirement Facilit Revenue Bonds (Givens Estates Project), Series A, 6.50% du

BlackRock Apex Municipal Fund, Inc. Schedule of Investments as of March 31, 2007 (in Thousands)

State	Face Amount	Municipal Bonds
Pennsylvania - 7.1%	\$ 250	Allegheny County, Pennsylvania, IDA, Lease Revenue Refundi (Residential Resources Inc. Project), 5.125% due 9/01/2031
	1,160	Bucks County, Pennsylvania, IDA, Retirement Community Reve Choice Inc.), Series A, 6.125% due 1/01/2025
	1,750	Chester County, Pennsylvania, Health and Education Facilit Senior Living Revenue Refunding Bonds (Jenners Pond Inc. P due 7/01/2012 (a)
	600	Harrisburg, Pennsylvania, Authority, University Revenue Bo University of Science), Series B, 6% due 9/01/2036
	1,825	Montgomery County, Pennsylvania, Higher Education and Heal Bonds (Faulkeways at Gwynedd Project), 6.75% due 11/15/200
	1,700	Montgomery County, Pennsylvania, IDA, Revenue Bonds (White Care Project), 6.25% due 2/01/2035
	1,600	Philadelphia, Pennsylvania, Authority for IDR (Air Cargo), 7.50% due 1/01/2025
	4,460	Philadelphia, Pennsylvania, Authority for IDR, Commercial due 12/01/2017
Rhode Island - 1.0%	1,750	
South Carolina - 3.7%	1,100	Connector 2000 Association, Inc., South Carolina, Toll Roa
	1,075	Appreciation Revenue Bonds, Senior-Series B, 6.50% due 1/0 Connector 2000 Association, Inc., South Carolina, Toll Roa Appreciation Revenue Bonds, Senior-Series B, 7.969% due 1/
	5,715	South Carolina Housing Finance and Development Authority,

		Refunding Bonds, AMT, Series A-2, 5.15% due 7/01/2037 (b)
Tennessee - 3.1%	5,000	Knox County, Tennessee, Health, Educational and Housing Fa Hospital Facilities Revenue Refunding Bonds (Covenant Heal due 1/01/2037 (f)
	245	Shelby County, Tennessee, Health, Educational and Housing Revenue Bonds (Germantown Village), 6.25% due 12/01/2034
	1,800	Shelby County, Tennessee, Health, Educational and Housing Revenue Bonds (Germantown Village), Series A, 7.25% due 12
	2,980	Sullivan County, Tennessee, Health, Educational & Housing Hospital Revenue Bonds (Wellmont Health System Project), S due 9/01/2036
Texas - 7.0%	1,000	Austin, Texas, Convention Center Revenue Bonds (Convention First Tier, Series A, 6.70% due 1/01/2011 (a)
	2,530	Brazos River Authority, Texas, PCR, Refunding (Texas Utili Series A, 7.70% due 4/01/2033
	1,220	Brazos River Authority, Texas, Revenue Refunding Bonds (Re Project), Series B, 7.75% due 12/01/2018

BlackRock Apex Municipal Fund, Inc. Schedule of Investments as of March 31, 2007

State	Face Amount	Municipal Bonds
	\$ 2,275 655	Dallas-Fort Worth, Texas, International Airport Facilities Corporation Revenue Bonds (American Airlines, Inc.), AMT, HFDC of Central Texas, Inc., Retirement Facilities Revenue
	1,000	5.625% due 11/01/2026 Houston, Texas, Health Facilities Development Corporation, Revenue Bonds (Buckingham Senior Living Community), Series due 2/15/2034
	875	Kerrville, Texas, Health Facilities Development Corporatio Bonds (Sid Peterson Memorial Hospital Project), 5.375% due
	2,310	Matagorda County, Texas, Navigation District Number 1, Rev (Reliant Energy Inc.), Series C, 8% due 5/01/2029
	1,330	Port Corpus Christi, Texas, Individual Development Corpora Facilities Revenue Bonds (Citgo Petroleum Corporation Proj due 11/01/2031
Utah - 1.1%	2,240	Carbon County, Utah, Solid Waste Disposal, Revenue Refundi Environmental), AMT, Series A, 7.45% due 7/01/2017
Virginia - 1.8%	2,450 310	Dulles Town Center, Virginia, Community Development Author Assessment Tax (Dulles Town Center Project), 6.25% due 3/0 Farms of New Kent, Virginia, Community Development Author
	725	Assessment Bonds, Series C, 5.80% due 3/01/2036 Suffolk, Virginia, IDA, Retirement Facilities, Revenue Ref Prince Center), 5.15% due 9/01/2024
Washington - 0.6%	1,200	Washington State Housing Financing Commission, Nonprofit R (Skyline at First Hill Project), Series A, 5.625% due 1/01
West Virginia - 0.6%	1,125	Princeton, West Virginia, Hospital Revenue Refunding Bonds Association Inc. Project), 6.20% due 5/01/2013

Wisconsin - 0.7%	1,320	Wisconsin State Health and Educational Facilities Authorit Castle Place Project), Series A, 7% due 12/01/2031
 Puerto Rico - 1.7%	815	Puerto Rico Commonwealth Highway and Transportation Author Revenue Refunding Bonds, Series M, 5% due 7/01/2046
	2,500	Puerto Rico Commonwealth Infrastructure Financing Authorit Revenue Bonds, Series B, 5% due 7/01/2041
U.S. Virgin Islands - 1.2%	2,100	Virgin Islands Government Refinery Facilities, Revenue Ref (Hovensa Coker Project), AMT, 6.50% due 7/01/2021
		Total Municipal Bonds (Cost - \$183,557) - 98.5%

Held	Short-Term Securities
1,600	Merrill Lynch Institutional Tax-Exempt Fund, 3.51% (c)(d)
	Total Short-Term Securities (Cost - \$1,600) - 0.8%
	Total Investments (Cost - \$185,157*) - 99.3%
	Other Assets Less Liabilities - 0.7%
	Net Assets - 100.0%

BlackRock Apex Municipal Fund, Inc. Schedule of Investments as of March 31, 2007 (in Thousands)

* The cost and unrealized appreciation (depreciation) of investments as of March 31, 2007, as computed for federal income tax purposes, were as follows:

	==-	
Net unrealized appreciation	\$	13,336
Gross unrealized depreciation		(55)
Gross unrealized appreciation	\$	13 , 391
	===	
Aggregate cost	\$	185,138

- (a) Prerefunded.
- (b) AMBAC Insured.
- (c) Investments in companies considered to be an affiliate of the Fund, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, were as follows:

	Net	Dividend			
Affiliate	Activity	Income			
Merrill Lynch Institutional Tax-Exempt Fund	499	\$49			

- (d) Represents the current yield as of March 31, 2007.
- (e) Security may have a maturity of more than one year at time of issuance, but has variable rate and demand features that qualify it as a short-term security. The rate disclosed is that currently in effect. This rate changes periodically based upon prevailing market rates.
- (f) Represents a zero coupon bond; the interest rate shown reflects the effective yield at the time of purchase.

Item 2 - Controls and Procedures

- 2(a) The registrant's certifying officers have reasonably designed such disclosure controls and procedures to ensure material information relating to the registrant is made known to us by others particularly during the period in which this report is being prepared. The registrant's certifying officers have determined that the registrant's disclosure controls and procedures are effective based on our evaluation of these controls and procedures as of a date within 90 days prior to the filing date of this report.
- 2(b) As of September 29, 2006, with the conclusion of the combination of Merrill Lynch's asset management business with BlackRock, the registrant was migrated to BlackRock's trading and compliance monitoring systems, and various personnel changes occurred. In conjunction with these business improvements, there were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under Act (17 CFR 270.30a-3(d)) that occurred during the last fiscal quarter that has materially affected, or is reasonably likely to 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/ Robert C. Doll, Jr. Robert C. Doll, Jr. Chief Executive Officer BlackRock Apex Municipal Fund, Inc.

Date: May 21, 2007

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/ Robert C. Doll, Jr.

Robert C. Doll, Jr. Chief Executive Officer BlackRock Apex Municipal Fund, Inc. Date: May 21, 2007

By: /s/ Donald C. Burke ------Donald C. Burke Chief Financial Officer BlackRock Apex Municipal Fund, Inc.

Date: May 21, 2007