

BLACKROCK APEX MUNICIPAL FUND INC  
Form N-Q  
September 28, 2010  
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: Anne F. Ackerley, 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: 07/31/2010

Item 1 Schedule of Investments

---

Schedule of Investments July 31, 2010 (Unaudited)

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

| Municipal Bonds  | Par<br>(000) | Value            |
|--|--------------|------------------|
| <b>Alabama 0.4%</b>  |              |                  |
| County of Jefferson Alabama, RB,<br>Series A:  |              |                  |
| 5.25%, 1/01/13   | \$ 435       | \$ 417,617       |
| 5.25%, 1/01/17   | 365          | 331,957          |
|  |              | <u>749,574</u>   |
| <b>Alaska 1.0%</b>   |              |                  |
| Alaska Industrial Development & Export<br>Authority, RB, Williams Lynxs Alaska<br>Cargoport, AMT, 8.00%, 5/01/23 |              |                  |
|  | 2,000        | 1,943,020        |
| <b>Arizona 3.7%</b>  |              |                  |
| Maricopa County IDA Arizona, RB,<br>Series A:  |              |                  |
| Arizona Charter Schools Project,<br>6.63%, 7/01/20   | 900          | 698,292          |
| Sun King Apartments Project,<br>6.00%, 11/01/10  | 5            | 4,983            |
| Phoenix IDA Arizona, Refunding RB,<br>America West Airlines Inc. Project,<br>AMT, 6.30%, 4/01/23                 | 2,950        | 2,351,799        |
| Pima County IDA, RB, Arizona Charter<br>Schools Project, Series E, 7.25%,<br>7/01/31                             | 935          | 939,638          |
| Pima County IDA, Refunding IDRFB,<br>Tucson Electric Power, 5.75%,<br>9/01/29                                    | 460          | 469,922          |
| Salt Verde Financial Corp., RB, Senior,<br>5.00%, 12/01/32   | 1,425        | 1,294,741        |
| University Medical Center Corp. Arizona,<br>RB, 6.25%, 7/01/29   | 540          | 579,231          |
| Yavapai County IDA Arizona, RB,<br>Yavapai Regional Medical Center,<br>Series A, 6.00%, 8/01/33                  | 500          | 504,220          |
|  |              | <u>6,842,826</u> |
| <b>California 4.2%</b>   |              |                  |
| California Statewide Communities<br>Development Authority, Refunding<br>RB:                                      |              |                  |
| American Baptist Homes of the<br>West, 6.25%, 10/01/39   | 885          | 887,965          |
| Senior Living, Southern California,<br>7.00%, 11/15/29   | 400          | 432,864          |
|  | 1,440        | 1,569,816        |

Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

Senior Living, Southern California,  
7.25%, 11/15/41

| Municipal Bonds  | Par<br>(000) | Value            |
|--|--------------|------------------|
| <b>California (concluded)</b>  |              |                  |
| City of Fontana California, Special Tax<br>Bonds, Refunding, Community<br>Facilities District No. 22-Sierra,<br>Series H, 6.00%, 9/01/34 | \$ 1,000     | \$ 970,230       |
| State of California, GO:<br>4.50%, 10/01/36  | 1,755        | 1,564,196        |
| Various Purpose, 6.00%, 3/01/33  | 2,120        | 2,294,900        |
|  |              | <u>7,719,971</u> |
| <b>Colorado 2.9%</b>   |              |                  |
| Elk Valley Public Improvement Corp.,<br>RB, Public Improvement Fee, Series<br>A, 7.30%, 9/01/22  | 2,800        | 2,775,864        |
| Plaza Metropolitan District No. 1<br>Colorado, Tax Allocation Bonds, Tax<br>Increment:<br>Public Improvement Fee, 8.00%,<br>12/01/25     | 2,000        | 2,080,560        |
| Subordinate 8.13%, 12/01/25  | 500          | 457,670          |
|  |              | <u>5,314,094</u> |
| <b>Connecticut 2.3%</b>  |              |                  |
| Harbor Point Infrastructure<br>Improvement District, Tax Allocation<br>Bonds, Harbor Point Project, Series<br>A, 7.88%, 4/01/39          | 1,610        | 1,706,729        |
| Mohegan Tribe of Indians of<br>Connecticut, RB, Public Improvement,<br>Priority Distribution:<br>6.25%, 1/01/31                          | 1,785        | 1,467,680        |
| 5.25%, 1/01/33 (a)   | 1,500        | 1,078,575        |
|  |              | <u>4,252,984</u> |
| <b>District of Columbia 2.3%</b>   |              |                  |
| District of Columbia, RB, Methodist<br>Home District of Columbia, Series A:<br>7.38%, 1/01/30  | 680          | 692,335          |
| 7.50%, 1/01/39   | 1,110        | 1,131,123        |
| District of Columbia Tobacco<br>Settlement Financing Corp.,<br>Refunding RB, Asset-Backed, 6.50%,<br>5/15/33                             | 730          | 699,829          |
| Metropolitan Washington Airports<br>Authority, RB, CAB, 2nd Senior Lien,<br>Series B (AGC), 6.75%, 10/01/39 (b)                          | 9,770        | 1,650,544        |
|  |              | <u>4,173,831</u> |

**Portfolio Abbreviations**

---

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:

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

## Schedule of Investments (continued)

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

| Municipal Bonds   | Par<br>(000) | Value      |
|---|--------------|------------|
| <b>Florida 9.1%</b>   |              |            |
| County of Miami-Dade Florida,<br>Refunding RB, Miami International<br>Airport, Series A-1, 5.38%, 10/01/41  | \$ 360       | \$ 366,322 |
| Hillsborough County IDA, RB, AMT,<br>National Gypsum Co.:   |              |            |
| Series A, 7.13%, 4/01/30  | 2,500        | 2,361,200  |
| Series B, 7.13%, 4/01/30  | 1,560        | 1,473,389  |
| Jacksonville Economic Development<br>Commission, RB, Gerdau Ameristeel<br>US Inc., AMT, 5.30%, 5/01/37  | 900          | 735,309    |
| Jacksonville Economic Development<br>Commission, Refunding RB, Florida<br>Proton Therapy Institute, Series A,<br>6.00%, 9/01/17                     | 840          | 863,831    |
| Lee County IDA Florida, RB, Series A,<br>Lee Charter Foundation, 5.38%,<br>6/15/37  | 1,810        | 1,489,594  |
| Midtown Miami Community<br>Development District, Special<br>Assessment Bonds, Series A:   |              |            |
| 6.00%, 5/01/24  | 1,370        | 1,336,079  |
| 6.25%, 5/01/37  | 1,350        | 1,295,743  |
| Santa Rosa Bay Bridge Authority, RB,<br>6.25%, 7/01/28  | 2,140        | 1,169,617  |
| Sarasota County Health Facilities<br>Authority, Refunding RB, Village On<br>The Isle Project:   |              |            |
| 5.50%, 1/01/27  | 590          | 543,803    |
| 5.50%, 1/01/32  | 550          | 496,238    |
| Sumter Landing Community<br>Development District Florida, RB,<br>Sub-Series B, 5.70%, 10/01/38  | 1,615        | 1,311,073  |
| Tampa Palms Open Space &<br>Transportation Community<br>Development District, RB, Capital<br>Improvement, Richmond Place<br>Project, 7.50%, 5/01/18 | 1,905        | 1,905,533  |
| Tolomato Community Development<br>District, Special Assessment Bonds,<br>Special Assessment, 6.65%,<br>5/01/40                                      | 1,850        | 1,521,532  |
|   |              | 16,869,263 |
| <b>Georgia 4.0%</b>   |              |            |
| City of Atlanta Georgia, Tax Allocation<br>Bonds, Princeton Lakes Project,<br>5.50%, 1/01/31  | 395          | 353,126    |
|   | 1,375        | 1,484,395  |

Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

|   |                      |                  |
|---|----------------------|------------------|
| Clayton County Development Authority,<br>RB, Delta Air Lines Inc. Project,<br>Series A, 8.75%, 6/01/29                              |                      |                  |
| County of Clayton Georgia, Tax<br>Allocation Bonds, Ellenwood Project,<br>7.50%, 7/01/33  | 1,335                | 1,288,288        |
| DeKalb County Hospital Authority<br>Georgia, RB, DeKalb Medical Center<br>Inc. Project, 6.13%, 9/01/40                              | 1,805                | 1,820,415        |
| Gainesville & Hall County Development<br>Authority, Refunding RB, Acts<br>Retirement Life Community,<br>Series A-2, 6.63%, 11/15/39 | 645                  | 673,786          |
| Rockdale County Development<br>Authority, RB, Visy Paper Project,<br>Series A, AMT, 6.13%, 1/01/34                                  | 1,680                | 1,578,948        |
|   | <b>Par<br/>(000)</b> | <b>Value</b>     |
| <b>Municipal Bonds</b>  |                      |                  |
| <b>Georgia (concluded)</b>  |                      |                  |
| Thomasville Hospital Authority, RB,<br>Anticipation Certificates, John D.<br>Archbold, 5.38%, 11/01/40                              | \$ 155               | \$ 153,500       |
|   |                      | <u>7,352,458</u> |
| <b>Guam 1.5%</b>  |                      |                  |
| Guam Government Waterworks<br>Authority, Refunding RB, Water,<br>6.00%, 7/01/25   | 515                  | 526,943          |
| Territory of Guam, GO, Series A:<br>6.00%, 11/15/19   | 250                  | 259,620          |
| 6.75%, 11/15/29   | 440                  | 471,772          |
| 7.00%, 11/15/39   | 455                  | 492,046          |
| Territory of Guam, RB, Section 30,<br>Series A, 5.63%, 12/01/29   | 1,000                | 1,028,060        |
|   |                      | <u>2,778,441</u> |
| <b>Illinois 5.7%</b>  |                      |                  |
| City of Chicago Illinois, Refunding RB,<br>American Airlines Inc. Project,<br>5.50%, 12/01/30                                       | 2,860                | 2,120,862        |
| Illinois Finance Authority, RB:<br>Roosevelt University Project,<br>6.50%, 4/01/44  | 1,700                | 1,776,160        |
| Rush University Medical Center<br>Obligation Group, Series A, 7.25%,<br>11/01/30  | 2,000                | 2,287,940        |
| Illinois Finance Authority, Refunding<br>RB:<br>CAB, Clare Water Tower, Series B,<br>0.42%, 5/15/50 (b)                             | 615                  | 7,152            |
| Clare Water Tower, Series A-7,<br>6.13%, 5/15/41  | 1,435                | 933,324          |
| Friendship Village of Schaumburg,<br>7.25%, 2/15/45   | 1,630                | 1,638,818        |
| Primary Health Care Centers<br>Program, 6.60%, 7/01/24  | 490                  | 441,098          |
|   | 755                  | 664,823          |

Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

|   |     |         |
|---|-----|---------|
| Village of Lincolnshire Illinois, Special Tax Bonds, Sedgebrook Project, 6.25%, 3/01/34                   |     |         |
| Village of Wheeling Illinois, Tax Allocation Bonds, North Milwaukee/Lake-Cook TIF Project, 6.00%, 1/01/25 | 750 | 696,008 |

10,566,185

**Indiana 1.2%**

|   |     |         |
|---|-----|---------|
| Indiana Finance Authority, Refunding RB, Improvement, U.S. Steel Corp., 6.00%, 12/01/26   | 620 | 635,252 |
| Indiana Health & Educational Facilities Financing Authority, Refunding RB, Community Foundation Northwest Indiana, 5.50%, 3/01/37 | 700 | 692,251 |
| Vigo County Hospital Authority Indiana, RB, Union Hospital Inc. (a): 5.70%, 9/01/37   | 440 | 404,809 |
| 5.75%, 9/01/42  | 545 | 500,397 |

2,232,709

**Kentucky 0.4%**

|  |     |         |
|--|-----|---------|
| Kentucky Economic Development Finance Authority, Refunding RB, Owensboro Medical Health System, Series A, 6.38%, 6/01/40 | 645 | 671,948 |
|--|-----|---------|

## Schedule of Investments (continued)

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

| Municipal Bonds  | Par<br>(000) | Value            |
|--|--------------|------------------|
| <b>Louisiana 1.1%</b>  |              |                  |
| Louisiana Local Government<br>Environmental Facilities &<br>Community Development Authority,<br>RB, Westlake Chemical Corp.<br>Projects, 6.75%, 11/01/32 | \$ 2,000     | \$ 2,068,520     |
| <b>Maryland 1.8%</b>   |              |                  |
| Maryland EDC, RB, Transportation<br>Facilities Project, Series A, 5.75%,<br>6/01/35  | 420          | 429,459          |
| Maryland Health & Higher Educational<br>Facilities Authority, RB, Washington<br>Christian Academy, 5.50%, 7/01/38  | 410          | 176,300          |
| Maryland Health & Higher Educational<br>Facilities Authority, Refunding RB,<br>Doctor s Community Hospital, 5.75%,<br>7/01/38                            | 1,265        | 1,215,728        |
| Maryland State Energy Financing<br>Administration, RB, Cogeneration,<br>AES Warrior Run, AMT, 7.40%,<br>9/01/19  | 1,500        | 1,500,600        |
|  |              | <u>3,322,087</u> |
| <b>Massachusetts 1.4%</b>  |              |                  |
| Massachusetts Development Finance<br>Agency, RB, First Mortgage, Overlook<br>Communities, Series A, 6.25%,<br>7/01/34                                    | 1,845        | 1,611,349        |
| Massachusetts Development Finance<br>Agency, Refunding RB, Eastern<br>Nazarene College, 5.63%, 4/01/19   | 190          | 181,636          |
| Massachusetts Health & Educational<br>Facilities Authority, RB, Jordan<br>Hospital, Series E, 6.75%, 10/01/33  | 850          | 848,411          |
|  |              | <u>2,641,396</u> |
| <b>Michigan 2.7%</b>   |              |                  |
| Advanced Technology Academy, RB,<br>6.00%, 11/01/37  | 625          | 570,462          |
| County of Wayne Michigan, GO,<br>Building Improvement, Series A,<br>6.75%, 11/01/39  | 375          | 397,868          |
| Monroe County Hospital Finance<br>Authority, Refunding RB, Mercy<br>Memorial Hospital Corp. Obligation,<br>5.50%, 6/01/35                                | 1,260        | 1,055,552        |



Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

|  |       |                  |
|--|-------|------------------|
| Royal Oak Hospital Finance Authority<br>Michigan, Refunding RB, William<br>Beaumont Hospital, 8.25%, 9/01/39 | 2,575 | 3,074,756        |
|  |       | <u>5,098,638</u> |

**Missouri 1.0%**

|  |       |                  |
|--|-------|------------------|
| Kansas City IDA Missouri, RB, First<br>Mortgage, Bishop Spencer, Series A,<br>6.50%, 1/01/35 | 1,000 | 902,040          |
| Kirkwood IDA Missouri, RB, Aberdeen<br>Heights, Series A, 8.25%, 5/15/39                     | 945   | 967,075          |
|  |       | <u>1,869,115</u> |

**Multi-State 0.3%**

|   |     |         |
|---|-----|---------|
| MuniMae TE Bond Subsidiary LLC,<br>7.50%, 6/30/49 (a)(c)(d) | 663 | 614,575 |
|---|-----|---------|

| Municipal Bonds | Par<br>(000) | Value |
|-----------------|--------------|-------|
|-----------------|--------------|-------|

**Nevada 0.2%**

|  |        |            |
|--|--------|------------|
| County of Clark Nevada, Special<br>Assessment Bonds, Special<br>Improvement District No. 142, Local<br>Improvement, 6.38%, 8/01/23 | \$ 370 | \$ 355,337 |
|--|--------|------------|

**New Hampshire 0.4%**

|  |     |         |
|--|-----|---------|
| New Hampshire Health & Education<br>Facilities Authority, RB, Catholic<br>Medical Center, 5.00%, 7/01/36 | 835 | 720,956 |
|--|-----|---------|

**New Jersey 7.5%**

|   |       |           |
|---|-------|-----------|
| New Jersey EDA, RB, Continental<br>Airlines Inc. Project, AMT:<br>6.63%, 9/15/12  | 3,050 | 3,095,658 |
| 6.25%, 9/15/29  | 1,000 | 952,300   |
| New Jersey EDA, Refunding RB, Newark<br>Airport Marriott Hotel, 7.00%,<br>10/01/14  | 1,500 | 1,506,810 |
| New Jersey Educational Facilities<br>Authority, Refunding RB, University of<br>Medicine & Dentistry, Series B:<br>7.13%, 12/01/23 | 670   | 787,491   |
| 7.50%, 12/01/32   | 1,065 | 1,222,833 |
| New Jersey Health Care Facilities<br>Financing Authority, RB, Pascack<br>Valley Hospital Association, 6.63%,<br>7/01/36 (e)(f)    | 1,870 | 19        |
| New Jersey Health Care Facilities<br>Financing Authority, Refunding RB,<br>St. Joseph's Healthcare System,<br>6.63%, 7/01/38      | 1,680 | 1,744,243 |
| New Jersey Transportation Trust Fund<br>Authority, RB, CAB, Transportation<br>System, Series C (AMBAC), 5.05%,<br>12/15/35 (b)    | 2,760 | 618,820   |

Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

Tobacco Settlement Financing Corp.  
New Jersey, Refunding RB, Series 1A:

|                |       |           |
|----------------|-------|-----------|
| 4.50%, 6/01/23 | 2,965 | 2,714,843 |
| 5.00%, 6/01/41 | 2,080 | 1,364,168 |

---

14,007,185

**New York 6.4%**

|   |     |         |
|---|-----|---------|
| Brooklyn Arena Local Development Corp., RB, Barclays Center Project, 6.38%, 7/15/43 | 685 | 702,570 |
|---|-----|---------|

|  |       |           |
|--|-------|-----------|
| Chautauqua County Industrial Development Agency, RB, NRG Dunkirk Power Project, 5.88%, 4/01/42 | 1,710 | 1,754,169 |
|--|-------|-----------|

|  |       |         |
|--|-------|---------|
| Dutchess County Industrial Development Agency New York, RB, St. Francis Hospital, Series B, 7.50%, 3/01/29 | 1,000 | 997,520 |
|--|-------|---------|

|   |       |           |
|---|-------|-----------|
| Metropolitan Transportation Authority, RB, Series 2008-C, 6.50%, 11/15/28 | 2,000 | 2,334,380 |
|---|-------|-----------|

|  |       |           |
|--|-------|-----------|
| New York City Industrial Development Agency, RB:<br>American Airlines Inc., JFK International Airport, AMT, 8.00%, 8/01/28 (d) | 720   | 755,424   |
| British Airways Plc Project, AMT, 7.63%, 12/01/32  | 1,730 | 1,748,926 |
| Series C, 6.80%, 6/01/28   | 350   | 367,763   |

---

BLACKROCK APEX MUNICIPAL FUND, INC.

JULY 31, 2010

3

## Schedule of Investments (continued)

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

| Municipal Bonds   | Par<br>(000) | Value             |
|---|--------------|-------------------|
| <b>New York (concluded)</b>   |              |                   |
| New York City Industrial Development Agency, RB: (concluded) Special Needs Facilities Pooled Program, Series C-1, 6.50%, 7/01/24    | \$ 830       | \$ 793,688        |
| New York Liberty Development Corp., RB, National Sports Museum Project, Series A, 6.13%, 2/15/19 (e)(f)                             | 630          | 6                 |
| New York Liberty Development Corp., Refunding RB, Second Priority, Bank of America Tower at One Bryant Park Project, 6.38%, 7/15/49 | 520          | 543,442           |
| New York State Dormitory Authority, RB, North Shore-Long Island Jewish Health System, Series A, 5.50%, 5/01/37                      | 1,000        | 1,033,580         |
| Yonkers Industrial Development Agency New York, RB, Sarah Lawrence College Project, Series A, 6.00%, 6/01/41                        | 850          | 890,868           |
|   |              | <u>11,922,336</u> |
| <b>North Carolina 1.7%</b>  |              |                   |
| North Carolina Medical Care Commission, Refunding RB, First Mortgage, Deerfield, Series A, 6.13%, 11/01/38                          | 3,230        | 3,238,947         |
| <b>Ohio 1.6%</b>  |              |                   |
| Buckeye Tobacco Settlement Financing Authority, RB, Asset-Backed, Senior Series A-2:<br>5.13%, 6/01/24                              | 1,110        | 927,327           |
| 6.50%, 6/01/47  | 2,685        | 2,082,271         |
|   |              | <u>3,009,598</u>  |
| <b>Pennsylvania 7.2%</b>  |              |                   |
| Allegheny County Hospital Development Authority, Refunding RB, Health System, West Penn, Series A, 5.38%, 11/15/40                  | 2,885        | 2,141,593         |
| Bucks County IDA, RB, Ann's Choice Inc. Facility, Series A, 6.13%, 1/01/25  | 1,160        | 1,138,726         |
| Cumberland County Municipal Authority, RB, Diakon Lutheran, 6.38%, 1/01/39  | 2,510        | 2,576,364         |

Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

|  |       |           |
|--|-------|-----------|
| Lancaster County Hospital Authority,<br>RB, Brethren Village Project, Series A:<br>6.25%, 7/01/26  | 475   | 478,145   |
| 6.50%, 7/01/40   | 675   | 659,313   |
| Montgomery County IDA Pennsylvania,<br>MRB, Whitmarsh Continuing Care,<br>6.25%, 2/01/35   | 1,700 | 1,374,841 |
| Pennsylvania Higher Educational<br>Facilities Authority, Refunding RB,<br>Allegheny Delaware Valley Obligation,<br>Series A (NPFGC), 5.88%, 11/15/21 | 470   | 458,419   |
| Philadelphia Authority for Industrial<br>Development, RB, AMT:<br>Commercial Development, 7.75%,<br>12/01/17   | 3,000 | 3,003,540 |

| Municipal Bonds   | Par<br>(000) | Value        |
|---|--------------|--------------|
| <b>Pennsylvania (concluded)</b>   |              |              |
| Philadelphia Authority for Industrial<br>Development, RB, AMT: (concluded)<br>Subordinate, Air Cargo, Series A,<br>7.50%, 1/01/25 | \$ 1,600     | \$ 1,551,872 |
|   |              | 13,382,813   |

|  |       |           |
|--|-------|-----------|
| <b>Puerto Rico 1.1%</b>  |       |           |
| Puerto Rico Public Buildings Authority,<br>Refunding RB, Series Q, 5.63%,<br>7/01/39 | 985   | 1,007,468 |
| Puerto Rico Sales Tax Financing Corp.,<br>RB, First Sub-Series A, 6.50%, 8/01/44     | 1,000 | 1,108,440 |
|  |       | 2,115,908 |

|   |       |           |
|---|-------|-----------|
| <b>Rhode Island 0.8%</b>  |       |           |
| Central Falls Detention Facility Corp.,<br>Refunding RB, 7.25%, 7/15/35 | 1,750 | 1,507,187 |

|  |       |         |
|--|-------|---------|
| <b>South Carolina 0.4%</b>   |       |         |
| Connector 2000 Association Inc., RB,<br>CAB, Senior Series B, 10.61%,<br>1/01/14 (b)(e)(f) | 1,075 | 144,373 |
| South Carolina Jobs-EDA, Refunding<br>RB, Palmetto Health, 5.50%,<br>8/01/26               | 670   | 677,296 |
|  |       | 821,669 |

|   |     |         |
|---|-----|---------|
| <b>Tennessee 0.1%</b>   |     |         |
| Shelby County Health Educational &<br>Housing Facilities Board, RB, Village<br>at Germantown, 6.25%, 12/01/34 | 245 | 212,528 |

|   |       |           |
|---|-------|-----------|
| <b>Texas 11.1%</b>  |       |           |
| Bexar County Health Facilities<br>Development Corp., RB, Army | 2,055 | 2,089,873 |

Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

|   |       |           |
|---|-------|-----------|
| Retirement Residence Project,<br>6.20%, 7/01/45   |       |           |
| Brazos River Authority, Refunding RB,<br>Texas Utility Co., Series, AMT, 7.70%,<br>4/01/33  | 2,530 | 1,347,301 |
| Central Texas Regional Mobility<br>Authority, RB:   |       |           |
| CAB, 7.48%, 1/01/28 (b)   | 1,000 | 329,830   |
| CAB, 7.78%, 1/01/33 (b)   | 2,150 | 487,469   |
| CAB, 7.79%, 1/01/34 (b)   | 4,000 | 852,680   |
| Senior Lien, 5.75%, 1/01/25   | 450   | 457,830   |
| City of Houston Texas, RB, Special<br>Facilities, Continental Airlines,<br>Series E, AMT, 6.75%, 7/01/21                                | 1,865 | 1,855,619 |
| Danbury Higher Education Authority<br>Inc., RB, A.W. Brown Fellowship<br>Charter, Series A (ACA), 5.13%,<br>8/15/36                     | 1,000 | 1,168,690 |
| Harris County Health Facilities<br>Development Corp., Refunding RB,<br>Memorial Hermann Healthcare<br>System, Series B, 7.25%, 12/01/35 | 1,110 | 1,263,036 |
| Matagorda County Navigation District<br>No. 1 Texas, Refunding RB, Central<br>Power & Light Co. Project, Series A,<br>6.30%, 11/01/29   | 850   | 927,401   |
| North Texas Tollway Authority, RB, Toll,<br>2nd Tier, Series F, 6.13%, 1/01/31  | 1,650 | 1,758,834 |
| Tarrant County Cultural Education<br>Facilities Finance Corp., RB:<br>CC Young Memorial Home, Series<br>A, 8.00%, 2/15/38               | 710   | 743,697   |

## Schedule of Investments (continued)

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

| Municipal Bonds   | Par<br>(000) | Value             |
|---|--------------|-------------------|
| <b>Texas (concluded)</b>  |              |                   |
| Tarrant County Cultural Education<br>Facilities Finance Corp., RB:<br>(concluded)   |              |                   |
| Senior Living Center Project,<br>Series A, 8.25%, 11/15/44  | \$ 1,710     | \$ 1,714,036      |
| Texas Private Activity Bond Surface<br>Transportation Corp., RB, Senior<br>Lien:  |              |                   |
| LBJ Infrastructure, 7.00%, 6/30/40  | 1,815        | 1,888,235         |
| Note Mobility, 6.88%, 12/31/39  | 1,605        | 1,665,765         |
| Texas State Public Finance Authority,<br>Refunding ERB, KIPP Inc., Series A<br>(ACA), 5.00%, 2/15/28                              | 2,250        | 2,069,685         |
|   |              | <u>20,619,981</u> |
| <b>U.S. Virgin Islands 1.2%</b>   |              |                   |
| United States Virgin Islands, Refunding<br>RB, Senior Secured, Hovensa Coker<br>Project, AMT, 6.50%, 7/01/21                      | 2,100        | 2,132,382         |
| <b>Utah 1.2%</b>  |              |                   |
| County of Carbon Utah, Refunding RB,<br>Laidlaw Environmental, Series A,<br>AMT, 7.45%, 7/01/17                                   | 2,240        | 2,244,592         |
| <b>Virginia 2.6%</b>  |              |                   |
| Dulles Town Center Community<br>Development Authority, Special<br>Assessment Bonds, Dulles Town<br>Center Project, 6.25%, 3/01/26 | 2,330        | 2,240,225         |
| Tobacco Settlement Financing Corp.<br>Virginia, Refunding RB, Senior<br>Series B-1, 5.00%, 6/01/47                                | 4,040        | 2,615,375         |
|   |              | <u>4,855,600</u>  |
| <b>Wisconsin 2.3%</b>   |              |                   |
| Wisconsin Health & Educational<br>Facilities Authority, RB:<br>New Castle Place Project, Series A,<br>7.00%, 12/01/31             | 1,320        | 1,318,376         |
| Wheaton Franciscan Healthcare,<br>5.25%, 8/15/34  | 2,540        | 2,320,138         |
| Wisconsin Health & Educational<br>Facilities Authority, Refunding RB, St.<br>John's Communities Inc., Series A:<br>7.25%, 9/15/29 | 175          | 180,574           |

Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

|                |     |           |
|----------------|-----|-----------|
| 7.63%, 9/15/39 | 350 | 366,254   |
|                |     | 4,185,342 |

**Wyoming 1.3%**

|   |       |           |
|---|-------|-----------|
| County of Sweetwater Wyoming,<br>Refunding RB, FMC Corp. Project,<br>AMT, 5.60%, 12/01/35 | 2,500 | 2,449,100 |
|---|-------|-----------|

|                                    |  |             |
|------------------------------------|--|-------------|
| <b>Total Municipal Bonds 94.1%</b> |  | 174,863,096 |
|------------------------------------|--|-------------|

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

**District of Columbia 1.7%**

|   |       |           |
|---|-------|-----------|
| District of Columbia Water & Sewer<br>Authority, RB, Series A, 6.00%,<br>10/01/35 | 2,730 | 3,085,265 |
|---|-------|-----------|

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

|   | Par<br>(000) | Value        |
|---|--------------|--------------|
| <b>Florida 3.3%</b>   |              |              |
| County of Miami-Dade Florida, RB,<br>Miami International Airport, Series A,<br>AMT (AGC), 5.25%, 10/01/33 | \$ 6,130     | \$ 6,157,830 |
| <b>Virginia 3.1%</b>  |              |              |
| Virginia HDA, RB, Sub-Series H-1<br>(NPFGC), 5.38%, 7/01/36   | 5,710        | 5,823,058    |
| <b>Total Municipal Bonds Transferred to<br/>Tender Option Bond Trusts 8.1%</b>                            |              | 15,066,153   |
| <b>Total Long-Term Investments<br/>(Cost \$190,267,683) 102.2%</b>  |              | 189,929,249  |

**Short-Term Securities**

|  | Shares    |           |
|--|-----------|-----------|
| FFI Institutional Tax-Exempt Fund,<br>0.21% (h)(i)             | 1,559,574 | 1,559,574 |
| <b>Total Short-Term Securities<br/>(Cost \$1,559,574) 0.8%</b> |           | 1,559,574 |

**Total Investments**

|   |  |             |
|---|--|-------------|
| <b>(Cost \$191,827,257*) 103.0%</b>       |  | 191,488,823 |
| <b>Other Assets Less Liabilities 0.9%</b> |  | 1,641,959   |
|   |  | (7,291,389) |

**Liability for Trust Certificates, Including Interest  
Expense and Fees Payable (3.9)%**

|                          |                |
|--------------------------|----------------|
| <b>Net Assets 100.0%</b> | \$ 185,839,393 |
|--------------------------|----------------|

\* The cost and unrealized appreciation (depreciation) of investments as of July 31, 2010, as computed for federal income tax purposes, were as follows:

|                               |                |
|-------------------------------|----------------|
| Aggregate cost                | \$ 184,556,603 |
| Gross unrealized appreciation | \$ 10,527,015  |
| Gross unrealized depreciation | (10,880,241)   |
| Net unrealized depreciation   | \$ (353,226)   |

- (a) 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.
- (b) Represents a zero-coupon bond. Rate shown reflects the current yield as of report date.
- (c) 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.
- (d) Variable rate security. Rate shown is as of report date.
- (e) Issuer filed for bankruptcy and/or is in default of interest payments.
- (f) Non-income producing security.
- (g) 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.



Schedule of Investments July 31, 2010 (Unaudited)

BlackRock Apex Municipal Fund, Inc. (APX)

- (h) 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 at April<br>30, 2010 | Net Activity | Shares at<br>July 31,<br>2010 | Income |
|---|-----------------------------|--------------|-------------------------------|--------|
| FFI Institutional<br>Tax-Exempt<br>Fund | 648,958                     | 910,616      | 1,559,574                     | \$ 681 |

- (i) 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 annual report.

The following table summarizes the inputs used as of July 31, 2010 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<br>Investments <sup>1</sup> |              | \$ 189,929,249 |         | \$ 189,929,249 |
| Short-Term<br>Securities              | \$ 1,559,574 |                |         | 1,559,574      |
| <b>Total</b>                          | \$ 1,559,574 | \$ 189,929,249 |         | \$ 191,488,823 |

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



Edgar Filing: BLACKROCK APEX MUNICIPAL FUND INC - Form N-Q

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/ Anne F. Ackerley  
Anne F. Ackerley  
Chief Executive Officer of  
BlackRock Apex Municipal Fund, Inc.

Date: September 27, 2010

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/ Anne F. Ackerley  
Anne F. Ackerley  
Chief Executive Officer (principal executive officer) of  
BlackRock Apex Municipal Fund, Inc.

Date: September 27, 2010

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

Date: September 27, 2010