

BLACKROCK MUNIYIELD NEW JERSEY FUND, INC.  
Form N-Q  
June 24, 2013

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 811-06570

Name of Fund: BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock MuniYield New Jersey 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: 07/31/2013

Date of reporting period: 04/30/2013

Item 1 – Schedule of Investments

**BlackRock MuniYield New Jersey Fund, Inc. (MYJ)**

Schedule of Investments April 30, 2013 (Unaudited)

**(Percentages shown are based on Net Assets)**

|  | Par<br>(000) | Value      |
|--|--------------|------------|
| Municipal Bonds  |              |            |
| New Jersey — 119.6%  |              |            |
| Corporate — 6.8%   |              |            |
| Middlesex County Improvement Authority, RB, Senior Heldrich Center Hotel, Series A, 5.00%, 1/01/20                     | \$655        | \$397,624  |
| New Jersey EDA, Refunding RB, New Jersey American Water Co., Inc. Project, AMT: Series A, 5.70%, 10/01/39              | 2,925        | 3,265,646  |
| Series B, 5.60%, 11/01/34  | 2,430        | 2,760,650  |
| New Jersey EDA, Refunding RB, United Water of New Jersey, Inc., Series B (AMBAC), 4.50%, 11/01/25                      | 4,500        | 4,974,120  |
| Salem County Pollution Control Financing Authority, Refunding RB, Atlantic City Electric, Series A, 4.88%, 6/01/29     | 4,550        | 5,036,486  |
|  |              | 16,434,526 |
| County/City/Special District/School District — 14.4%   |              |            |
| Bergen County New Jersey Improvement Authority, Refunding RB, Fair Lawn Community Center, Inc. Project, 5.00%, 9/15/34 | 1,470        | 1,736,320  |
| City of Margate City New Jersey, GO, Refunding, Improvement, New Jersey: 5.00%, 1/15/26                                | 1,200        | 1,398,972  |
| 5.00%, 1/15/27   | 845          | 978,079    |
| City of Perth Amboy New Jersey, GO, CAB, Refunding (AGM), 5.00%, 7/01/34   | 1,925        | 2,061,482  |
| City of Perth Amboy New Jersey, Refunding, GO (AGM), 5.00%, 7/01/33  | 1,575        | 1,694,968  |
| County of Hudson New Jersey, COP, Refunding (NPFGC), 6.25%, 12/01/16   | 1,500        | 1,739,985  |
| Essex County Improvement Authority, Refunding RB, Project Consolidation (NPFGC): 5.50%, 10/01/28                       | 2,700        | 3,575,718  |
| 5.50%, 10/01/29  | 5,085        | 6,747,032  |
| Gloucester County Improvement Authority, RB, County Guaranteed Loan - County Capital Program, 5.00%, 4/01/38           | 1,000        | 1,087,480  |
| Hudson County Improvement Authority, RB, Harrison Parking Facility Project, Series C (AGC), 5.38%, 1/01/44             | 4,800        | 5,326,656  |
| Monmouth County Improvement Authority, Refunding RB, Government Loan (AMBAC): 5.00%, 12/01/15                          | 5            | 5,013      |
|  | Par<br>(000) | Value      |
| Municipal Bonds  |              |            |
| New Jersey (continued)   |              |            |
| County/City/Special District/School District (concluded)   |              |            |
| Monmouth County Improvement Authority, Refunding RB, Government Loan (AMBAC) (concluded): 5.00%, 12/01/16              | \$5          | \$5,013    |
| Newark Housing Authority, RB, South Ward Police Facility (AGC), 6.75%, 12/01/38  | 1,750        | 2,176,755  |

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|  |       |            |
|--|-------|------------|
| Newark Housing Authority, Refunding RB, Redevelopment Project (NPFGC), 4.38%, 1/01/37                  | 2,875 | 2,898,604  |
| Union County Improvement Authority, RB, Guaranteed Lease-Family Court Building Project, 5.00%, 5/01/42 | 2,835 | 3,212,452  |
|  |       | 34,644,529 |
| Education — 18.5%  |       |            |
| New Jersey EDA, RB:  |       |            |
| MSU Student Housing Project, 5.88%, 6/01/42  | 1,500 | 1,706,190  |
| School Facilities Construction, Series CC-2, 5.00%, 12/15/31   | 1,700 | 1,932,951  |
| School Facilities Construction, Series CC-2, 5.00%, 12/15/32   | 1,300 | 1,470,079  |
| New Jersey EDA, Refunding RB, Series GG, 5.25%, 9/01/27  | 3,000 | 3,533,820  |
| New Jersey Educational Facilities Authority, RB, Montclair State University, Series J, 5.25%, 7/01/38  | 1,140 | 1,291,118  |
| New Jersey Educational Facilities Authority, Refunding RB:   |       |            |
| College of New Jersey, Series D (AGM), 5.00%, 7/01/35  | 6,115 | 6,741,054  |
| Georgian Court University, Series D, 5.25%, 7/01/37  | 1,000 | 1,060,520  |
| Kean University, Series A, 5.50%, 9/01/36  | 4,500 | 5,136,210  |
| New Jersey Institute of Technology, Series H, 5.00%, 7/01/31   | 1,250 | 1,404,138  |
| Ramapo College, Series B, 5.00%, 7/01/37   | 155   | 175,958    |
| Ramapo College, Series B, 5.00%, 7/01/42   | 340   | 385,971    |
| Rider University, Series A, 5.00%, 7/01/32   | 1,000 | 1,104,240  |
| Rowan University, Series B (AGC), 5.00%, 7/01/24   | 1,800 | 2,077,416  |
| University of Medicine & Dentistry, Series B, 7.13%, 12/01/23  | 1,300 | 1,664,715  |

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**BlackRock MuniYield New Jersey Fund, Inc.**  
**(MYJ)**

Schedule of Investments (continued)

(Percentages shown are based on Net Assets)

|  | Par<br>(000) | Value       |
|--|--------------|-------------|
| Municipal Bonds  |              |             |
| New Jersey (continued)   |              |             |
| Education (concluded)  |              |             |
| New Jersey Educational Facilities Authority, Refunding RB (concluded):               |              |             |
| University of Medicine & Dentistry, Series B, 7.50%, 12/01/32                        | \$1,625      | \$2,021,792 |
| New Jersey Higher Education Student Assistance Authority, Refunding RB:              |              |             |
| Series 1A, 5.00%, 12/01/25   | 1,010        | 1,121,171   |
| Series 1A, 5.00%, 12/01/26   | 640          | 706,003     |
| Series 1A, 5.25%, 12/01/32   | 900          | 995,805     |
| Series A, AMT, 5.75%, 12/01/29   | 4,045        | 4,564,378   |
| New Jersey Institute of Technology, RB, Series A, 5.00%, 7/01/42                     | 4,320        | 4,944,586   |
| Rutgers - The State University of New Jersey, Refunding RB, Series F, 5.00%, 5/01/39 | 500          | 575,590     |
|  |              | 44,613,705  |
| Health — 13.8%   |              |             |
| New Jersey EDA, RB, Masonic Charity Foundation of New Jersey:                        |              |             |
| 5.25%, 6/01/24   | 1,425        | 1,455,395   |
| 5.25%, 6/01/32   | 685          | 699,440     |
| New Jersey EDA, Refunding RB, First Mortgage, Winchester, Series A:                  |              |             |
| 5.75%, 11/01/24  | 2,500        | 2,560,550   |
| 5.80%, 11/01/31  | 1,000        | 1,021,520   |
| New Jersey Health Care Facilities Financing Authority, RB:                           |              |             |
| Childrens Specialized Hospital, Series A, 5.50%, 7/01/36                             | 1,540        | 1,578,115   |
| Hunterdon Medical Center, Series A, 5.13%, 7/01/35                                   | 1,950        | 2,022,813   |
| Meridian Health, Series I (AGC), 5.00%, 7/01/38                                      | 970          | 1,045,825   |
| Virtua Health (AGC), 5.50%, 7/01/38  | 2,500        | 2,778,075   |
| New Jersey Health Care Facilities Financing Authority, Refunding RB:                 |              |             |
| AHS Hospital Corp., 6.00%, 7/01/41   | 2,435        | 2,994,392   |
| Barnabas Health, Series A, 5.00%, 7/01/25  | 265          | 306,512     |
| Barnabas Health, Series A, 5.63%, 7/01/32  | 1,090        | 1,236,714   |
| Barnabas Health, Series A, 5.63%, 7/01/37  | 3,030        | 3,417,325   |
| Kennedy Health System, 5.00%, 7/01/31  | 750          | 841,305     |
| Meridian Health System, 5.00%, 7/01/23   | 500          | 598,905     |
| Meridian Health System, 5.00%, 7/01/25   | 1,000        | 1,164,480   |
|  | Par<br>(000) | Value       |
| Municipal Bonds  |              |             |
| New Jersey (continued)   |              |             |
| Health (concluded)   |              |             |
| New Jersey Health Care Facilities Financing Authority, Refunding RB (concluded):     |              |             |
| Meridian Health System, 5.00%, 7/01/26   | \$830        | \$958,584   |
| Meridian Health System, 5.00%, 7/01/27   | 1,000        | 1,148,020   |
| Robert Wood Johnson, 5.00%, 7/01/31  | 1,000        | 1,106,030   |

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|   |       |            |
|---|-------|------------|
| South Jersey Hospital, 5.00%, 7/01/36   | 385   | 399,819    |
| South Jersey Hospital, 5.00%, 7/01/46   | 1,650 | 1,709,020  |
| St. Barnabas Health Care System, Series A, 5.00%, 7/01/29   | 4,155 | 4,361,836  |
|   |       | 33,404,675 |
| Housing — 7.3%  |       |            |
| New Jersey State Housing & Mortgage Finance Agency, RB:   |       |            |
| M/F Housing, Series A, 4.55%, 11/01/43  | 2,880 | 2,999,549  |
| S/F Housing, Series U, AMT, 4.95%, 10/01/32   | 555   | 579,154    |
| S/F Housing, Series U, AMT, 5.00%, 10/01/37   | 765   | 793,389    |
| S/F Housing, Series X, AMT, 4.85%, 4/01/16  | 1,090 | 1,121,784  |
| S/F Housing, Series X, AMT, 5.05%, 4/01/18  | 295   | 325,963    |
| S/F Housing, Series CC, 5.00%, 10/01/34   | 2,215 | 2,399,820  |
| Series A, 4.75%, 11/01/29   | 2,305 | 2,492,166  |
| Series A, 6.50%, 10/01/38   | 815   | 846,687    |
| Series A, AMT (NPFGC), 4.90%, 11/01/35  | 1,365 | 1,374,555  |
| New Jersey State Housing & Mortgage Finance Agency, Refunding RB, S/F Housing, Series T, AMT, 4.65%, 10/01/32 | 4,505 | 4,679,434  |
|   |       | 17,612,501 |
| State — 28.4%   |       |            |
| Garden State Preservation Trust, RB (AGM):  |       |            |
| CAB, Series B, 2.60%, 11/01/23 (a)  | 1,860 | 1,418,734  |
| CAB, Series B, 3.19%, 11/01/28 (a)  | 4,540 | 2,779,569  |
| Election of 2005, Series A, 5.80%, 11/01/15 (b)   | 2,500 | 2,831,375  |
| New Jersey EDA, RB:   |       |            |
| Motor Vehicle Surcharge, Series A (NPFGC), 5.25%, 7/01/25   | 2,000 | 2,497,640  |

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**BlackRock MuniYield New Jersey Fund, Inc.**  
**(MYJ)**

Schedule of Investments (continued)

(Percentages shown are based on Net Assets)

|   | Par<br>(000) | Value        |
|---|--------------|--------------|
| Municipal Bonds   |              |              |
| New Jersey (continued)  |              |              |
| State (concluded)   |              |              |
| New Jersey EDA, RB (concluded):   |              |              |
| Motor Vehicle Surcharge, Series A (NPFGC), 5.25%, 7/01/33   | \$12,500     | \$13,102,500 |
| School Facilities Construction, Series KK, 5.00%, 3/01/35   | 1,500        | 1,708,560    |
| School Facilities Construction, Series KK, 5.00%, 3/01/38   | 1,470        | 1,673,124    |
| School Facilities Construction, Series L (AGM), 5.00%, 3/01/15 (b)  | 5,800        | 6,285,344    |
| School Facilities Construction, Series P, 5.00%, 9/01/15  | 3,000        | 3,313,860    |
| School Facilities Construction, Series P, 5.25%, 9/01/15 (b)  | 2,710        | 3,018,425    |
| School Facilities Construction, Series Z (AGC), 5.50%, 12/15/34   | 3,665        | 4,247,772    |
| Series Y, 5.00%, 9/01/33  | 880          | 987,193      |
| New Jersey EDA, Refunding RB:   |              |              |
| 5.00%, 6/15/26  | 440          | 503,972      |
| 5.00%, 6/15/28  | 720          | 815,738      |
| 5.00%, 6/15/29  | 1,760        | 1,977,800    |
| School Facilities Construction, Series AA, 5.50%, 12/15/29  | 3,000        | 3,471,180    |
| School Facilities Construction, Series AA, 5.25%, 12/15/33  | 1,000        | 1,130,980    |
| School Facilities, Series GG, 5.25%, 9/01/26  | 7,000        | 8,305,360    |
| New Jersey Health Care Facilities Financing Authority, RB, Hospital Asset Transformation Program, Series A, 5.25%, 10/01/38 | 2,300        | 2,512,497    |
| State of New Jersey, COP, Equipment Lease Purchase, Series A:   |              |              |
| 5.25%, 6/15/27  | 4,200        | 4,755,366    |
| 5.25%, 6/15/28  | 1,100        | 1,240,129    |
|   |              | 68,577,118   |
| Transportation — 27.0%  |              |              |
| Delaware River Port Authority of Pennsylvania & New Jersey, RB, Series D, 5.00%, 1/01/40                                    | 1,535        | 1,713,367    |
| New Jersey State Turnpike Authority, RB:  |              |              |
| Growth & Income Securities, Series B (AMBAC), 0.00%, 1/01/35 (c)  | 4,870        | 4,687,911    |
| Series E, 5.25%, 1/01/40  | 2,525        | 2,827,445    |
| New Jersey State Turnpike Authority, Refunding RB:  |              |              |
| Series A, 5.00%, 1/01/35  | 1,000        | 1,126,420    |
| Series B, 5.00%, 1/01/30  | 2,660        | 3,086,584    |
| New Jersey Transportation Trust Fund Authority, RB, Transportation System:  |              |              |
| CAB, Series A (AGC), 5.63%, 12/15/28  | 1,250        | 1,491,538    |
|   | Par<br>(000) | Value        |
| Municipal Bonds   |              |              |
| New Jersey (concluded)  |              |              |
| Transportation (concluded)  |              |              |
| New Jersey Transportation Trust Fund Authority, RB, Transportation System (concluded):                                      |              |              |

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|   |         |             |
|---|---------|-------------|
| CAB, Series C (AMBAC), 4.63%, 12/15/35 (a)                                      | \$4,140 | \$1,469,741 |
| Series A, 6.00%, 6/15/35  | 6,030   | 7,364,499   |
| Series A, 5.88%, 12/15/38   | 3,650   | 4,314,482   |
| Series A, 6.00%, 12/15/38   | 1,950   | 2,324,556   |
| Series A, 5.50%, 6/15/41  | 6,000   | 7,031,760   |
| Series A, 5.00%, 6/15/42  | 1,000   | 1,110,490   |
| Series A (AGC), 5.50%, 12/15/38   | 1,000   | 1,153,890   |
| Series B, 5.00%, 6/15/42  | 7,340   | 8,139,840   |
| Port Authority of New York & New Jersey, RB:                                    |         |             |
| Consolidated, 93rd Series, 6.13%, 6/01/94                                       | 5,000   | 6,181,650   |
| Consolidated, 169th Series, AMT, 5.00%, 10/15/41                                | 250     | 280,790     |
| JFK International Air Terminal, 6.00%, 12/01/42                                 | 2,700   | 3,161,322   |
| Port Authority of New York & New Jersey, Refunding RB, AMT:                     |         |             |
| Consolidated, 152nd Series, 5.75%, 11/01/30                                     | 3,300   | 3,839,715   |
| Consolidated, 152nd Series, 5.25%, 11/01/35                                     | 240     | 264,326     |
| Consolidated, 172nd Series, 5.00%, 10/01/34                                     | 1,500   | 1,701,810   |
| South Jersey Transportation Authority, Refunding RB, Series A:                  |         |             |
| 5.00%, 11/01/28   | 1,075   | 1,243,926   |
| 5.00%, 11/01/29   | 575     | 662,797     |
|   |         | 65,178,859  |
| Utilities — 3.4%  |         |             |
| Rahway Valley Sewerage Authority, RB, CAB, Series A (NPFGC), 4.13%, 9/01/31 (a) | 6,000   | 2,835,420   |
| Union County Utilities Authority, Refunding RB, Series A:                       |         |             |
| County Deficiency Agreement, Series A, 5.00%, 6/15/41                           | 4,115   | 4,717,148   |
| Covanta Union, Series A, AMT, 5.25%, 12/01/31                                   | 670     | 748,383     |
|   |         | 8,300,951   |
| Total Municipal Bonds in New Jersey   |         | 288,766,864 |
| Puerto Rico — 6.0%  |         |             |
| State — 6.0%  |         |             |
| Puerto Rico Sales Tax Financing Corp., RB, First Sub-Series A:                  |         |             |
| 5.75%, 8/01/37  | 6,000   | 6,438,120   |
| 6.00%, 8/01/42  | 4,000   | 4,378,240   |

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| <b>BlackRock MuniYield New Jersey Fund, Inc.</b>   |              |             |
|--|--------------|-------------|
| <b>(MYJ)</b>   |              |             |
| <b>(Percentages shown are based on Net Assets)</b>   |              |             |
|  | Par<br>(000) | Value       |
| Schedule of Investments (continued)  |              |             |
| Municipal Bonds  |              |             |
| Puerto Rico (concluded)  |              |             |
| State (concluded)  |              |             |
| Puerto Rico Sales Tax Financing Corp., Refunding RB, First Sub-Series C, 6.00%,<br>8/01/39                 | \$3,320      | \$3,655,187 |
| Total Municipal Bonds in Puerto Rico   |              | 14,471,547  |
| Total Municipal Bonds – 125.6%   |              | 303,238,411 |
|  |              |             |
| Municipal Bonds Transferred to   |              |             |
| Tender Option Bond (TOB) Trusts (d)  |              |             |
| New Jersey — 29.6%   |              |             |
| Education — 1.0%   |              |             |
| Rutgers State University of New Jersey, Refunding RB, Series F, 5.00%, 5/01/39                             | 2,009        | 2,312,713   |
| State — 7.4%   |              |             |
| Garden State Preservation Trust, RB, Election of 2005, Series A (AGM), 5.75%,<br>11/01/28                  | 5,460        | 7,369,853   |
| New Jersey EDA, RB, School Facilities Construction:  |              |             |
| 6.00%, 12/15/18 (b)  | 1,800        | 2,143,638   |
| 6.00%, 12/15/34  | 1,800        | 2,143,638   |
| New Jersey EDA, Refunding RB, School Facilities Construction, Series NN, 5.00%,<br>3/01/29 (e)             | 5,232        | 6,092,713   |
|  |              | 17,749,842  |
| Transportation — 15.3%   |              |             |
| New Jersey State Turnpike Authority, RB, Series A, 5.00%, 1/01/38 (e)                                      | 8,820        | 9,886,426   |
| New Jersey Transportation Trust Fund Authority, RB:  |              |             |
| Series B, 5.25%, 6/15/36 (e)   | 5,000        | 5,712,700   |
| Transportation System, Series A (AGM), 5.00%, 12/15/32   | 4,100        | 4,639,601   |
| Port Authority of New York & New Jersey, RB, Consolidated, 169th Series, AMT,<br>5.00%, 10/15/41           | 11,250       | 12,635,550  |
|  |              |             |
|  | Par<br>(000) | Value       |
| Municipal Bonds Transferred to   |              |             |
| Tender Option Bond (TOB) Trusts (d)  |              |             |
| New Jersey (concluded)   |              |             |
| Transportation (concluded)   |              |             |
| Port Authority of New York & New Jersey, Refunding RB, Consolidated, 152nd Series,<br>AMT, 5.25%, 11/01/35 | \$3,764      | \$4,145,183 |
|  |              | 37,019,460  |
| Utilities — 5.9%   |              |             |
| Union County Utilities Authority, Refunding LRB, Covanta Union, Series A, AMT,<br>5.25%, 12/01/31          | 12,820       | 14,319,812  |
| Total Municipal Bonds in New Jersey  |              | 71,401,827  |

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|  |           |               |
|--|-----------|---------------|
| Puerto Rico — 1.0%   |           |               |
| State — 1.0%   |           |               |
| Puerto Rico Sales Tax Financing Corp., Refunding RB, Series C, 5.25%, 8/01/40  | 2,220     | 2,405,215     |
| Total Municipal Bonds Transferred to   |           | 73,807,042    |
| Tender Option Bond (TOB) Trusts – 30.6%  |           |               |
| Total Long-Term Investments  |           | 377,045,453   |
| (Cost – \$343,777,246) – 156.2%  |           |               |
|  |           |               |
|  |           | <b>Shares</b> |
| Short-Term Securities  |           |               |
| BIF New Jersey Municipal Money Fund 0.00% (f)(g)   | 2,519,270 | 2,519,270     |
| Total Short-Term Securities  |           | 2,519,270     |
| (Cost – \$2,519,270) – 1.0%  |           |               |
| Total Investments (Cost - \$346,296,516*) – 157.2%   |           | 379,564,723   |
| Other Assets Less Liabilities – 1.9%   |           | 4,818,179     |
| Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable – (16.8)%  |           | (40,684,982 ) |
| VRDP Shares, at Liquidation Value – (42.3)%  |           | (102,200,000) |
| Net Assets Applicable to Common Shares – 100.0%  |           | \$241,497,920 |
| * As of April 30, 2013, gross unrealized appreciation and gross unrealized depreciation based on cost for federal income tax purposes were as follows: |           |               |
| Tax cost   |           | \$306,126,091 |
| Gross unrealized appreciation  |           | \$33,619,931  |
| Gross unrealized depreciation  |           | (845,638 )    |
| Net unrealized appreciation  |           | \$32,774,293  |

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Schedule of Investments (continued) **BlackRock MuniYield New Jersey Fund, Inc. (MYJ)**

Notes to Schedule of Investments

- (a) Represents a zero-coupon bond. Rate shown reflects the current yield as of report date.
- (b) 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.
- (c) Represents a step-up bond that pays an initial coupon rate for the first period and then a higher coupon rate for the following periods. Rate shown is as of report date.
- (d) Securities represent bonds transferred to a TOB in exchange for which the Fund acquired residual interest certificates. These securities serve as collateral in a financing transaction.  
All or a portion of security is subject to a recourse agreement, which may require the Fund to pay the liquidity provider in the event there is a shortfall between the TOB trust certificates and proceeds received from the sale of
- (e) the security contributed to the TOB trust. In the case of a shortfall, the aggregate maximum potential amount the Fund could ultimately be required to pay under the agreements, which expire from 6/15/19 to 9/01/20, is \$14,347,588.
- (f) Investments in issuers considered to be an affiliate of the Fund during the period ended April 30, 2013, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

| Affiliate                           | Shares<br>Held at<br>July 31, 2012 | Net<br>Activity | Shares<br>Held at<br>April 30, 2013 | Income |
|-------------------------------------|------------------------------------|-----------------|-------------------------------------|--------|
| BIF New Jersey Municipal Money Fund | 1,495,608                          | 1,023,662       | 2,519,270                           | —      |

- (g) Represents the current yield as of report date.

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:

- AGC Assured Guaranty Corp.
- AGM Assured Guaranty Municipal Corp.
- AMBAC American Municipal Bond Assurance Corp.
- AMT Alternative Minimum Tax (subject to)
- CAB Capital Appreciation Bonds
- COP Certificates of Participation
- EDA Economic Development Authority
- GO General Obligation Bonds
- LRB Lease Revenue Bonds

M/F Multi-Family  
 NPFGC National Public Finance Guarantee Corp.  
 RB Revenue Bonds  
 S/F Single-Family

Financial futures contracts as of April 30, 2013 were as follows:

| Contracts Sold | Issue                    | Exchange               | Expiration | Notional Value | Unrealized Depreciation |
|----------------|--------------------------|------------------------|------------|----------------|-------------------------|
| (225)          | 10-Year US Treasury Note | Chicago Board of Trade | June 2013  | \$30,005,859   | \$(304,581)             |

For Fund compliance purposes, the Fund's sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or ratings group indexes, and/or as defined by Fund management. These definitions may not apply for purposes of this report, which may combine such sector sub-classifications for reporting ease.

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Schedule of Investments (concluded) **BlackRock MuniYield New Jersey Fund, Inc. (MYJ)**

Fair Value Measurements - Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs to valuation techniques are categorized into a disclosure hierarchy consisting of three broad levels for financial reporting purposes as follows:

Level 1 — unadjusted price quotations in active markets/exchanges for identical assets and liabilities that the Fund has the ability to access

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 and derivative financial instruments)

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Accordingly, the degree of judgment exercised in determining fair value is greatest for instruments categorized in Level 3. The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the level in the fair value hierarchy within which the fair value measurement falls in its entirety is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

Changes in valuation techniques may result in transfers into or out of an assigned level within the disclosure hierarchy. In accordance with the Fund's policy, transfers between different levels of the fair value disclosure hierarchy are deemed to have occurred as of the beginning of the reporting period. The categorization of a value determined for investments and derivative financial instruments is based on the pricing transparency of the investment and derivative financial instrument and is not necessarily an indication of the risks associated with investing in those securities. For information about the Fund's policy regarding valuation of investments and derivative financial instruments and other significant accounting policies, please refer to the Fund's most recent financial statements as contained in its semi-annual report.

The following tables summarize the Fund's investments and derivative financial instruments categorized in the disclosure hierarchy as of April 30, 2013:

|                                    | Level 1     | Level 2       | Level 3 | Total         |
|------------------------------------|-------------|---------------|---------|---------------|
| Assets:                            |             |               |         |               |
| Investments:                       |             |               |         |               |
| Long-Term Investments <sup>1</sup> | —           | \$377,045,453 | —       | \$377,045,453 |
| Short-Term Securities              | \$2,519,270 | —             | —       | 2,519,270     |
| <b>Total</b>                       | \$2,519,270 | \$377,045,453 | —       | \$379,564,723 |

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

|   | Level 1     | Level 2 | Level 3 | Total       |
|---|-------------|---------|---------|-------------|
| Derivative Financial Instruments <sup>2</sup> |             |         |         |             |
| Liabilities:                                  |             |         |         |             |
| Interest rate contracts                       | \$(304,581) | —       | —       | \$(304,581) |

<sup>2</sup> Derivative financial instruments are financial futures contracts, which are valued at the unrealized appreciation/depreciation on the instrument.

Certain of the Fund's assets and liabilities are held at carrying amount, which approximates fair value for financial reporting purposes. As of April 30, 2013, such assets and liabilities are categorized within the disclosure hierarchy as follows:

|  | Level 1          | Level 2                | Level 3  | Total                  |
|--|------------------|------------------------|----------|------------------------|
| <b>Assets:</b>                               |                  |                        |          |                        |
| Cash pledged for financial futures contracts | \$297,000        | —                      | —        | \$ 297,000             |
| <b>Liabilities:</b>                          |                  |                        |          |                        |
| TOB trust certificates                       | —                | \$ (40,664,339)        | —        | (40,664,339)           |
| VRDP shares                                  | —                | (102,200,000)          | —        | (102,200,000)          |
| <b>Total</b>                                 | <b>\$297,000</b> | <b>\$(142,864,339)</b> | <b>—</b> | <b>\$(142,567,339)</b> |

There were no transfers between levels during the period ended April 30, 2013.

BLACKROCK MUNIYIELD NEW JERSEY FUND, INC. APRIL 30, 2013 6

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 MuniYield New Jersey Fund, Inc.

By: /s/ John M. Perlowski

John M. Perlowski

Chief Executive Officer (principal executive officer) of

BlackRock MuniYield New Jersey Fund, Inc.

Date: June 24, 2013

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 MuniYield New Jersey Fund, Inc.

Date: June 24, 2013

By: /s/ Neal J. Andrews

Neal J. Andrews

Chief Financial Officer (principal financial officer) of

BlackRock MuniYield New Jersey Fund, Inc.

Date: June 24, 2013