

BLACKROCK MUNIYIELD NEW JERSEY FUND, INC.

Form N-Q

June 20, 2018

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 52nd Street, New York, NY 10055

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

Date of fiscal year end: 07/31/2018

Date of reporting period: 04/30/2018

Item 1 Schedule of Investments

Schedule of Investments (unaudited)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

April 30, 2018

(Percentages shown are based on Net Assets)

| <i>Security</i> | <i>Par (000)</i> | <i>Value</i> |
|---|----------------------|--------------|
| Municipal Bonds 127.3% | | |
| New Jersey 126.2% | | |
| Corporate 11.0% | | |
| County of Salem New Jersey Pollution Control Financing Authority, Refunding RB, Atlantic City Electric, Series A, 4.88%, 06/01/29 | \$ 4,550 | \$ 4,742,647 |
| New Jersey EDA, RB: | | |
| Continental Airlines, Inc. Project, Series A, AMT, 5.63%, 11/15/30 | 1,730 | 1,935,766 |
| Series B, AMT, 5.63%, 11/15/30 | 485 | 542,686 |
| Motor Vehicle Surcharge, Series A (NPFGC), 5.25%, 07/01/25 ^(a) | 215 | 254,326 |
| 5.25%, 07/01/25 | 1,785 | 2,021,191 |
| Provident Group-Kean Properties, Series A, 5.00%, 07/01/47 | 440 | 466,303 |
| New Jersey EDA, Refunding RB: | | |
| Duke Farms Foundation Project, 4.00%, 07/01/46 | 1,330 | 1,376,257 |
| New Jersey American Water Co., Inc. Project, Series A, AMT, 5.70%, 10/01/39 | 7,900 | 8,243,255 |
| Series B, AMT, 5.60%, 11/01/34 | 2,430 | 2,563,699 |
| Sub Series A, 5.00%, 07/01/33 | 1,050 | 1,129,842 |
| Sub Series A, 4.00%, 07/01/34 | 1,270 | 1,240,358 |
| | | 24,516,330 |
| County/City/Special District/School District 17.8% | | |
| Casino Reinvestment Development Authority, Refunding RB: | | |
| 5.25%, 11/01/39 | 2,280 | 2,415,728 |
| 5.25%, 11/01/44 | 5,600 | 5,934,600 |
| City of Bayonne New Jersey, GO, Refunding, Qualified General Improvement, (BAM): | | |
| 5.00%, 07/01/33 | 925 | 1,026,907 |
| 5.00%, 07/01/35 | 1,435 | 1,583,422 |
| City of Margate New Jersey, GO, Refunding, Improvement ^(c) : | | |
| 5.00%, 01/15/21 | 1,200 | 1,291,920 |
| | <i>Par (000)</i> | <i>Value</i> |
| Security | | |
| County/City/Special District/School District (continued) | | |
| City of Margate New Jersey, GO, Refunding, Improvement ^(c) (continued): | | |
| 5.00%, 01/15/21 | \$ 845 | \$ 909,727 |
| City of Perth Amboy New Jersey, GO, CAB, Refunding (AGM), | | |
| 5.00%, 07/01/33 | 755 | 756,057 |
| County of Essex New Jersey Improvement Authority, RB, AMT, | | |
| 5.25%, 07/01/45 ^(b) | 3,765 | 3,799,939 |
| County of Essex New Jersey Improvement Authority, Refunding RB, Project Consolidation (NPFGC): | | |
| 5.50%, 10/01/28 | 2,700 | 3,337,983 |
| 5.50%, 10/01/29 | 5,085 | 6,339,317 |

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| | | |
|--|-------|------------|
| County of Hudson New Jersey Improvement Authority, RB, Harrison Parking Facility Project, Series C (AGC), 5.38%, 01/01/44 | 4,800 | 4,904,544 |
| County of Mercer New Jersey Improvement Authority, RB, Courthouse Annex Project, 5.00%, 09/01/40 | 1,470 | 1,618,397 |
| County of Middlesex New Jersey, COP, Refunding, Civic Square IV Redevelopment, 5.00%, 10/15/31 | 1,400 | 1,670,886 |
| County of Union New Jersey Improvement Authority, LRB, Guaranteed Lease, Family Court Building Project, 5.00%, 05/01/42 | 1,400 | 1,519,028 |
| County of Union New Jersey Utilities Authority, Refunding RB, Resources Recovery Facility, Covanta Union, Inc., AMT, Series A, 5.25%, 12/01/31 | 670 | 732,236 |
| Monroe Township Board of Education Middlesex County, GO, Refunding, 5.00%, 03/01/38 | 1,625 | 1,785,339 |
| | | 39,626,030 |
| Education 22.2% | | |
| County of Atlantic New Jersey Improvement Authority, RB, Stockton University Atlantic City, Series A (AGM), 4.00%, 07/01/46 | 600 | 610,020 |
| New Jersey EDA, RB: Hatikvah International Academy Charter School Project, Series A, 5.00%, 07/01/27 ^(b) | 215 | 219,584 |

Schedule of Investments (unaudited) (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

April 30, 2018

(Percentages shown are based on Net Assets)

| <i>Security</i> | <i>Par (000)</i> | <i>Value</i> |
|--|----------------------|--------------|
| Education (continued) | | |
| New Jersey EDA, RB (continued): | | |
| Hatikvah International Academy Charter School Project, Series A, 5.25%, 07/01/37 ^(b) | \$ 590 | \$ 589,953 |
| 5.38%, 07/01/47 ^(b) | 1,020 | 1,020,286 |
| MSU Student Housing Project Provide, 5.75%, 06/01/20 ^(c) | 1,000 | 1,076,450 |
| 5.88%, 06/01/20 ^(c) | 1,500 | 1,618,485 |
| School Facilities Construction (AGC), 5.50%, 12/15/18 ^(c) | 1,295 | 1,324,435 |
| 5.50%, 12/15/34 | 25 | 25,532 |
| Team Academy Charter School Project, 6.00%, 10/01/33 | 2,835 | 3,140,415 |
| New Jersey EDA, Refunding RB ^(b) : | | |
| Greater Brunswick Charter School, Inc. Project, Series A, 5.88%, 08/01/44 | 780 | 788,237 |
| Greater Brunswick Charter School, Inc. Project, Series A, 6.00%, 08/01/49 | 555 | 560,977 |
| Teaneck Community Charter School Project, Series A, 4.25%, 09/01/27 | 210 | 204,931 |
| Teaneck Community Charter School Project, Series A, 5.00%, 09/01/37 | 450 | 437,472 |
| 5.13%, 09/01/52 | 1,000 | 943,790 |
| New Jersey Educational Facilities Authority, RB: | | |
| Higher Educational Capital Improvement Fund, Series A, 5.00%, 09/01/32 | 2,500 | 2,647,075 |
| Rider University Issue, Series F, | | |
| 4.00%, 07/01/42 | 1,155 | 1,078,470 |
| 5.00%, 07/01/47 | 820 | 867,511 |
| New Jersey Educational Facilities Authority, Refunding RB: | | |
| College of New Jersey, Series D (AGM), 5.00%, 07/01/18 ^(c) | 1,000 | 1,005,380 |
| Kean University, Series A, 5.50%, 09/01/19 ^(c) | 4,500 | 4,706,235 |
| Montclair State University, Series A, 5.00%, 07/01/44 | 6,790 | 7,480,475 |
| New Jersey Institute of Technology, Series H, 5.00%, 07/01/31 | 1,250 | 1,321,075 |
| Ramapo College, Series B, 5.00%, 07/01/42 | 340 | 367,248 |
| Rider University, Series A, 5.00%, 07/01/32 | 1,000 | 1,048,180 |
| Rowan University, Series B (AGC), 5.00%, 07/01/18 ^(c) | 1,800 | 1,809,684 |
| Seton Hall University, Series D, 5.00%, 07/01/38 | 395 | 434,105 |
| | <i>Par</i> | |
| <i>Security</i> | <i>(000)</i> | <i>Value</i> |
| Education (continued) | | |
| New Jersey Educational Facilities Authority, Refunding RB (continued): | | |
| Stevens Institute of Technology, Series A, 5.00%, 07/01/42 | \$ 540 | \$ 598,099 |
| Stevens Institute of Technology, Series A, 4.00%, 07/01/47 | 555 | 559,645 |
| University of Medicine & Dentistry, Series B, 7.13%, 06/01/19 ^(c) | 1,300 | 1,370,694 |
| New Jersey Higher Education Student Assistance Authority, Refunding RB: | | |
| Series 1, AMT, 5.75%, 12/01/29 | 2,435 | 2,607,641 |
| Series 1A, 5.00%, 12/01/25 | 555 | 576,273 |
| Series 1A, 5.00%, 12/01/26 | 345 | 358,182 |

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| | | |
|--|-------|------------|
| Series 1A, 5.25%, 12/01/32 | 900 | 935,397 |
| New Jersey Institute of Technology, RB, Series A: 5.00%, 07/01/40 | 1,500 | 1,665,480 |
| 5.00%, 07/01/42 | 2,110 | 2,274,812 |
| 5.00%, 07/01/45 | 2,935 | 3,248,928 |
| | | 49,521,156 |
| Health 9.5% | | |
| County of Camden New Jersey Improvement Authority, Refunding RB, 5.00%, 02/15/34 | 590 | 629,589 |
| New Jersey Health Care Facilities Financing Authority, RB: Inspira Health Obligated Group, 5.00%, 07/01/42 | 1,105 | 1,223,887 |
| Meridian Health System Obligated Group, Series I (AGC), 5.00%, 07/01/18 ^(c) | 925 | 929,976 |
| Robert Wood Johnson University Hospital, Series A, 5.50%, 07/01/43 | 1,420 | 1,593,652 |
| Virtua Health, Series A (AGC), 5.50%, 07/01/38 | 2,500 | 2,598,625 |
| New Jersey Health Care Facilities Financing Authority, Refunding RB: AHS Hospital Corp., 6.00%, 07/01/21 ^(c) | 2,435 | 2,729,708 |
| Princeton Healthcare System, 5.00%, 07/01/34 | 860 | 949,595 |
| 5.00%, 07/01/39 | 1,445 | 1,575,194 |
| Robert Wood Johnson University Hospital, 5.00%, 01/01/20 ^(c) | 1,000 | 1,047,990 |

Schedule of Investments (unaudited) (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

April 30, 2018

(Percentages shown are based on Net Assets)

| <i>Security</i> | <i>Par (000)</i> | <i>Value</i> |
|--|----------------------|--------------|
| Health (continued) | | |
| New Jersey Health Care Facilities Financing Authority, Refunding RB (continued): | | |
| RWJ Barnabas Health Obligated Group, Series A, 4.00%, 07/01/43 | \$ 935 | \$ 949,951 |
| 5.00%, 07/01/43 | 2,160 | 2,373,754 |
| St. Barnabas Health Care System, Series A, 5.63%, 07/01/21 ^(c) | 1,090 | 1,202,401 |
| St. Barnabas Health Care System, Series A, 5.63%, 07/01/21 ^(c) | 3,030 | 3,342,453 |
| | | 21,146,775 |
| Housing 3.9% | | |
| New Jersey EDA, Refunding RB, Provident Group-Montclair Properties LLC (AGM), 5.00%, 06/01/42 | | |
| | 1,970 | 2,162,745 |
| New Jersey Housing & Mortgage Finance Agency, RB: | | |
| M/F Housing, Series A, 4.75%, 11/01/29 | 2,305 | 2,355,456 |
| S/F Housing, Series CC, 5.00%, 10/01/34 | 1,365 | 1,391,945 |
| S/F Housing, Series U, AMT, 4.95%, 10/01/32 | 45 | 45,059 |
| 5.00%, 10/01/37 | 35 | 35,045 |
| New Jersey Housing & Mortgage Finance Agency, Refunding RB, Series D, AMT, 4.25%, 11/01/37 | 745 | 745,499 |
| Newark Housing Authority, RB, South Ward Police Facility (AGC), 6.75%, 12/01/19 ^(c) | 1,750 | 1,878,083 |
| | | 8,613,832 |
| State 8.5% | | |
| Garden State Preservation Trust, RB, CAB, Series B (AGM) ^(d) : | | |
| 0.00%, 11/01/23 | 1,460 | 1,240,883 |
| 0.00%, 11/01/28 | 4,540 | 3,186,808 |
| New Jersey EDA, RB, School Facilities Construction, Series CC-2, 5.00%, 12/15/31 | 1,125 | 1,159,369 |
| New Jersey EDA, Refunding RB: | | |
| Cigarette Tax, 5.00%, 06/15/26 | 440 | 471,029 |
| Cigarette Tax, 5.00%, 06/15/28 | 720 | 768,190 |
| Cigarette Tax, 5.00%, 06/15/29 | 1,760 | 1,874,998 |
| | <i>Par (000)</i> | <i>Value</i> |
| State (continued) | | |
| New Jersey EDA, Refunding RB (continued): | | |
| School Facilities Construction, 5.25%, 06/15/19 ^(c) | \$ 265 | \$ 274,900 |
| School Facilities Construction, Series AA, 5.25%, 06/15/19 ^(c) | 70 | 72,615 |
| 5.50%, 06/15/19 ^(c) | 2,005 | 2,085,441 |
| 5.50%, 12/15/29 | 995 | 1,027,387 |
| 5.25%, 12/15/33 | 665 | 684,152 |
| Series GG, 5.25%, 09/01/27 | 3,000 | 3,150,900 |
| | 1,785 | 1,810,168 |

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| | | |
|--|--------|------------|
| New Jersey Health Care Facilities Financing Authority, RB, Hospital Asset Transformation Program, Series A, 5.25%, 10/01/18 ^(c) | | |
| State of New Jersey, COP, Equipment Lease Purchase, Series A, 5.25%, 06/15/19 ^(c) | 1,100 | 1,140,480 |
| | | 18,947,320 |
| Tobacco 4.0% | | |
| Tobacco Settlement Financing Corp., Refunding RB: | | |
| Series A, 5.25%, 06/01/46 | 760 | 844,079 |
| Sub-Series B, 5.00%, 06/01/46 | 7,605 | 7,979,318 |
| | | 8,823,397 |
| Transportation 47.6% | | |
| Delaware River Port Authority of Pennsylvania & New Jersey, RB: | | |
| 5.00%, 01/01/40 | 2,620 | 2,851,084 |
| Series D, 5.00%, 01/01/40 | 1,535 | 1,601,205 |
| New Jersey EDA, RB, Goethals Bridge Replacement Project, AMT, Private Activity Bond: | | |
| 5.38%, 01/01/43 | 9,420 | 10,264,315 |
| (AGM), 5.00%, 01/01/31 | 1,000 | 1,103,430 |
| New Jersey State Turnpike Authority, RB: | | |
| Series A, 5.00%, 07/01/22 ^(c) | 385 | 427,820 |
| Series A, 5.00%, 07/01/22 ^(c) | 10,750 | 11,968,297 |
| Series A, 5.00%, 01/01/35 | 625 | 709,512 |
| Series E, 5.25%, 01/01/19 ^(c) | 2,525 | 2,581,484 |
| New Jersey State Turnpike Authority, Refunding RB: | | |
| Series A, 5.00%, 01/01/22 ^(c) | 1,000 | 1,099,500 |
| Series E, 5.00%, 01/01/32 | 150 | 174,180 |

Schedule of Investments (unaudited) (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

April 30, 2018

(Percentages shown are based on Net Assets)

| <i>Security</i> | <i>Par (000)</i> | <i>Value</i> |
|---|----------------------|--------------|
| Transportation (continued) | | |
| New Jersey State Turnpike Authority, Refunding RB (continued): | | |
| Series G, 4.00%, 01/01/43 | \$ 1,355 | \$ 1,391,057 |
| New Jersey Transportation Trust Fund Authority, RB: | | |
| CAB, Transportation System, Series C (AMBAC), 0.00%, 12/15/35 ^(d) | 4,140 | 1,798,002 |
| Federal Highway Reimbursement Revenue Notes, Series A, 5.00%, 06/15/30 | 1,250 | 1,365,775 |
| Series A-2, 5.00%, 06/15/30 | 6,570 | 6,589,841 |
| Series AA, 5.00%, 06/15/38 | 5,935 | 6,204,924 |
| Transportation Program, Series AA, 5.25%, 06/15/41 | 2,960 | 3,153,170 |
| Transportation System, 6.00%, 12/15/38 | 1,950 | 1,995,162 |
| Series A, 6.00%, 06/15/35 | 6,030 | 6,574,027 |
| 5.88%, 12/15/38 | 3,650 | 3,723,985 |
| Series A, 5.50%, 06/15/41 | 5,500 | 5,737,765 |
| Series A (AGC), 5.63%, 12/15/28 | 1,250 | 1,278,662 |
| 5.50%, 12/15/38 | 1,000 | 1,021,980 |
| Series AA, 5.50%, 06/15/39 | 5,520 | 5,896,961 |
| New Jersey Turnpike Authority, Refunding RB, Series B, 5.00%, 01/01/40 | 4,000 | 4,533,800 |
| Port Authority of New York & New Jersey, ARB: | | |
| Consolidated, 169th Series, 5.00%, 10/15/41 | 250 | 266,788 |
| Consolidated, 93rd Series, 6.13%, 06/01/94 | 5,000 | 5,941,900 |
| JFK International Air Terminal, Series 8, 6.00%, 12/01/42 | 2,700 | 2,952,396 |
| Port Authority of New York & New Jersey, Refunding ARB, Consolidated: 152nd Series, AMT, 5.75%, 11/01/30 | 2,300 | 2,300,000 |
| | <i>Par (000)</i> | <i>Value</i> |
| <i>Security</i> | | |
| Transportation (continued) | | |
| Port Authority of New York & New Jersey, Refunding ARB, Consolidated (continued): | | |
| 152nd Series, AMT, 5.25%, 11/01/35 | \$ 240 | \$ 240,000 |
| 166th Series, 5.25%, 07/15/36 | 4,000 | 4,313,920 |
| 172nd Series, AMT, 5.00%, 10/01/34 | 1,500 | 1,629,030 |
| 206th Series, AMT, 5.00%, 11/15/42 | 1,195 | 1,334,122 |
| 5.00%, 11/15/47 | 1,335 | 1,484,707 |
| South Jersey Port Corp., Refunding ARB, Marine Terminal, Series B, AMT, 5.00%, 01/01/48 | 1,585 | 1,686,075 |
| | | 106,194,876 |
| Utilities 1.7% | | |
| Rahway Valley Sewerage Authority, RB, CAB, Series A (NPFGC), 0.00%, 09/01/31 ^(d) | 6,000 | 3,763,320 |
| Total Municipal Bonds in New Jersey | | 281,153,036 |

Puerto Rico 1.1%

Tobacco 1.1%

Children s Trust Fund, Refunding RB, Tobacco Settlement Asset-Backed Bonds:

| | | |
|-----------------|-------|-----------|
| 5.50%, 05/15/39 | 1,275 | 1,243,940 |
| 5.63%, 05/15/43 | 1,220 | 1,166,698 |

Total Municipal Bonds in Puerto Rico 2,410,638

Total Municipal Bonds 127.3%

(Cost \$271,235,289) 283,563,674

Municipal Bonds Transferred to Tender Option Bond Trusts^(e)

New Jersey 36.8%

County/City/Special District/School District 9.0%

| | | |
|--|-------|-----------|
| County of Hudson New Jersey Improvement Authority, RB, Hudson County Vocational-Technical Schools Project, 5.25%, 05/01/51 | 1,440 | 1,623,020 |
|--|-------|-----------|

Schedule of Investments (unaudited) (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

April 30, 2018

(Percentages shown are based on Net Assets)

| <i>Security</i> | <i>Par</i> | <i>Value</i> |
|--|--------------|--------------|
| | <i>(000)</i> | |
| County/City/Special District/School District (continued) | | |
| County of Union New Jersey Utilities Authority, Refunding RB, Series A, AMT: County Deficiency Agreement, 5.00%, 06/15/41 | | |
| | \$ 4,112 | \$ 4,431,866 |
| Resource Recovery Facility, Covanta Union, Inc., 5.25%, 12/01/31 | 12,820 | 13,997,389 |
| | | 20,052,275 |
| Education 3.8% | | |
| Rutgers The State University of New Jersey, Refunding RB: Series F, 5.00%, 05/01/19 ^(c) | | |
| | 2,011 | 2,073,569 |
| Series L, 5.00%, 05/01/43 | 5,870 | 6,465,453 |
| | | 8,539,022 |
| Health 1.3% | | |
| New Jersey Health Care Facilities Financing Authority, RB, Inspira Health Obligated Group, 4.00%, 07/01/47 | | |
| | 2,987 | 2,982,063 |
| State 7.0% | | |
| Garden State Preservation Trust, RB, Election of 2005, Series A (AGM), 5.75%, 11/01/28 | | |
| | 5,460 | 6,425,275 |
| New Jersey EDA, RB, School Facilities Construction (AGC) ^(c) : 6.00%, 12/15/18 | | |
| | 3,550 | 3,640,517 |
| 6.00%, 12/15/18 | 50 | 51,517 |
| New Jersey EDA, Refunding RB, School Facilities Construction, Series NN, 5.00%, 03/01/29 ^(f) | | |
| | 5,230 | 5,511,050 |
| | | 15,628,359 |
| Transportation 15.7% | | |
| New Jersey State Turnpike Authority, RB, Series A, 5.00%, 07/01/22 ^{(c)(f)} | | |
| | 8,820 | 9,787,819 |
| <i>Security</i> | | |
| | <i>(000)</i> | <i>Value</i> |
| Transportation (continued) | | |
| New Jersey Transportation Trust Fund Authority, RB, Transportation System: Series A (AMBAC) (AGM), 5.00%, 12/15/32 | | |
| | \$ 4,100 | \$ 4,108,589 |
| Series B, 5.25%, 06/15/36 ^(f) | 5,001 | 5,200,416 |
| Port Authority of New York & New Jersey, Refunding ARB, Consolidated, AMT: 152nd Series, 5.25%, 11/01/35 | | |
| | 3,764 | 3,763,701 |
| 169th Series, 5.00%, 10/15/41 | 11,257 | 12,001,020 |
| | | 34,861,545 |
| Total Municipal Bonds Transferred to Tender Option Bond Trusts 36.8% | | |
| (Cost \$78,457,012) | | 82,063,264 |
| | | 365,626,938 |

Total Long-Term Investments 164.1%
(Cost \$349,692,301)

| | <i>Shares</i> | |
|--|---------------|----------------|
| Short-Term Securities 0.9% | | |
| BlackRock Liquidity Funds, MuniCash, Institutional Class, 1.48% ^{(g)(h)} | 2,006,441 | 2,006,441 |
| Total Short-Term Securities 0.9% (Cost \$2,006,441) | | 2,006,441 |
| Total Investments 165.0% (Cost \$351,698,742) | | 367,633,379 |
| Other Assets Less Liabilities 2.0% | | 4,558,211 |
| Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable (21.2)% | | (47,344,052) |
| VRDP Shares at Liquidation Value, Net of Deferred Offering Costs (45.8)% | | (101,991,285) |
| Net Assets Applicable to Common Shares 100.0% | | \$ 222,856,253 |

(a) Security is collateralized by municipal bonds or U.S. Treasury obligations.

(b) Security exempt from registration pursuant to Rule 144A under the Securities Act of 1933, as amended. These securities may be resold in transactions exempt from registration to qualified institutional investors.

(c) U.S. 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.

(d) Zero-coupon bond.

(e) Represent bonds transferred to a TOB Trust in exchange of cash and residual certificates received by the Fund. These bonds serve as collateral in a secured borrowing.

(f) All or a portion of security is subject to a recourse agreement. The aggregate maximum potential amount the Fund could ultimately be required to pay under the agreements, which expires between June 15, 2019 to September 1, 2020, is \$14,350,925.

(g) Annualized 7-day yield as of period end.

(h) During the period ended April 30, 2018, investments in issuers considered to be an affiliate of the Fund for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Schedule of Investments (unaudited) (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

April 30, 2018

| | <i>Shares Held at 07/31/17</i> | <i>Net Activity</i> | <i>Shares Held at 04/30/18</i> | <i>Value at 04/30/18</i> | <i>Income</i> | <i>Change in Net Unrealized Realized Appreciation (Loss) (Depreciation)</i> |
|--|--|-------------------------|--|------------------------------|---------------|---|
| <i>Affiliated</i> | | | | | | |
| BlackRock Liquidity Funds, MuniCash, Institutional Class | 7,054,161 | (5,047,720) | 2,006,441 | \$ 2,006,441 | \$ 13,314 | \$ (199) \$ (268) |

(a) Includes net capital gain distributions, if applicable.

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

Derivative Financial Instruments Outstanding as of Period End**Futures Contracts**

| <i>Description</i> | <i>Number of Contracts</i> | <i>Expiration Date</i> | <i>Notional Amount (000)</i> | <i>Value/ Unrealized Appreciation (Depreciation)</i> |
|----------------------------|--------------------------------|----------------------------|----------------------------------|--|
| Short Contracts: | | | | |
| 10-Year U.S. Treasury Note | 44 | 06/20/18 | \$ 5,264 | \$ 35,105 |
| Long U.S. Treasury Bond | 41 | 06/20/18 | 5,898 | 16,741 |
| 5-Year U.S. Treasury Note | 22 | 06/29/18 | 2,497 | 14,726 |
| | | | | \$ 66,572 |

Portfolio Abbreviations

AGC Assured Guarantee Corp.

AGM Assured Guaranty Municipal Corp.

AMBAC American Municipal Bond Assurance Corp.

AMT Alternative Minimum Tax (subject to)

ARB Airport Revenue Bonds

BAM Build America Mutual Assurance Co.

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

Schedule of Investments (unaudited) (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

April 30, 2018

Fair Value Hierarchy as of Period End

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

Level 1 Unadjusted price quotations in active markets/exchanges for identical assets or 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 fair value hierarchy classification is determined based on the lowest level input that is significant to the fair value measurement in its entirety. Investments classified within Level 3 have significant unobservable inputs used by the BlackRock Global Valuation Methodologies Committee (the Global Valuation Committee) in determining the price for Fair Valued Investments. Level 3 investments include equity or debt issued by privately held companies or funds. There may not be a secondary market, and/or there are a limited number of investors. Level 3 investments may also be adjusted to reflect illiquidity and/or non-transferability, with the amount of such discount estimated by the Global Valuation Committee in the absence of market information.

Changes in valuation techniques may result in transfers into or out of an assigned level within the hierarchy. In accordance with the Fund's policy, transfers between different levels of the fair value 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 investments and derivative financial instruments 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, refer to the Fund's most recent financial statements as contained in its semi-annual report.

As of April 30, 2018, the following tables summarize the Fund's investments and derivative financial instruments categorized in the disclosure hierarchy:

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| | <i>Level 1</i> | <i>Level 2</i> | <i>Level 3</i> | <i>Total</i> |
|---|----------------|----------------|----------------|----------------|
| Assets: | | | | |
| Investments: | | | | |
| Long-Term Investments ^(a) | \$ | \$ 365,626,938 | \$ | \$ 365,626,938 |
| Short-Term Securities | 2,006,441 | | | 2,006,441 |
| | \$ 2,006,441 | \$ 365,626,938 | \$ | \$ 367,633,379 |
| Derivative Financial Instruments ^(b) | | | | |
| Assets: | | | | |
| Interest rate contracts | \$ 66,572 | \$ | \$ | \$ 66,572 |

^(a) See above Schedule of Investments for values in each sector.

^(b) Derivative financial instruments are futures contracts which are valued at the unrealized appreciation (depreciation) on the instrument.

The Fund may hold assets and/or liabilities in which the fair value approximates the carrying amount for financial reporting purposes. As of period end, such assets and/or liabilities are categorized within the disclosure hierarchy as follows:

| | <i>Level 1</i> | <i>Level 2</i> | <i>Level 3</i> | <i>Total</i> |
|----------------------------------|----------------|------------------|----------------|------------------|
| Liabilities: | | | | |
| TOB Trust Certificates | \$ | \$ (47,126,371) | \$ | \$ (47,126,371) |
| VRDP Shares at Liquidation Value | | (102,200,000) | | (102,200,000) |
| | \$ | \$ (149,326,371) | \$ | \$ (149,326,371) |

During the period ended April 30, 2018, there were no transfers between levels.

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 18, 2018

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 18, 2018

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

Date: June 18, 2018