

BLACKROCK MUNIYIELD NEW JERSEY FUND INC
 Form N-Q
 June 26, 2009

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: Donald C. Burke, Chief Executive Officer, BlackRock
 MuniYield New Jersey Fund, Inc., 800 Scudders Mill Road, Plainsboro, NJ, 08536. Mailing
 address: P.O. Box 9011, Princeton, NJ, 08543-9011

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

Date of fiscal year end: 07/31/2009

Date of reporting period: 04/30/2009

Item 1 Schedule of Investments

BlackRock MuniYield New Jersey Fund, Inc.

Schedule of Investments April 30, 2009 (Unaudited)

(Percentages shown are based on Net Assets)

| | | Par (000) | Value |
|--|---|--------------|--------------|
| Municipal Bonds | | | |
| New Jersey - 146.0% | | | |
| Corporate - 1.6% | Gloucester County, New Jersey, Improvement Authority, Solid Waste Resource Recovery, Revenue Refunding Bonds (Waste Management Inc. Project), AMT, Series B, 7%, 12/01/29 | \$ 1,180 | \$ 1,188,024 |
| | Gloucester County, New Jersey, Improvement Authority, Solid Waste Resource Recovery, Revenue Refunding Bonds (Waste Management Inc. Project), Series A, 6.85%, 12/01/29 | 2,000 | 2,010,640 |
| | | | 3,198,664 |
| County/City/Special District/School | Burlington County, New Jersey, Bridge Commission Revenue Bonds (Governmental Leasing Program), 5.25%, 8/15/12 (a) | 1,000 | 1,127,200 |
| District - 26.1% | Essex County, New Jersey, Improvement Authority, Project Consolidation Revenue Refunding Bonds, 5.50%, 10/01/29 (b) | 5,085 | 5,288,349 |

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| | | |
|--|-------|-----------|
| Essex County, New Jersey, Improvement Authority Revenue Bonds, Series A, 5%, 10/01/13 (a)(c) | 2,620 | 3,001,000 |
| Hudson County, New Jersey, COP, Refunding, 6.25%, 12/01/16 (b) | 1,500 | 1,645,245 |
| Hudson County, New Jersey, Improvement Authority, Facility Lease Revenue Refunding Bonds (Hudson County Lease Project), 5.375%, 10/01/24 (b)(c) | 4,500 | 4,531,815 |
| Hudson County, New Jersey, Improvement Authority, Parking Revenue Bonds (Harrison Parking Facility Project), Series C, 5.375%, 1/01/44 (d) | 4,800 | 4,934,112 |
| Jackson Township, New Jersey, School District, GO, 5%, 4/15/12 (a)(c) | 6,840 | 7,574,206 |
| Middlesex County, New Jersey, Improvement Authority, County- Guaranteed Revenue Bonds (Golf Course Projects), 5.25%, 6/01/22 | 1,455 | 1,568,432 |
| Middlesex County, New Jersey, Improvement Authority, Senior Revenue Bonds (Heldrich Center Hotel/Conference Project), Series A, 5%, 1/01/20 | 655 | 403,473 |
| Monmouth County, New Jersey, Improvement Authority, Governmental Loan Revenue Refunding Bonds, 5%, 12/01/11 (a)(e) | 2,085 | 2,290,060 |
| Monmouth County, New Jersey, Improvement Authority, Governmental Loan Revenue Refunding Bonds, 5%, 12/01/15 (e) | 1,215 | 1,251,462 |
| Monmouth County, New Jersey, Improvement Authority, Governmental Loan Revenue Refunding Bonds, 5%, 12/01/16 (e) | 1,280 | 1,312,691 |
| Morristown, New Jersey, Parking Authority Revenue Bonds, 4.50%, 8/01/37 (b) | 585 | 541,956 |
| Newark, New Jersey, Housing Authority, Port Authority-Port Newark Marine Terminal, Additional Rent-Backed Revenue Refunding Bonds (City of Newark Redevelopment Projects), 4.375%, 1/01/37 (b) | 3,225 | 2,792,624 |

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 list below.

| | | | |
|-------------|--------------------------------------|------------|------------------------------------|
| AMT | Alternative Minimum Tax (subject to) | EDR | Economic Development Revenue Bonds |
| CABS | Capital Appreciation Bonds | GO | General Obligation Bonds |
| COP | Certificates of Participation | M/F | Multi-Family |
| EDA | Economic Development Authority | S/F | Single-Family |

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Schedule of Investments April 30, 2009 (Unaudited)

(Percentages shown are based on Net Assets)

| | Par (000) | Value |
|---|--------------|--------------|
| Municipal Bonds | | |
| Perth Amboy, New Jersey, GO (Convertible CABS), Refunding, 5.30%, 7/01/33 (f)(g) | \$ 1,575 | \$ 1,296,288 |
| Perth Amboy, New Jersey, GO (Convertible CABS), Refunding, 5.294%, 7/01/34 (f)(g) | 1,925 | 1,577,961 |
| Salem County, New Jersey, Improvement Authority Revenue Bonds (Finlaw State Office Building Project), 5.375%, 8/15/28 (f) | 500 | 522,570 |
| Salem County, New Jersey, Improvement Authority Revenue Bonds (Finlaw State Office Building Project), 5.25%, 8/15/38 (f) | 500 | 513,140 |
| South Jersey Port Corp. of New Jersey, Revenue Refunding Bonds, 4.75%, 1/01/18 | 4,280 | 4,444,609 |
| South Jersey Port Corp. of New Jersey, Revenue Refunding Bonds, 4.85%, 1/01/19 | 2,485 | 2,571,727 |
| South Jersey Port Corp. of New Jersey, Revenue Refunding Bonds, 5%, 1/01/20 | 2,000 | 2,069,600 |
| | | 51,258,520 |
| Education - 18.2% | | |
| New Jersey State Educational Facilities Authority Revenue Bonds (Georgian Court College Project), Series C, 6.50%, 7/01/13 (a) | 2,000 | 2,393,700 |
| New Jersey State Educational Facilities Authority Revenue Bonds (Montclair State University), Series J, 5.25%, 7/01/38 | 1,140 | 1,153,976 |
| New Jersey State Educational Facilities Authority Revenue Bonds (Rider University), Series C, 5%, 7/01/37 (h) | 1,750 | 1,342,775 |
| New Jersey State Educational Facilities Authority Revenue Bonds (Rowan University), Series C, 5%, 7/01/14 (a)(b) | 1,955 | 2,239,550 |
| New Jersey State Educational Facilities Authority Revenue Bonds (Rowan University), Series C, 5.125%, 7/01/14 (a)(b) | 2,165 | 2,493,344 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (College of New Jersey), Series D, 5%, 7/01/35 (f) | 6,115 | 6,254,544 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (Gregorian Court University), Series D, 5.25%, 7/01/37 | 1,000 | 802,400 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (Montclair State University), Series L, 5%, 7/01/14 (a)(b) | 5,305 | 6,077,143 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (Ramapo College), Series I, 4.25%, 7/01/31 (e) | 750 | 656,123 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (Ramapo College), Series I, 4.25%, 7/01/36 (e) | 810 | 688,322 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (Rider University), 5%, 7/01/17 (h) | 1,000 | 952,200 |

| | | |
|---|-------|-----------|
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (Rider University), Series A, 5.50%, 7/01/23 (h) | 1,255 | 1,222,395 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (Rider University), Series A, 5.25%, 7/01/34 (h) | 1,450 | 1,206,502 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (Rowan University), Series B, 5%, 7/01/24 (d) | 1,800 | 1,921,266 |

BlackRock MuniYield New Jersey Fund, Inc.

Schedule of Investments April 30, 2009 (Unaudited)

(Percentages shown are based on Net Assets)

| | Par (000) | Value |
|---|--------------|--------------|
| Municipal Bonds | | |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (University of Medicine and Dentistry), Series B, 7.125%, 12/01/23 | \$ 1,300 | \$ 1,350,557 |
| New Jersey State Educational Facilities Authority, Revenue Refunding Bonds (University of Medicine and Dentistry), Series B, 7.50%, 12/01/32 | 1,625 | 1,655,891 |
| New Jersey State Higher Education Assistance Authority, Student Loan Revenue Bonds, AMT, Series A, 5.30%, 6/01/17 (e) | 3,170 | 3,187,086 |
| | | 35,597,774 |
| Health - 24.0% | | |
| New Jersey EDA, EDR (Masonic Charity Foundation of New Jersey), 5.25%, 6/01/24 | 1,425 | 1,413,215 |
| New Jersey EDA, EDR (Masonic Charity Foundation of New Jersey), 5.25%, 6/01/32 | 685 | 633,269 |
| New Jersey EDA, First Mortgage Revenue Refunding Bonds (The Winchester Gardens at Ward Homestead Project), Series A, 5.75%, 11/01/24 | 2,500 | 2,098,925 |
| New Jersey EDA, First Mortgage Revenue Refunding Bonds (The Winchester Gardens at Ward Homestead Project), Series A, 5.80%, 11/01/31 | 2,000 | 1,564,820 |
| New Jersey EDA, Revenue Bonds (Saint Barnabas Project), Series A, 6.249%, 7/01/24 (b)(i) | 3,850 | 1,403,325 |
| New Jersey Health Care Facilities Financing Authority, Health System Revenue Bonds (Catholic Health East), Series A, 5.375%, 11/15/12 (a) | 1,100 | 1,251,580 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Children's Specialized Hospital), Series A, 5.50%, 7/01/36 | 1,540 | 1,187,617 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Hospital Asset Transformation Program), Series A, 5.25%, 10/01/38 | 1,000 | 986,680 |

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| | | |
|--|-------|-----------|
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Hunterdon Medical Center), Series A, 5.125%, 7/01/35 | 1,950 | 1,587,475 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Meridian Health), Series I, 5%, 7/01/38 (d) | 1,000 | 980,370 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Pascack Valley Hospital Association), 6.625%, 7/01/36 (j)(k) | 1,845 | 47,785 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Robert Wood University), 5.70%, 7/01/20 (e) | 4,000 | 4,026,160 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Somerset Medical Center), 5.50%, 7/01/33 | 1,875 | 972,619 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (South Jersey Hospital System), 6%, 7/01/12 (a) | 6,640 | 7,592,442 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Southern Ocean County Hospital), 5.125%, 7/01/31 (h) | 2,000 | 1,563,780 |
| New Jersey Health Care Facilities Financing Authority Revenue Bonds (Virtua Health), 5.50%, 7/01/38 (d) | 2,500 | 2,453,500 |

3

BlackRock MuniYield New Jersey Fund, Inc.

Schedule of Investments April 30, 2009 (Unaudited)

(Percentages shown are based on Net Assets)

| | Par (000) | Value |
|---|--------------|--------------|
| Municipal Bonds | | |
| New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Atlantic City Medical Center), 5.75%, 7/01/12 (a) | \$ 1,060 | \$ 1,188,398 |
| New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Atlantic City Medical Center), 6.25%, 7/01/12 (a) | 500 | 568,235 |
| New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Atlantic City Medical Center), 6.25%, 7/01/17 | 520 | 544,372 |
| New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Atlantic City Medical Center), 5.75%, 7/01/25 | 520 | 521,446 |
| New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Capital Health System Inc.), Series A, 5.75%, 7/01/13 | 1,650 | 1,889,877 |
| New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Meridian Health System Obligation Group), 5.25%, 7/01/19 (f) | 1,500 | 1,506,045 |
| New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Meridian Health System Obligation Group), 5.375%, 7/01/24 (f) | 2,250 | 2,250,697 |
| New Jersey Health Care Facilities Financing Authority, Revenue | | |

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| | | | |
|------------------------|---|--------|------------|
| | Refunding Bonds (Meridian Health System Obligation Group), 5.25%, 7/01/29 (f) | 2,195 | 2,072,277 |
| | New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Saint Barnabas Health Care System), Series A, 5%, 7/01/29 | 4,155 | 3,066,016 |
| | New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Saint Barnabas Health Care System), Series B, 5.902%, 7/01/30 (i) | 2,000 | 282,640 |
| | New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Saint Barnabas Health Care System), Series B, 5.697%, 7/01/36 (i) | 500 | 39,340 |
| | New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (Saint Barnabas Health Care System), Series B, 5.176%, 7/01/37 (i) | 13,250 | 949,362 |
| | New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (South Jersey Hospital System), 5%, 7/01/36 | 1,385 | 1,142,763 |
| | New Jersey Health Care Facilities Financing Authority, Revenue Refunding Bonds (South Jersey Hospital System), 5%, 7/01/46 | 1,650 | 1,309,176 |
| | | | 47,094,206 |
| Housing - 13.3% | New Jersey State Housing and Mortgage Finance Agency, Capital Fund Program Revenue Bonds, Series A, 4.70%, 11/01/25 (f) | 6,950 | 6,749,493 |
| | New Jersey State Housing and Mortgage Finance Agency, Home Buyer Revenue Bonds, AMT, Series CC, 5.80%, 10/01/20 (b) | 4,515 | 4,649,050 |
| | New Jersey State Housing and Mortgage Finance Agency, Home Buyer Revenue Bonds, AMT, Series U, 5.60%, 10/01/12 (b) | 2,515 | 2,530,643 |
| | New Jersey State Housing and Mortgage Finance Agency, M/F Revenue Bonds, AMT, Series A, 4.90%, 11/01/35 (c) | 1,500 | 1,309,245 |

4

BlackRock MuniYield New Jersey Fund, Inc.

Schedule of Investments April 30, 2009 (Unaudited)

(Percentages shown are based on Net Assets)

| | Par (000) | Value |
|--|--------------|--------------|
| Municipal Bonds | | |
| New Jersey State Housing and Mortgage Finance Agency Revenue Bonds, Series AA, 6.50%, 10/01/38 | \$ 2,160 | \$ 2,295,799 |
| New Jersey State Housing and Mortgage Finance Agency, S/F Housing Revenue Bonds, AMT, Series U, 4.95%, 10/01/32 | 700 | 630,889 |
| New Jersey State Housing and Mortgage Finance Agency, S/F Housing Revenue Bonds, AMT, Series X, 4.85%, 4/01/16 | 3,605 | 3,694,584 |

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| | | | |
|----------------------|---|--------|-------------------------|
| | New Jersey State Housing and Mortgage Finance Agency, S/F Housing Revenue Refunding Bonds, AMT, Series T, 4.65%, 10/01/32 | 4,945 | 4,216,255 26,075,958 |
| State - 35.6% | Garden State Preservation Trust of New Jersey, Capital Appreciation Revenue Bonds, Series B, 5.116%, 11/01/23 (f)(i) | 6,860 | 3,504,637 |
| | Garden State Preservation Trust of New Jersey, Capital Appreciation Revenue Bonds, Series B, 5.247%, 11/01/28 (f)(i) | 4,540 | 1,668,178 |
| | Garden State Preservation Trust of New Jersey, Open Space and Farmland Preservation Revenue Bonds, Series A, 5.80%, 11/01/22 (f) | 4,300 | 4,861,064 |
| | New Jersey EDA, Cigarette Tax Revenue Bonds, 5.75%, 6/15/29 (h) | 1,895 | 1,399,401 |
| | New Jersey EDA, Cigarette Tax Revenue Bonds, 5.50%, 6/15/31 (h) | 370 | 258,956 |
| | New Jersey EDA, Cigarette Tax Revenue Bonds, 5.75%, 6/15/34 (h) | 755 | 537,243 |
| | New Jersey EDA, Motor Vehicle Surcharge Revenue Bonds, Series A, 5.25%, 7/01/33 (b) | 14,000 | 13,960,940 |
| | New Jersey EDA, Revenue Bonds (Department of Human Services), 5%, 7/01/12 | 220 | 238,894 |
| | New Jersey EDA, School Facilities Construction Revenue Bonds, Series L, 5%, 3/01/30 (f) | 5,800 | 5,869,832 |
| | New Jersey EDA, School Facilities Construction Revenue Bonds, Series O, 5.25%, 3/01/23 | 2,400 | 2,477,664 |
| | New Jersey EDA, School Facilities Construction Revenue Bonds, Series P, 5%, 9/01/15 | 3,000 | 3,298,320 |
| | New Jersey EDA, School Facilities Construction Revenue Bonds, Series P, 5.25%, 9/01/16 | 3,115 | 3,429,677 |
| | New Jersey EDA, School Facilities Construction Revenue Bonds, Series Z, 5.50%, 12/15/34 (d) | 3,665 | 3,901,686 |
| | New Jersey EDA, School Facilities Construction Revenue Bonds, Series Z, 6%, 12/15/34 (d) | 3,600 | 3,970,800 |
| | New Jersey State, COP (Equipment Lease Purchase Agreement), Series A, 5.25%, 6/15/28 | 1,100 | 1,102,497 |
| | New Jersey State Transit Corporation, COP (Federal Transit Administration Grants), Series B, 5.75%, 9/15/14 | 3,620 | 3,848,748 |
| | New Jersey State Transportation Trust Fund Authority, Transportation System Revenue Bonds, CABS, Series C, 5.05%, 12/15/35 (e)(i) | 4,140 | 793,886 |
| | New Jersey State Transportation Trust Fund Authority, Transportation System Revenue Bonds, Series A, 5.50%, 12/15/21 | 3,525 | 3,848,701 |

BlackRock MuniYield New Jersey Fund, Inc.

Schedule of Investments April 30, 2009 (Unaudited)

(Percentages shown are based on Net Assets)

| | Par (000) | Value |
|--|--------------|--------------|
| Municipal Bonds | | |
| New Jersey State Transportation Trust Fund Authority, Transportation System Revenue Bonds, Series A, 5.625%, 12/15/28 (d) | \$ 1,250 | \$ 1,319,788 |
| New Jersey State Transportation Trust Fund Authority, Transportation System Revenue Bonds, Series A, 6%, 12/15/38 | 2,900 | 3,135,335 |
| New Jersey State Transportation Trust Fund Authority, Transportation System Revenue Refunding Bonds, Series B, 5.50%, 12/15/21 | 5,865 | 6,403,583 |
| | | 69,829,830 |
| Tobacco - 4.9% | | |
| Tobacco Settlement Financing Corp. of New Jersey, Asset-Backed Revenue Bonds, 7%, 6/01/13 (a) | 3,010 | 3,644,659 |
| Tobacco Settlement Financing Corp. of New Jersey, Asset-Backed Revenue Bonds, 5.75%, 6/01/32 | 1,820 | 1,965,363 |
| Tobacco Settlement Financing Corp. of New Jersey, Asset-Backed Revenue Refunding Bonds, Series 1A, 4.50%, 6/01/23 | 3,000 | 2,520,330 |
| Tobacco Settlement Financing Corp. of New Jersey, Asset-Backed Revenue Refunding Bonds, Series 1A, 5%, 6/01/41 | 2,500 | 1,318,125 |
| Tobacco Settlement Financing Corp. of New Jersey, Asset-Backed Revenue Refunding Bonds, Series 1B, 5.651%, 6/01/41 (i) | 5,100 | 182,121 |
| | | 9,630,598 |
| Transportation - 14.0% | | |
| Delaware River Port Authority of Pennsylvania and New Jersey Revenue Bonds, 6%, 1/01/19 (f) | 7,860 | 7,961,237 |
| New Jersey State Transportation Trust Fund Authority, Transportation System Revenue Bonds, Series A, 5.50%, 12/15/38 (d) | 1,000 | 1,054,180 |
| New Jersey State Turnpike Authority, Turnpike Revenue Bonds, Series B, 5.985%, 1/01/35 (e)(i) | 4,870 | 3,478,592 |
| New Jersey State Turnpike Authority, Turnpike Revenue Bonds, Series E, 5.25%, 1/01/40 | 2,600 | 2,613,520 |
| Port Authority of New York and New Jersey, Consolidated Revenue Bonds, 93rd Series, 6.125%, 6/01/94 | 5,000 | 5,556,900 |
| Port Authority of New York and New Jersey, Consolidated Revenue Refunding Bonds, AMT, 152nd Series, 5.75%, 11/01/30 | 3,300 | 3,323,727 |
| Port Authority of New York and New Jersey, Consolidated Revenue Refunding Bonds, AMT, 152nd Series, 5.25%, 11/01/35 | 3,765 | 3,520,162 |
| | | 27,508,318 |

| | | | |
|-------------------------|---|-------|-----------|
| Utilities - 8.3% | New Jersey EDA, Water Facilities Revenue Bonds (New Jersey-American Water Company, Inc. Project), AMT, Series A, 5.25%, 11/01/32 (e) | 1,000 | 807,450 |
| | New Jersey EDA, Water Facilities Revenue Bonds (New Jersey-American Water Company, Inc. Project), AMT, Series A, 6.875%, 11/01/34 (c) | 6,670 | 6,618,441 |
| | New Jersey EDA, Water Facilities Revenue Refunding Bonds (United Water of New Jersey, Inc.), Series B, 4.50%, 11/01/25 (e) | 4,500 | 4,544,685 |

6

BlackRock MuniYield New Jersey Fund, Inc.

| Schedule of Investments April 30, 2009 (Unaudited) | | (Percentages shown are based on Net Assets) | |
|--|--|---|--------------|
| | | Par (000) | Value |
| | Municipal Bonds | | |
| | Rahway Valley Sewerage Authority, New Jersey, Sewer Revenue Bonds, CABS, Series A, 4.87%, 9/01/31 (b)(i) | \$ 6,000 | \$ 1,630,140 |
| | Union County, New Jersey, Utilities Authority, Senior Lease Revenue Refunding Bonds (Ogden Martin System of Union, Inc.), AMT, Series A, 5.375%, 6/01/17 (e) | 1,585 | 1,586,474 |
| | Union County, New Jersey, Utilities Authority, Senior Lease Revenue Refunding Bonds (Ogden Martin System of Union, Inc.), AMT, Series A, 5.375%, 6/01/18 (e) | 1,175 | 1,168,608 |
| | | | 16,355,798 |
| | Total Municipal Bonds in New Jersey | | 286,549,666 |
| Puerto Rico - 3.6% | | | |
| Education - 1.1% | Puerto Rico Industrial, Tourist, Educational, Medical and Environmental Control Facilities Revenue Bonds (University Plaza Project), Series A, 5%, 7/01/33 (b) | 2,500 | 2,165,800 |
| Transportation - 1.6% | Puerto Rico Commonwealth Highway and Transportation Authority, Highway Revenue Refunding Bonds, Series CC, 5.50%, 7/01/31 (d) | 3,000 | 3,121,410 |
| Utilities - 0.9% | Puerto Rico Industrial, Tourist, Educational, Medical and Environmental Control Facilities Revenue Bonds (Cogeneration Facility-AES Puerto Rico Project), AMT, 6.625%, 6/01/26 | 1,900 | 1,782,789 |
| | Total Municipal Bonds in Puerto Rico | | 7,069,999 |
| U.S. Virgin Islands - 2.1% | | | |
| Corporate - 2.1% | Virgin Islands Government Refinery Facilities, Revenue Refunding | | |

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| | | | |
|---------------------------------|---|---------------|----------------|
| | Bonds (Hovensa Coker Project), AMT, 6.50%, 7/01/21 Virgin Islands Public Finance Authority, Refinery Facilities Revenue | 3,500 | 2,745,015 |
| | Bonds (Hovensa Refinery), AMT, 5.875%, 7/01/22 | 1,900 | 1,347,993 |
| | Total Municipal Bonds in U.S. Virgin Islands | | 4,093,008 |
| | Total Municipal Bonds - 151.7% | | 297,712,673 |
| New Jersey - 3.2% | Municipal Bonds Transferred to Tender Option Bond Trusts (I) | | |
| | Garden State Preservation Trust of New Jersey, Open Space and Farmland Preservation Revenue Bonds, Series A, 5.75%, 11/01/28 (f) | 5,460 | 6,347,687 |
| State - 3.2% | Total Municipal Bonds Transferred to Tender Option Bond Trusts - 3.2% | | 6,347,687 |
| | Total Long-Term Investments (Cost - \$309,803,793) - 154.9% | | 304,060,360 |
| | Short-Term Securities | Shares | |
| Money Market Fund - 1.1% | CMA New Jersey Municipal Money Fund, 0.33% (m)(n) | 2,180,363 | 2,180,363 |
| | Total Short-Term Securities (Cost - \$2,180,363) - 1.1% | | 2,180,363 |
| | Total Investments (Cost - \$311,984,156*) - 156.0% | | 306,240,723 |
| | Liabilities in Excess of Other Assets - (0.5)% | | (1,106,889) |
| | Liability for Trust Certificates, Including Interest Expense and Fees Payable - (2.1)% | | (4,112,506) |
| | Preferred Shares, at Redemption Value - (53.4)% | | (104,738,581) |
| | Net Assets Applicable to Common Shares - 100.0% | | \$ 196,282,747 |

7

BlackRock MuniYield New Jersey Fund, Inc.

Schedule of Investments April 30, 2009 (Unaudited)

* The cost and unrealized appreciation (depreciation) of investments as of April 30, 2009, as

computed for federal income tax purposes, were as follows:

| | | |
|-------------------------------|----|--------------|
| Aggregate cost | \$ | 307,182,981 |
| Gross unrealized appreciation | \$ | 12,409,234 |
| Gross unrealized depreciation | | (17,446,492) |
| Net unrealized depreciation | \$ | (5,037,258) |

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- (a) 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.
- (b) NPFGC Insured.
- (c) FGIC Insured.
- (d) Assured Guaranty Insured.
- (e) AMBAC Insured.
- (f) FSA Insured.
- (g) 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 reflects the effective yield as of report date.
- (h) Radian Insured.
- (i) Represents a zero-coupon bond. Rate shown reflects the current yield as of report date.
- (j) Issuer filed for bankruptcy or is in default of interest payments.
- (k) Non-income producing security.
- (l) 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.
- (m) Represents the current yield as of report date.
- (n) Investments in companies considered to be an affiliate of the Fund, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, were as follows:

| Affiliate | Net Activity | Income |
|-------------------------------------|-------------------------|---------------|
| CMA New Jersey Municipal Money Fund | (2,258,408) | \$ 44,328 |

Effective August 1, 2008, the Fund adopted Financial Accounting Standards Board Statement of Financial Accounting Standards No. 157, "Fair Value Measurements" ("FAS 157"). FAS 157 clarifies the definition of fair value, establishes a framework for measuring fair values and requires additional disclosures about the use of 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 securities
- 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 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 circumstance, 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 methodology used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. For information about the Fund's policy regarding valuation of investments and other significant accounting policies, please refer to the Fund's most recent financial statements as contained in its semi-annual report.

8

BlackRock MuniYield New Jersey Fund, Inc.

Schedule of Investments April 30, 2009 (Unaudited)

The following table summarizes the inputs used as of April 30, 2009 in determining the fair valuation of the Fund's investments:

| Valuation Inputs | Investments in Securities Assets |
|---------------------|--|
| Level 1 | \$ 2,180,363 |
| Level 2 | 304,060,360 |
| Level 3 | - |
| Total | \$ 306,240,723 |

9

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 13(a)-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

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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/ Donald C. Burke

Donald C. Burke

Chief Executive Officer of

BlackRock MuniYield New Jersey Fund, Inc.

Date: June 19, 2009

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/ Donald C. Burke

Donald C. Burke

Chief Executive Officer (principal executive officer) of

BlackRock MuniYield New Jersey Fund, Inc.

Date: June 19, 2009

By: /s/ Neal J. Andrews

Neal J. Andrews

Chief Financial Officer (principal financial officer) of

BlackRock MuniYield New Jersey Fund, Inc.

Date: June 19, 2009
