

BLACKROCK MUNIYIELD NEW JERSEY FUND INC  
Form N-Q  
June 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 811-06570

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: Anne F. Ackerley, 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: 07/31/2010

Date of reporting period: 04/30/2010

Item 1 Schedule of Investments

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## Schedule of Investments April 30, 2010 (Unaudited)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
<b>New Jersey 132.2%</b>		
Corporate 3.5%		
New Jersey EDA, Refunding RB, New Jersey American Water Co., Series A, AMT, 5.70%, 10/01/39	\$ 2,925	\$ 2,987,244
Salem County Utilities Authority, Refunding RB, Atlantic City Electric, Series A, 4.88%, 6/01/29	4,550	4,579,848
		7,567,092
<b>County/City/Special District/School District 19.5%</b>		
Burlington County Bridge Commission, RB, Governmental Leasing Program, 5.25%, 8/15/12 (a)	1,000	1,100,740
City of Perth Amboy New Jersey, GO, CAB (AGM) (b):		
5.07%, 7/01/33	1,575	1,444,716
5.07%, 7/01/34	1,925	1,761,183
County of Hudson New Jersey, COP, Refunding (NPFGC), 6.25%, 12/01/16	1,500	1,720,380
Essex County Improvement Authority, Refunding RB, Project Consolidation (NPFGC), 5.50%, 10/01/29	5,085	5,738,626
Hudson County Improvement Authority, RB, Harrison Parking Facility Project, Series C (AGC), 5.38%, 1/01/44	4,800	5,119,728
Hudson County Improvement Authority, Refunding RB, Hudson County Lease Project (NPFGC), 5.38%, 10/01/24	4,500	4,536,315
Middlesex County Improvement Authority, RB:		
Golf Course Projects, 5.25%, 6/01/22	1,455	1,612,460
Senior, Heldrich Center Hotel, Series A, 5.00%, 1/01/20	655	370,258

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Monmouth County Improvement

Authority, RB, Governmental Loan

(AMBAC):

5.00%, 12/01/11 (a)	1,020	1,091,186
5.00%, 12/01/11 (a)	1,065	1,139,326
5.00%, 12/01/15	1,215	1,251,705
5.00%, 12/01/16	1,280	1,311,821

Morristown Parking Authority, RB

(NPFGC), 4.50%, 8/01/37

585	584,052
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Newark Housing Authority, Refunding

RB, Newark Redevelopment Project

(NPFGC), 4.38%, 1/01/37

2,875	2,719,405
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	Par (000)	Value
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New Jersey (continued)

County/City/Special District/School District (concluded)

Salem County Improvement Authority,

RB, Finlaw Street Office Building

(AGM):

5.38%, 8/15/28	\$ 500	\$ 543,080
5.25%, 8/15/38	500	527,825

South Jersey Port Corp., Refunding RB:

4.75%, 1/01/18	4,280	4,406,217
4.85%, 1/01/19	2,485	2,553,064
5.00%, 1/01/20	2,000	2,053,620
		41,585,707

Education 17.8%

New Jersey EDA, RB, School Facilities

Construction, Series CC-2 (c):

5.00%, 12/15/31	1,700	1,782,535
5.00%, 12/15/32	1,300	1,359,865

New Jersey Educational Facilities

Authority, RB:

Georgian Court College Project,

Series C, 6.50%, 7/01/13 (a)

2,000	2,330,000
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Montclair State University, Series J,

5.25%, 7/01/38

1,140	1,183,616
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Rider University, Series A (Radian),

5.50%, 7/01/23

1,255	1,281,568
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Rider University, Series A (Radian),

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5.25%, 7/01/34 Rider University, Series C (Radian),	1,450	1,381,270
5.00%, 7/01/37	1,750	1,627,203
<b>New Jersey Educational Facilities</b>		
Authority, Refunding RB:		
College of New Jersey, Series D (AGM), 5.00%, 7/01/35	6,115	6,330,187
Georgian Court University, Series D, 5.25%, 7/01/37	1,000	970,360
Montclair State University, Series L (NPFGC), 5.00%, 7/01/14 (a)	5,305	6,068,814
Ramapo College, Series I (AMBAC), 4.25%, 7/01/31	750	703,478
Ramapo College, Series I (AMBAC), 4.25%, 7/01/36	810	742,381
Rider University (Radian), 5.00%, 7/01/17	1,000	1,017,610
Rowan University, Series B (AGC), 5.00%, 7/01/24	1,800	1,937,286
University of Medicine & Dentistry, Series B, 7.13%, 12/01/23	1,300	1,501,942
University of Medicine & Dentistry, Series B, 7.50%, 12/01/32	1,625	1,861,129

### 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.	EDA	Economic Development Authority
AGM	Assured Guaranty Municipal Corp.	FGIC	Financial Guaranty Insurance Co.
AMBAC	American Municipal Bond Assurance Corp.	GO	General Obligation Bonds
AMT	Alternative Minimum Tax (subject to)	NPFGC	National Public Finance Guarantee Corp.
CAB	Capital Appreciation Bonds	RB	Revenue Bonds
COP	Certificates of Participation	S/F	Single-Family

BLACKROCK MUNIYIELD NEW JERSEY FUND, INC.

APRIL 30, 2010



## Schedule of Investments (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

(Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
<b>New Jersey (continued)</b>		
<b>Education (concluded)</b>		
New Jersey Higher Education Assistance		
Authority, Refunding RB, Series 1A:		
5.00%, 12/01/25	\$ 1,035	\$ 1,061,920
5.00%, 12/01/26	645	657,771
5.25%, 12/01/32	900	913,500
New Jersey State Higher Education		
Assistance Authority, RB, Series A,		
AMT (AMBAC), 5.30%, 6/01/17	3,170	3,172,948
		37,885,383
<b>Health 18.8%</b>		
New Jersey EDA, RB:		
CAB, St. Barnabas Health, Series A		
(NPFGC), 6.25%, 7/01/24 (d)	3,850	1,380,649
Masonic Charity Foundation of New		
Jersey, 5.25%, 6/01/24	1,425	1,443,953
Masonic Charity Foundation of New		
Jersey, 5.25%, 6/01/32	685	661,525
New Jersey EDA, Refunding RB, First		
Mortgage, Winchester, Series A:		
5.75%, 11/01/24	2,500	2,503,925
5.80%, 11/01/31	1,000	989,100
New Jersey Health Care Facilities		
Financing Authority, RB:		
Children's Specialized Hospital,		
Series A, 5.50%, 7/01/36	1,540	1,480,048
Health System, Catholic Health		
East, Series A, 5.38%, 11/15/12 (a)	1,100	1,219,449
Hospital Asset Transformation		
Program, Series A, 5.25%,		
10/01/38	1,300	1,312,272
Hunterdon Medical Center, Series A,		
5.13%, 7/01/35	1,950	1,871,337
Meridian Health, Series I (AGC),		

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5.00%, 7/01/38	1,000	1,009,950
Pascack Valley Hospital Association,		
6.63%, 7/01/36 (e)(f)	1,845	18
Robert Wood University (AMBAC),		
5.70%, 7/01/20	4,000	4,008,680
Southern Ocean County Hospital		
(Radian), 5.13%, 7/01/31	2,000	1,756,820
Virtua Health (AGC), 5.50%,		
7/01/38	2,500	2,651,250
New Jersey Health Care Facilities		
Financing Authority, Refunding RB:		
Atlantic City Medical Center, 5.75%,		
7/01/12 (a)	1,060	1,163,202
Atlantic City Medical Center, 6.25%,		
7/01/12 (a)	500	554,015
Atlantic City Medical System,		
6.25%, 7/01/17	520	546,811
Atlantic City Medical System,		
5.75%, 7/01/25	520	531,528
CAB, St. Barnabas Health, Series B,		
5.90%, 7/01/30 (d)	2,000	410,280

	Par	Value
Municipal Bonds	(000)	
<b>New Jersey (continued)</b>		
<b>Health (concluded)</b>		
New Jersey Health Care Facilities		
Financing Authority,		
Refunding RB (concluded):		
CAB, St. Barnabas Health, Series B,		
5.69%, 7/01/36 (d)	\$ 500	\$ 60,735
CAB, St. Barnabas Health, Series B,		
5.17%, 7/01/37 (d)	13,250	1,484,928
Capital Health System Obligation		
Group, Series A, 5.75%,		
7/01/13 (a)	1,650	1,850,953
Meridian Health System Obligation		
Group (AGM), 5.25%, 7/01/19	1,500	1,502,265
Meridian Health System Obligation		
Group (AGM), 5.38%, 7/01/24	2,250	2,252,497
Meridian Health System Obligation		

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Group (AGM), 5.25%, 7/01/29	2,195	2,195,856
South Jersey Hospital, 5.00%, 7/01/36	385	374,567
South Jersey Hospital, 5.00%, 7/01/46	1,650	1,572,598
St. Barnabas Health Care System, Series A, 5.00%, 7/01/29	4,155	3,375,273
		40,164,484
<b>Housing 16.3%</b>		
New Jersey State Housing & Mortgage		
Finance Agency, RB:		
Capital Fund Program, Series A (AGM), 4.70%, 11/01/25	6,950	7,055,154
Home Buyer, Series CC, AMT (NPFGC), 5.80%, 10/01/20	4,515	4,670,768
S/F Housing, Series CC, 5.00%, 10/01/34	3,455	3,477,112
S/F Housing, Series U, AMT, 4.95%, 10/01/32	700	692,496
S/F Housing, Series X, AMT, 4.85%, 4/01/16	3,605	3,740,656
S/F Housing, Series X, AMT, 5.05%, 4/01/18	600	620,406
Series A, 4.75%, 11/01/29	2,305	2,284,739
Series A, AMT (FGIC), 4.90%, 11/01/35	1,365	1,309,376
Series AA, 6.50%, 10/01/38	1,735	1,893,301
New Jersey State Housing & Mortgage		
Finance Agency, Refunding RB, S/F		
Housing, Series T, AMT, 4.65%, 10/01/32	4,945	4,758,227
Newark Housing Authority, RB, South		
Ward Police Facility (AGC):		
5.75%, 12/01/30	1,115	1,194,689
6.75%, 12/01/38	2,670	3,039,715
		34,736,639

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## Schedule of Investments (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

(Percentages shown are based on Net Assets)

Municipal Bonds	Par (000)	Value
<b>New Jersey (continued)</b>		
State 34.3%		
Garden State Preservation Trust, RB (AGM):		
CAB, Series B, 5.11%, 11/01/23 (d) \$	6,860	\$ 3,848,460
CAB, Series B, 5.25%, 11/01/28 (d)	4,540	1,932,451
Election of 2005, Series A, 5.80%, 11/01/22	4,300	5,023,303
New Jersey EDA, RB:		
Department of Human Services, Pooled, 5.00%, 7/01/12	220	235,954
Motor Vehicle Surcharge, Series A (NPFGC), 5.25%, 7/01/33	14,000	14,250,460
School Facilities Construction, Series L (AGM), 5.00%, 3/01/30	5,800	6,000,854
School Facilities Construction, Series O, 5.25%, 3/01/23	2,400	2,573,904
School Facilities Construction, Series P, 5.00%, 9/01/15	3,000	3,345,390
School Facilities Construction, Series P, 5.25%, 9/01/16	2,710	3,044,008
School Facilities Construction, Series Z (AGC), 5.50%, 12/15/34	3,665	4,007,678
School Facilities Construction, Series Z (AGC), 6.00%, 12/15/34	3,600	4,073,796
New Jersey EDA, Refunding RB, School Facilities Construction, Series AA, 5.50%, 12/15/29	3,300	3,577,959
New Jersey State Transit Corp., COP, Subordinate, Federal Transit Administration Grants, Series B, 5.75%, 9/15/14	3,620	3,897,111
New Jersey Transportation Trust Fund Authority, Transportation System, RB: CAB, Series C (AMBAC), 5.05%,		

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12/15/35 (d)	4,140	887,740
Series A, 6.00%, 12/15/38	2,900	3,221,088
Series A (AGC), 5.63%, 12/15/28	1,250	1,393,975
New Jersey Transportation Trust Fund		
Authority, Transportation System,		
Refunding RB:		
Series A, 5.50%, 12/15/21	3,525	4,009,405
Series B (NPFGC), 5.50%, 12/15/21	5,865	6,706,158
State of New Jersey, COP, Equipment		
Lease Purchase, Series A, 5.25%, 6/15/28	1,100	1,146,068
		73,175,762
<b>Tobacco 3.0%</b>		
Tobacco Settlement Financing Corp.		
New Jersey, Refunding RB, Series 1A, 4.50%, 6/01/23	6,720	6,418,541

	Par (000)	Value
Municipal Bonds		
<b>New Jersey (concluded)</b>		
<b>Transportation 11.0%</b>		
New Jersey State Turnpike Authority, RB:		
Growth & Income Securities,		
Series B (AMBAC),6.34%, 1/01/35 (b)	\$ 4,870	\$ 3,903,013
Series E, 5.25%, 1/01/40	5,475	5,730,682
New Jersey Transportation Trust Fund		
Authority, RB, Transportation System,		
Series A:		
5.88%, 12/15/38	3,050	3,346,857
(AGC), 5.50%, 12/15/38	1,000	1,091,690
Port Authority of New York & New Jersey, RB, Consolidated, 93 <sup>rd</sup> Series, 6.13%, 6/01/94		
	5,000	6,003,500
Port Authority of New York & New Jersey, Refunding RB, Consolidated, 152 <sup>nd</sup> Series, AMT, 5.75%, 11/01/30		
	3,300	3,524,367
		23,600,109

**Utilities 8.0%**

Cumberland County Improvement

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Authority, RB, Series A, 5.00%, 1/01/30	1,210	1,193,520
New Jersey EDA, RB, New Jersey American Water Co., Inc. Project, Series A, AMT (FGIC), 6.88%, 11/01/34	6,670	6,674,536
New Jersey EDA, Refunding RB, United Water of New Jersey Inc., Series B (AMBAC), 4.50%, 11/01/25	4,500	4,682,925
Rahway Valley Sewerage Authority, RB, CAB, Series A (NPFGC), 4.87%, 9/01/31 (d)	6,000	1,781,880
Union County Utilities Authority, Refunding RB, Senior Lease, Ogden Martin, Series A, AMT (AMBAC): 5.38%, 6/01/17	1,585	1,585,792
5.38%, 6/01/18	1,175	1,175,388
		17,094,041
Total Municipal Bonds in New Jersey		282,227,758
<b>Puerto Rico 5.9%</b>		
<b>Housing 0.9%</b>		
Puerto Rico Housing Finance Authority, Refunding RB, Subordinate, Capital Fund Modernization, 5.13%, 12/01/27	1,975	1,971,504
<b>State 3.0%</b>		
Puerto Rico Sales Tax Financing Corp., RB, First Sub-Series A, 5.75%, 8/01/37	6,000	6,361,500

BLACKROCK MUNIYIELD NEW JERSEY FUND, INC.

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## Schedule of Investments (continued)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
<b>Puerto Rico (concluded)</b>		
<b>Transportation 1.5%</b>		
Puerto Rico Highway & Transportation Authority, Refunding RB, Series CC (AGC), 5.50%, 7/01/31	\$ 3,000	\$ 3,264,420
<b>Utilities 0.5%</b>		
Puerto Rico Electric Power Authority, RB, Series WW, 5.50%, 7/01/38	1,000	1,027,050
Total Municipal Bonds in Puerto Rico		12,624,474
<b>U.S. Virgin Islands 1.7%</b>		
<b>Corporate 1.7%</b>		
United States Virgin Islands, Refunding RB, Senior Secured, Hovensa Coker Project, AMT, 6.50%, 7/01/21	3,500	3,545,640
Total Municipal Bonds in the U.S. Virgin Islands		3,545,640
Total Municipal Bonds 139.8%		298,397,872
Municipal Bonds Transferred to Tender		
Option Bond Trusts (g)		
<b>New Jersey 4.9%</b>		
<b>State 3.1%</b>		
Garden State Preservation Trust, RB, Election of 2005, Series A (AGM), 5.75%, 11/01/28	5,460	6,725,191
<b>Transportation 1.8%</b>		
Port Authority of New York & New Jersey, Refunding RB, Consolidated, 152 <sup>nd</sup> Series, AMT, 5.25%, 11/01/35	3,764	3,845,063
Total Municipal Bonds Transferred to Tender Option Bond Trusts 4.9%		10,570,254
Total Long-Term Investments (Cost \$300,178,942) 144.7%	308,968,126	
Short-Term Securities	Shares	
CMA New Jersey Municipal Money Fund, 0.04% (h)(i)	12,709,014	12,709,014
Total Short-Term Securities		

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(Cost \$12,709,014) 6.0% 12,709,014

	Value
Total Investments	
(Cost \$312,887,956*) 150.7%	\$ 321,677,140
Other Assets Less Liabilities 0.3%	598,019
Liability for Trust Certificates, Including Interest	
Expense and Fees Payable (3.1)%	(6,613,481)
Preferred Shares, at Redemption Value (47.9)%	(102,209,433)
Net Assets Applicable to Common Shares 100.0%	\$ 213,452,245

\* The cost and unrealized appreciation (depreciation) of investments as of April 30, 2010, as computed for federal income tax purposes, were as

follows:

Aggregate cost	\$ 306,284,254
Gross unrealized appreciation	\$ 14,725,584
Gross unrealized depreciation	(5,936,399)
Net unrealized appreciation	\$ 8,789,185

(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) Represents a step-up bond that pays an initial coupon rate for the first period and then a lower coupon rate for the following periods. Rate shown reflects the current yield.

(c) When-issued security. Unsettled when-issued transactions were as follows:

Counterparty	Value	Unrealized Appreciation
Merrill Lynch & Co.	\$ 3,142,400	\$ 15,739

(d) Represents a zero-coupon bond. Rate shown reflects the current yield 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.

(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, were as follows:

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Affiliate	Shares Held at July 31, 2009	Net Activity	Shares Held at April 30, 2010	Income
CMA New Jersey Municipal Money Fund	3,181,516	9,527,498	12,709,014	\$2,154

(i) Represents the current yield as of report date.

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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, 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 semi-annual report.

The following table summarize the inputs used as of April 30, 2010 in determining the fair valuation of the Fund's investments:

Investments in Securities				
Valuation Inputs	Level 1	Level 2	Level 3	Total
Assets:				
Long-Term				
Investments <sup>1</sup>		\$308,968,126		\$ 308,968,126
Short-Term				
Securities	\$ 12,709,014			12,709,014
Total	\$ 12,709,014	\$308,968,126		\$ 321,677,140

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

BLACKROCK MUNIYIELD NEW JERSEY FUND, INC.

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### 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

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/ Anne F. Ackerley

Anne F. Ackerley

Chief Executive Officer of

BlackRock MuniYield New Jersey Fund, Inc.

Date: June 28, 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 MuniYield New Jersey Fund, Inc.

Date: June 28, 2010

By: /s/ Neal J. Andrews

Neal J. Andrews

Chief Financial Officer (principal financial officer) of

BlackRock MuniYield New Jersey Fund, Inc.

Date: June 28, 2010

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