BLACKROCK MUNIYIELD CALIFORNIA FUND, INC Form N-CSR October 08, 2008

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-06499

Name of Fund: BlackRock MuniYield California Fund, Inc. (MYC)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: Donald C. Burke, Chief Executive Officer, BlackRock MuniYield California 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: 07/31/2008

Date of reporting period: 11/01/2007 07/31/2008

Item 1 Report to Stockholders

EQUITIES FIXED INCOME REAL ESTATE LIQUIDITY ALTERNATIVES BLACKROCK SOLUTIONS

Annual Report

JULY 31, 2008

BlackRock Muni New York Intermediate Duration Fund, Inc. (MNE)

BlackRock MuniYield Arizona Fund, Inc. (MZA)

BlackRock MuniYield California Fund, Inc. (MYC)

BlackRock MuniYield Florida Fund (MYF)

BlackRock MuniYield New Jersey Fund, Inc. (MYJ)

NOT FDIC INSURED MAY LOSE VALUE NO BANK GUARANTEE

Table of Contents

| | Page |
|---|------|
| | |
| A Letter to Shareholders | 3 |
| Annual Report: | |
| Fund Summaries | 4 |
| The Benefits and Risks of Leveraging | 9 |
| Swap Agreements | 9 |
| Financial Statements: | |
| Schedules of Investments | 10 |
| Statements of Assets and Liabilities | 28 |
| Statements of Operations | 30 |
| Statements of Changes in Net Assets | 33 |
| Financial Highlights | 38 |
| Notes to Financial Statements | 43 |
| Report of Independent Registered Public Accounting Firm | 52 |
| Important Tax Information | 53 |
| Disclosure of Investment Advisory Agreement and Subadvisory Agreement | 54 |
| Automatic Dividend Reinvestment Plan | 58 |
| Officers and Directors or Trustees | 59 |
| Additional Information | 62 |
| 2 ANNUAL REPORT | |
| JULY 31, 2008 | |

A Letter to Shareholders

Dear Shareholder

For more than a year, investors have been besieged by a weak housing market, the bursting of the credit bubble that has troubled the financial sector, and surging food and oil prices, which have stoked inflation concerns. Healthy nonfinancial corporate profits and robust exporting activity remained among the few bright spots, helping the economy to grow at a modest, but still positive, pace.

The Federal Reserve Board (the Fed) has been aggressive in its attempts to stimulate economic growth and stabilize financial markets. In addition to slashing the target federal funds rate 325 basis points (3.25%) between September

2007 and April 2008, the central bank introduced the new Term Securities Lending Facility, granted broker-dealers access to the discount window and used its own balance sheet to help negotiate the sale of Bear Stearns. However, the end of the period saw a pause in Fed action; the central bank held the target rate steady at 2.0% as it attempted to balance weak growth and inflationary pressures.

The Fed s bold response to the financial crisis helped mitigate credit stress and investor anxiety, albeit temporarily.

U.S. equity markets sank sharply over the reporting period, notwithstanding a brief rally in the spring and another in mid-summer, and international markets followed suit.

Treasury securities also traded in a volatile fashion, but generally rallied (yields fell as prices correspondingly rose), as the broader flight-to-quality theme persisted. The yield on 10-year Treasury issues, which fell to 3.34% in March, climbed to the 4.20% range in mid-June as investors temporarily shifted out of Treasury issues in favor of riskier assets (such as stocks and other high-quality fixed income sectors), then reversed course and declined to 3.99% by period-end when credit fears re-emerged. Meanwhile, tax-exempt issues underperformed their taxable counterparts, as problems among municipal bond insurers and the failure in the market for auction rate securities continued to pressure the group.

Overall, the major benchmark indexes generated results that reflected heightened risk aversion:

| Total Returns as of July 31, 2008 | 6-month | 12-month |
|---|---------|----------|
| U.S. equities (S&P 500 Index) | (7.08)% | (11.09)% |
| Small cap U.S. equities (Russell 2000 Index) | 0.86 | (6.71) |
| International equities (MSCI Europe, Australasia, Far East Index) | (5.04) | (12.19) |
| Fixed income (Lehman Brothers U.S. Aggregate Index) | (0.63) | 6.15 |
| Tax-exempt fixed income (Lehman Brothers Municipal Bond Index) | (0.85) | 2.83 |
| High yield bonds (Lehman Brothers U.S. Corporate High Yield 2% Issuer Capped Index) | (0.80) | 0.52 |

Past performance is no guarantee of future results. Index performance shown for illustrative purposes only. You cannot invest directly in an index.

Shortly before this shareholder report mailing, the investment landscape was dramatically altered as the ongoing

credit crisis intensified, resulting in a widespread breakdown in the financial services sector and unprecedented government intervention. Through periods of market turbulence, as ever, BlackRock's full resources are dedicated to the management of our clients assets. For our most current views on the economy and financial markets, we invite you to visit www.blackrock.com/funds. As always, we thank you for entrusting BlackRock with your investment assets, and we look forward to continuing to serve you in the months and years ahead.

THIS PAGE NOT PART OF YOUR FUND REPORT

3

Fund Summary as of July 31, 2008

BlackRock Muni New York Intermediate Duration Fund, Inc. Investment Objective

BlackRock Muni New York Intermediate Duration Fund, Inc. (MNE) (the Funds) eks to provide shareholders with high current income exempt from fed-

eral income taxes and New York State and New York City personal income taxes by investing primarily in a portfolio of municipal obligations, the interest

on which, in the opinion of bond counsel to the issuer, is exempt from federal income taxes and New York State and New York City personal income taxes.

Performance

For the 12 months ended July 31, 2008, the Fund returned (5.61)% based on market price and (3.58)% based on net asset value (NAV). For the same

period, the closed-end Lipper Intermediate Municipal Debt Funds category posted an average return of 0.55% on a NAV basis. All returns reflect reinvest-

ment of dividends. Detracting from the Fund s yearly performance was its below-average distribution rate. Our desire to improve income to the Fund led

to significantly more investments in longer-dated issues, which proved more volatile as risk spreads increased and the municipal yield curve steepened.

In addition, the Fund s lower-quality holdings hampered results due to credit spread widening and the lack of liquidity. Looking ahead, we believe the

Fund is well positioned to benefit from a recovering high yield market, a reversion to historical valuations versus U.S. Treasury issues and a continued slowing economy.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other conditions.

These views are not intended to be a forecast of future events and are no guarantee of future results.

| Symbol on New York Stock Exchange | MNE |
|--|----------------|
| Initital Offering Date | August 1, 2003 |
| Yield on Closing Market Price as of July 31, 2008 (\$12.12) ¹ | 5.25% |
| Tax Equivalent Yield ² | 8.08% |
| Current Monthly Distribution per Common Share ³ | \$0.053 |
| Current Annualized Distribution per Common Share ³ | \$0.636 |
| Leverage as of July 31, 2008 ⁴ | 35% |

The table below summarizes the changes in the Fund s market price and net asset value per share:

| | 7/31/08 | 5/31/08 | Change | High | Low |
|-----------------|---------|---------|---------|---------|---------|
| Market Price | \$12.12 | \$12.81 | (5.39)% | \$12.81 | \$11.86 |
| Net Asset Value | \$13.51 | \$14.05 | (3.84)% | \$14.11 | \$13.47 |

The following unaudited charts show the portfolio composition and credit quality allocations of the Fund s long-term investments:

Portfolio Composition

| Sector | 7/31/08 | 5/31/08 |
|--------------------------------|---------|---------|
| City/County/State | 23% | 25% |
| Hospital | 18 | 17 |
| Education | 17 | 16 |
| Housing | 13 | 13 |
| Transportation | 12 | 12 |
| Power | 10 | 9 |
| Industrial & Pollution Control | 3 | 4 |
| Tobacco | 2 | 2 |
| Water & Sewer | 2 | 2 |

Credit Quality Allocations⁵

| Credit Rating | 7/31/08 | 5/31/08 |
|---------------|---------|---------|
| AAA/Aaa | 6% | 20% |
| AA/Aa | 43 | 29 |
| A/A | 21 | 17 |
| BBB/Baa | 15 | 20 |
| BB/Ba | 9 | 7 |

¹ Yield on closing market price is calculated by dividing the current annualized distribution per share by the closing market price. Past performance does not guarantee future results.

² Tax equivalent yield assumes the maximum federal tax rate of 35%.

³ The distribution is not constant and is subject to change.

⁴ As a percentage of total managed assets, which is the total assets of the Fund (including any assets attributable to Auction Market Preferred Shares (Preferred Shares) and tender option bond trusts (TOBs)) minus the sum of accrued liabilities.

 CCC/Caa
 2
 2

 Not Rated
 46
 5

4 ANNUAL REPORT

JULY 31, 2008

Fund Summary as of July 31, 2008

BlackRock MuniYield Arizona Fund, Inc.

Investment Objective

BlackRock MuniYield Arizona Fund, Inc. (MZA) (the Funds) eks to provide shareholders with as high a level of current income exempt f Arizona income taxes as is consistent with its investment policies and prudent investment management by investing primarily in a portfolio of investment grade municipal obligations the interest on which, in the opinion of bond counsel to the issuers, is exempt from federal and Arizon

Performance

For the 12 months ended July 31, 2008, the Fund returned 7.31% based on market price and (3.14)% based on NAV. For the same period, the Lipper Other States Municipal Debt Funds category posted an average return of (1.16)% on a NAV basis. All returns reflect reinvestment of the Fund benefited from its above-average yield, but performance was negatively impacted by two factors: above-average exposure to the longer curve, which underperformed as rates increased at the longer end of the yield curve more than in the shorter end; and, above-average exposure to the longer and other spread sectors (e.g., housing), which underperformed amid dramatic credit spread widening over the annual period.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other These views are not intended to be a forecast of future events and are no guarantee of future results.

| Symbol on American Stock Exchange | MZA |
|--|------------------|
| Initital Offering Date | October 29, 1993 |
| Yield on Closing Market Price as of July 31, 2008 (\$13.94) ¹ | 4.91% |
| Tax Equivalent Yield ² | 7.55% |
| Current Monthly Distribution per Common Share ³ | \$0.057 |
| Current Annualized Distribution per Common Share ³ | \$0.684 |
| Leverage as of July 31, 2008 ⁴ | 43% |

⁵ Using the higher of Standard & Poor s (S&P s) or Moody s Investors Service (Moody s) ratings.

⁶ The investment advisor has deemed certain of these non-rated securities to be investment grade quality. As of July 31, 2008, the market value of these securities was \$1,927,760 representing 2% of the Fund's long-term investments.

The table below summarizes the changes in the Fund s market price and net asset value per share:

| | 7/31/08 | 10/31/07 | Change | High | Low |
|-----------------|---------|----------|---------|---------|---------|
| Market Price | \$13.94 | \$13.66 | 2.05% | \$15.65 | \$12.27 |
| Net Asset Value | \$12.81 | \$13.96 | (8.24)% | \$14.01 | \$12.41 |

The following unaudited charts show the portfolio composition and credit quality allocations of the Fund s long-term investments: Portfolio Composition

| Sector | 7/31/08 | 10/31/07 |
|--------------------------------|---------|----------|
| Education | 25% | 29% |
| City, County & State | 19 | 21 |
| Hospital | 12 | 13 |
| Housing | 11 | 10 |
| Lease Revenue | 9 | 7 |
| Power | 8 | 6 |
| Water & Sewer | 7 | 4 |
| Tax Revenue | 3 | 3 |
| Transportation | 3 | 3 |
| Industrial & Pollution Control | 3 | 4 |

Credit Quality Allocations⁵

| Credit Rating | 7/31/08 | 10/31/07 | |
|------------------------|---------|----------|--|
| AAA/Aaa | 11% | 49% | |
| AA/Aa | 36 | 9 | |
| A/A | 27 | 17 | |
| BBB/Baa | 20 | 19 | |
| BB/Ba | 1 | 2 | |
| B/B | 1 | | |
| Not Rated ⁶ | 4 | 4 | |

⁵ Using the higher of S&P s or Moody s ratings.

¹ Yield on closing market price is calculated by dividing the current annualized distribution per share by the closing market price. Past performance does not guarantee future results.

² Tax equivalent yield assumes the maximum federal tax rate of 35%.

³ The distribution is not constant and is subject to change.

⁴ As a percentage of total managed assets, which is the total assets of the Fund (including any assets attributable to Preferred Shares and TOBs) minus the sum of accrued liabilities.

⁶ The investment advisor has deemed certain of these non-rated securities to be of investment grade quality. As of July 31, 2008

and October 31, 2007, the market value of these securities was \$2,300,385 representing 2% and \$1,004,490 representing 1%, respectively, of the Fund's long-term investments.

ANNUAL REPORT

JULY 31, 2008

5

Fund Summary as of July 31, 2008

BlackRock MuniYield California Fund, Inc.

Investment Objective

BlackRock MuniYield California Fund, Inc. (MYC) (the Funds) eks to provide shareholders with as high a level of current income exempt and California income taxes as is consistent with its investment policies and prudent investment management by investing primarily in a port term municipal obligations the interest on which, in the opinion of bond counsel to the issuers, is exempt from federal and California income

Performance

For the 12 months ended July 31, 2008, the Fund returned 3.26% based on market price and (1.74)% based on NAV. For the same period, to closed-end Lipper California Municipal Debt Funds category posted an average return of (2.54)% on a NAV basis. All returns reflect reinvest dividends. A neutral duration posture and a relatively higher cash equivalent reserve position versus its Lipper peers provided the Fund is Nacushion against volatility from widening credit spreads and rising long-term investment rates. Management is strategy is to balance total return opportunistically improving current yield. Higher absolute rates could be in the offering should credit-related concerns and higher issuance we the market next year. Management would expect to use an improvement in valuation to extend duration.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other These views are not intended to be a forecast of future events and are no guarantee of future results.

| Symbol on New York Stock Exchange | MYC |
|--|-------------------|
| Initital Offering Date | February 28, 1992 |
| Yield on Closing Market Price as of July 31, 2008 (\$13.07) ¹ | 5.05% |
| Tax Equivalent Yield ² | 7.77% |
| Current Monthly Distribution per Common Share ³ | \$0.055 |
| Current Annualized Distribution per Common Share ³ | \$0.660 |
| Leverage as of July 31, 2008 ⁴ | 42% |

¹ Yield on closing market price is calculated by dividing the current annualized distribution per share by the closing market price. Past performance does not guarantee future results.

² Tax equivalent yield assumes the maximum federal tax rate of 35%.

³ The distribution is not constant and is subject to change.

⁴ As a percentage of total managed assets, which is the total assets of the Fund (including any assets attributable to Preferred Shares and

TOBs) minus the sum of accrued liabilities.

The table below summarizes the changes in the Fund s market price and net asset value per share:

| | 7/31/08 | 10/31/07 | Change | High | Low |
|-----------------|---------|----------|---------|---------|---------|
| Market Price | \$13.07 | \$13.25 | (1.36)% | \$14.00 | \$12.33 |
| Net Asset Value | \$13.71 | \$14.60 | (6.10)% | \$14.85 | \$13.18 |

The following unaudited charts show the portfolio composition and credit quality allocations of the Fund s long-term investments:

Portfolio Composition

Credit Quality Allocations⁵

| Sector | 7/31/08 | 10/31/07 | Credit Rating | 7/31/08 | 10/31/07 |
|--------------------------------|---------|----------|--|---------|----------|
| City, County & State | 23% | 18% | AAA/Aaa | 43% | 79% |
| Education | 18 | 15 | AA/Aa | 39 | 3 |
| Lease Revenue | 12 | 12 | A/A | 14 | 12 |
| Water & Sewer | 11 | 12 | BBB/Baa | 4 | 6 |
| Hospital | 9 | 9 | ⁵ Using the higher of S&P s or Moody s ratings. | | |
| Tax Revenue | 8 | 11 | | | |
| Power | 7 | 8 | | | |
| Transportation | 4 | 6 | | | |
| Housing | 4 | 2 | | | |
| Industrial & Pollution Control | 2 | 4 | | | |
| Resource Recovery | 2 | 2 | | | |
| Tobacco | | 1 | | | |

6 ANNUAL REPORT

JULY 31, 2008

Fund Summary as of July 31, 2008

BlackRock MuniYield Florida Fund

Investment Objective

BlackRock MuniYield Florida Fund (MYF) (the Funds) eks to provide shareholders with as high a level of current income exempt from fet taxes as is consistent with its investment policies and prudent investment management by investing primarily in a portfolio of long-term munitions the interest on which, in the opinion of bond counsel to the issuers, is exempt from federal income taxes and which enables shares of the exempt from Florida intangible personal property taxes.

Performance

For the 12 months ended July 31, 2008, the Fund returned (5.00)% based on market price and (1.70)% based on NAV. For the same period

end Lipper Florida Municipal Debt Funds category posted an average return of (1.84)% on a NAV basis. All returns reflect reinvestment of di Fund s significant overweight in pre-refunded bonds in the one- to five-year maturity range aided comparative results, as the yield curve stern short- and intermediate-maturity issues outperformed the rest of the market. Conversely, problems within the monoline insurance industry has impact on the entire insured municipal market and accordingly, detracted from the Fund s performance, as well as that of its peers. Exposur hospital bonds and single-family housing bonds also hampered results as these two sectors underperformed over the annual period.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other These views are not intended to be a forecast of future events and are no guarantee of future results.

Fund Information

| Symbol on New York Stock Exchange | MYF |
|--|-------------------|
| Initital Offering Date | February 28, 1992 |
| Yield on Closing Market Price as of July 31, 2008 (\$11.91) ¹ | 5.84% |
| Tax Equivalent Yield ² | 8.98% |
| Current Monthly Distribution per Common Share ³ | \$0.058 |
| Current Annualized Distribution per Common Share ³ | \$0.696 |
| Leverage as of July 31, 2008 ⁴ | 39% |

¹ Yield on closing market price is calculated by dividing the current annualized distribution per share by the closing market price. Past performance does not guarantee future results.

The table below summarizes the changes in the Fund s market price and net asset value per share:

| | 7/31/08 | 10/31/07 | Change | High | Low |
|-----------------|---------|----------|---------|---------|---------|
| Market Price | \$11.91 | \$12.86 | (7.39)% | \$13.40 | \$11.86 |
| Net Asset Value | \$13.59 | \$14.53 | (6.47)% | \$14.79 | \$13.26 |

The following unaudited charts show the portfolio composition and credit quality allocations of the Fund s long-term investments:

Portfolio Composition

| Sector | 7/31/08 | 10/31/07 |
|----------------------|---------|----------|
| Transportation | 24% | 21% |
| Hospital | 21 | 19 |
| Lease Revenue | 14 | 15 |
| Water & Sewer | 11 | 10 |
| City, County & State | 11 | 11 |
| Tax Revenue | 5 | 8 |
| Education | 5 | 7 |
| Housing | 4 | 5 |

² Tax equivalent yield assumes the maximum federal tax rate of 35%.

³ The distribution is not constant and is subject to change.

⁴ As a percentage of total managed assets, which is the total assets of the Fund (including any assets attributable to Preferred Shares and TOBs) minus the sum of accrued liabilities.

| Industrial & Pollution Control | 4 | 2 |
|--------------------------------|---|---|
| Power | 1 | 2 |

Credit Quality Allocations⁵

| Credit Rating | 7/31/08 | 10/31/07 |
|------------------------|---------|----------|
| AAA/Aaa | 34% | 80% |
| AA/Aa | 34 | 2 |
| A/A | 16 | 7 |
| BBB/Baa | 8 | 9 |
| Not Rated ⁶ | 8 | 2 |

⁵ Using the higher of S&P s or Moody s ratings.

ANNUAL REPORT

JULY 31, 2008

7

Fund Summary as of July 31, 2008

BlackRock MuniYield New Jersey Fund, Inc.

Investment Objective

BlackRock MuniYield New Jersey Fund, Inc. (MYJ) (the Funds) eks to provide shareholders with as high a level of current income exempled federal and New Jersey income taxes as is consistent with its investment policies and prudent investment management by investing primarily portfolio of long-term, investment grade municipal obligations the interest on which, in the opinion of bond counsel to the issuer, is exempt from income tax and New Jersey personal income taxes.

Performance

For the 12 months ended July 31, 2008, the Fund returned (1.02)% based on market price and (0.81)% based on NAV. For the same period end Lipper New Jersey Municipal Debt Funds category posted an average return of (3.42)% on a NAV basis. All returns reflect reinvestment The Fund s short duration position benefited performance during a period of rising tax-exempt bond yields. An underweight position in municipal subject to the alternative minimum tax (AMT) also enhanced results, as these issues significantly underperformed over the last year.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other. These views are not intended to be a forecast of future events and are no guarantee of future results.

⁶ The investment advisor has deemed certain of these non-rated securities to be of investment grade quality. As of July 31, 2008 and October 31, 2007, the market value of these securities was \$13,599,832 representing 5% and \$7,574,838 representing 2%, respectively, of the Fund's long-term investments.