BLACKROCK MUNIYIELD CALIFORNIA QUALITY FUND, INC
Form N-CSR
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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 811-06692

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

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock MuniYield California Quality Fund, Inc., 55 East 52^{nd} Street, New York, NY 10055

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

Date of fiscal year end: 07/31/2012

Date of reporting period: 07/31/2012

Item 1 – Report to Stockholders

July 31, 2012

Annual Report

BlackRock MuniHoldings Quality Fund II, Inc. (MUE)

BlackRock MuniYield California Quality Fund, Inc. (MCA)

BlackRock MuniYield Michigan Quality Fund II, Inc. (MYM)

BlackRock MuniYield New York Quality Fund, Inc. (MYN)

BlackRock MuniYield Quality Fund III, Inc. (MYI)

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Dear Shareholder

About this time one year ago, financial markets fell into turmoil, triggered by Standard & Poor s historic downgrade of US government debt. Since then, asset prices have continued to move broadly in risk-on rallies and risk-off retreats driven by macro-level concerns, primarily the sovereign debt crisis in Europe and uncertainty about global economic growth.

Equity markets crumbled in the third quarter of 2011 as fearful investors fled riskier assets in favor of traditionally safe investments including US Treasuries and gold. In October, however, improving economic data and more concerted efforts among European leaders toward stemming the region s debt crisis drew investors back to the markets. Improving sentiment carried over into early 2012 as investors saw some relief from the world s financial woes. Volatility abated and risk assets (including stocks, commodities and high yield bonds) moved boldly higher through the first two months of 2012 while climbing Treasury yields pressured higher-quality fixed income assets.

Markets reversed course in the spring when Europe s debt problems boiled over once again. High levels of volatility returned as political instability in Greece threatened the country s membership in the euro zone. Spain faced severe deficit issues while the nation s banks clamored for liquidity. Yields on Spanish and Italian government debt rose to levels deemed unsustainable. European leaders conferred and debated vehemently over the need for fiscal integration among the 17 nations comprising the euro currency bloc as a means to resolve the crisis for the long term.

Alongside the drama in Europe, investors were discouraged by gloomy economic reports from various parts of the world. A slowdown in China, a key powerhouse for global growth, became particularly worrisome. In the United States, disappointing jobs reports dealt a crushing blow to sentiment. Risk assets sold off in the second quarter as investors again retreated to safe haven assets.

The summer brought a modest rebound in most asset classes. However, financial markets continued to swing sharply in both directions as investors reacted to mixed economic data as well as comments and policy actions or lack of action from central banks around the globe.

On the whole, higher quality investments outperformed riskier asset classes for the 12 months ended July 31, 2012 as investors continued to focus on safety. US Treasury bonds delivered the strongest returns, followed by tax-exempt municipal bonds. Some higher-risk investments, including US large-cap stocks and corporate bonds, managed to post gains for the one-year period, and while US small-cap stocks generated a slight gain for the 12-month period, they posted a marginal loss for the last 6 months. International and emerging equities, which experienced significant downturns in 2011, lagged other asset classes amid ongoing global uncertainty. US large-cap stocks and high yield bonds rallied higher in recent months as many investors increased their appetite for risk. Continued low short-term interest rates kept yields on money market securities near their all-time lows.

We know that investors continue to face a world of uncertainty and highly volatile markets, but we also believe these challenging times present many opportunities. We remain committed to working with you and your financial professional to identify actionable ideas for your portfolio. We encourage you to visit **www.blackrock.com/newworld** for more information.

Sincerely,

Rob Kapito
President, BlackRock Advisors, LLC

We know that investors continue to face a world of uncertainty and highly volatile markets, but we also believe these challenging times present many opportunities.

Rob Kapito
President, BlackRock Advisors, LLC

Total Returns as of July 31, 2012

	6-month	12-month
US large cap equities (S&P 500® Index)	6.25%	9.13%
US small cap equities (Russell 2000® Index)	(0.03)	0.19
International equities (MSCI Europe, Australasia, Far East Index)	(1.15)	(11.45)
Emerging market equities (MSCI Emerging Markets Index)	(4.83)	(13.93)
3-month Treasury bill (BofA Merrill Lynch 3-Month US Treasury Bill Index)	0.05	0.07
US Treasury securities (BofA Merrill Lynch 10-Year US Treasury Index)	4.31	15.58
US investment grade bonds (Barclays US Aggregate Bond Index)	2.88	7.25
Tax-exempt municipal bonds (S&P Municipal Bond Index)	3.22	10.70
US high yield bonds (Barclays US Corporate High Yield 2% Issuer Capped Index)	6.05	8.00

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

Municipal Market Overview

For the 12-Month Period Ended July 31, 2012

One year ago, the municipal bond market was rebounding from a prolonged weak period stemming from events in the fourth quarter of 2010. Municipals had suffered severe losses in late 2010 amid a steepening US Treasury yield curve, political uncertainty and a flood of inflated headlines about municipal finance troubles. A significant supply-demand imbalance had developed by the end of the year, leading to wider quality spreads and higher yields for municipal bonds heading into 2011.

Having lost confidence in municipals, retail investors retreated from the market, resulting in municipal mutual fund outflows totaling $35.1 billion from the middle of November 2010 until the trend finally broke in June 2011. However, weak demand in the first half of 2011 was counterbalanced by lower supply. According to Thomson Reuters, total new issuance was down 32% in 2011 as compared to the prior year.

On August 5, 2011, Standard & Poor s (S&P) downgraded the US government s credit rating from AAA to AA+. While this led to the downgrade of approximately 11,000 municipal issues directly tied to the US debt rating, this represented a very small fraction of the municipal market and said nothing about the individual municipal credits themselves. In fact, demand for municipal bonds increased as severe volatility in US equities drove investors to more stable asset classes. The municipal market benefited from an exuberant Treasury market and continued muted new issuance. As supply remained constrained, demand from both traditional and non-traditional buyers was strong, pushing long-term municipal bond yields lower and sparking a curve-flattening trend that continued through year end. Ultimately, 2011 was one of the strongest performance years in municipal market history. The S&P Municipal Bond Index returned 10.62% in 2011, making municipal bonds a top-performing fixed income asset class for the year.

Strong demand carried over into 2012 as investors continued to search for yield in a low-rate environment. Municipal market supply-and-demand technicals typically strengthen considerably upon the conclusion of tax season as net negative supply takes hold. This theme remained intact for 2012. In the spring, a resurgence of concerns about Europe s financial crisis and weakening US economic data drove municipal bond yields lower and prices higher as investors were drawn to the asset class for its relatively low volatility in addition to the income and capital preservation it offers. The S&P Municipal Bond Index has gained 5.75% year-to-date.

Overall, the municipal yield curve flattened during the period from July 29, 2011 to July 31, 2012. As measured by Thomson Municipal Market Data, yields declined by 151 basis points (bps) to 2.84% on AAA-rated 30-year municipal bonds and by 101 bps to 1.66% on 10-year bonds, while yields on 5-year issues fell 51 bps to 0.65%. While the entire municipal curve flattened over the 12-month time period, the spread between 2- and 30-year maturities tightened by 140 bps, and in the 2- to 10-year range, the spread tightened by 90 bps.

The fundamental picture for municipalities continues to improve. Austerity has been the general theme across the country as states set their budgets, although a small number of states continue to rely on a kick-the-can approach to close their budget gaps, using aggressive revenue projections and accounting gimmicks. It has been over a year and a half since the fiscal problems plaguing state and local governments first became highly publicized. Thus far, the prophecy of widespread defaults across the municipal market has not materialized. Through the first half of 2012, approximately $1.07 billion in par value of municipal bonds have entered into debt service default for the first time. This represents only 0.540% of total issuance for that period and 0.029% of total municipal bonds outstanding, as compared to 0.065% for the full year 2011. (Data provided by Bank of America Merrill Lynch.) BlackRock maintains the view that municipal bond defaults will remain in the periphery and the overall market is fundamentally sound. We continue to recognize that careful credit research and security selection remain imperative amid uncertainty in this economic environment.

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Fund Summary as of July 31, 2012

BlackRock MuniHoldings Quality Fund II, Inc.

Fund Overview

BlackRock MuniHoldings Quality Fund II, Inc. s (MUE) (the Fund) investment objective is to provide shareholders with current income exempt from federal income taxes. The Fund seeks to achieve its investment objective by investing primarily in long-term, investment grade municipal obligations exempt from federal income taxes (except that the interest may be subject to the federal alternative minimum tax). Under normal market conditions, the Fund invests at least 80% of its assets in municipal obligations with remaining maturities of one year or more at the time of investment. The Fund may invest directly in such securities or synthetically through the use of derivatives.

No assurance can be given that the Fund s investment objective will be achieved.

Performance

For the 12 months ended July 31, 2012, the Fund returned 32.85% based on market price and 23.64% based on net asset value (NAV). For the same period, the closed-end Lipper General & Insured Municipal Debt Funds (Leveraged) category posted an average return of 29.37% based on market price and 20.77% based on NAV. All returns reflect reinvestment of dividends. The Fund moved from a discount to NAV to a premium by period end, which accounts for the difference between performance based on price and performance based on NAV. The following discussion relates to performance based on NAV. The Fund s long duration posture (greater sensitivity to interest rates) contributed positively to performance as the yield curve flattened (i.e., longer-term interest rates fell more than shorter rates) and bond prices moved higher on the long end of the municipal curve. The Fund s longer-dated holdings in the health, transportation and utilities sectors experienced the best price appreciation. The Fund used US Treasury financial futures contracts as a means of hedging interest rate risk. These positions had a slight negative impact on results as interest rates declined over the 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 conditions.
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 (NYSE)	MUE
Initial Offering Date	February 26, 1999
Yield on Closing Market Price as of July 31, 2012 ($15.55)[1]	5.67%
Tax Equivalent Yield[2]	8.72%
Current Monthly Distribution per Common Share[3]	$0.0735
Current Annualized Distribution per Common Share[3]	$0.8820
Economic Leverage as of July 31, 2012[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.

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

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

4 Represents Variable Rate Muni Term Preferred Shares (VMTP Shares) and tender option bond trusts (TOBs) as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to VMTP Shares and TOBs, minus the sum of accrued liabilities. For a discussion of leveraging techniques utilized by the Fund, please see The Benefits and Risks of Leveraging on page 10.

The table below summarizes the changes in the Fund s market price and NAV per share:

	7/31/12	7/31/11	Change	High	Low
Market Price	$ 15.55	$ 12.46	24.80%	$ 15.55	$ 11.45
Net Asset Value	$ 15.18	$ 13.07	16.14%	$ 15.25	$ 13.07

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

Sector Allocations

	7/31/12	7/31/11
County/City/Special District/School District	28%	26%
Transportation	21	19
Utilities	17	23
State	15	9
Health	10	9
Education	6	2
Housing	2	2
Tobacco	1	1
Corporate		9

Credit Quality Allocations[5]

	7/31/12	7/31/11
AAA/Aaa	16%	16%
AA/Aa	63	62
A	20	18
BBB/Baa	1	3
BB/Ba		1

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

Fund Summary as of July 31, 2012 **BlackRock MuniYield California Quality Fund, Inc.**

Fund Overview

BlackRock MuniYield California Quality Fund, Inc. s (MCA) (the Fund) investment objective is to provide shareholders with as high a level of current income exempt from federal and California income taxes as is consistent with its investment policies and prudent investment management. The Fund seeks to achieve its investment objective by investing at least 80% of its assets in municipal obligations exempt from federal income taxes (except that the interest may be subject to the federal alternative minimum tax) and California income taxes. Under normal market conditions, the Fund invests primarily in long-term municipal obligations that are investment grade quality at the time of investment. The Fund may invest directly in such securities or synthetically through the use of derivatives.

No assurance can be given that the Fund s investment objective will be achieved.

Performance

For the 12 months ended July 31, 2012, the Fund returned 35.48% based on market price and 23.15% based on NAV. For the same period, the closed-end Lipper California Municipal Debt Funds category posted an average return of 30.47% based on market price and 21.65% based on NAV. All returns reflect reinvestment of dividends. The Fund s discount to NAV, which narrowed during the period, accounts for the difference between performance based on price and performance based on NAV. The following discussion relates to performance based on NAV. The Fund s long duration posture (sensitivity to interest rate movements) had a positive impact on performance as interest rates generally declined amid the investor flight-to-quality in the US Treasury market. Leverage achieved through the use of tender option bonds while the municipal yield curve was historically steep boosted returns. The Fund s holdings of higher quality essential service revenue bonds contributed positively, as did holdings of select general obligation bonds and school district credits with stronger underlying fundamentals. Investments in the health, education, transportation and utilities sectors were particularly strong contributors. Additionally, purchases of zero-coupon bonds deemed undervalued added to the Fund s total return. The Fund used US Treasury financial futures contracts to hedge against rising interest rates. These positions had a modestly negative impact on returns as interest rates declined over the period.

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

Fund Information

Symbol on NYSE	MCA
Initial Offering Date	October 30, 1992
Yield on Closing Market Price as of July 31, 2012 ($16.59)[1]	5.50%
Tax Equivalent Yield[2]	8.46%
Current Monthly Distribution per Common Share[3]	$0.0760
Current Annualized Distribution per Common Share[3]	$0.9120
Economic Leverage as of July 31, 2012[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.

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

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

4 Represents Variable Rate Demand Preferred Shares (VRDP Shares) and TOBs as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to VRDP Shares and TOBs, minus the sum of accrued liabilities. For a discussion of leveraging techniques utilized by the Fund, please see The Benefits and Risks of Leveraging on page 10.

The table below summarizes the changes in the Fund s market price and NAV per share:

	7/31/12	7/31/11	Change	High	Low
Market Price	$ 16.59	$ 13.00	27.62%	$ 16.59	$ 12.60
Net Asset Value	$ 16.60	$ 14.31	16.00%	$ 16.65	$ 14.31

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

Sector Allocations

	7/31/12	7/31/11
County/City/Special District/School District	42%	45%
Utilities	26	28
Education	10	10
Health	10	4
Transportation	8	8
State	4	1
Corporate		4

Credit Quality Allocations[5]

	7/31/12	7/31/11
AAA/Aaa	11%	11%
AA/Aa	76	79
A	13	10

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

Fund Summary as of July 31, 2012 **BlackRock MuniYield Michigan Quality Fund II, Inc.**

Fund Overview

BlackRock MuniYield Michigan Quality Fund II, Inc. s (MYM) (the Fund) investment objective is to provide shareholders with as high a level of current income exempt from federal and Michigan income taxes as is consistent with its investment policies and prudent investment management. The Fund seeks to achieve its investment objective by investing at least 80% of its assets in municipal obligations exempt from federal income taxes (except that the interest may be subject to the federal alternative minimum tax) and Michigan income taxes. Under normal market conditions, the Fund invests primarily in long-term municipal obligations that are investment grade quality at the time of investment. The Fund may invest directly in such securities or synthetically through the use of derivatives.

No assurance can be given that the Fund s investment objective will be achieved.

Performance

For the 12 months ended July 31, 2012, the Fund returned 25.76% based on market price and 19.01% based on NAV. For the same period, the closed-end Lipper Michigan Municipal Debt Funds category posted an average return of 23.86% based on market price and 17.29% based on NAV. All returns reflect reinvestment of dividends. The Fund s discount to NAV, which narrowed during the period, accounts for the difference between performance based on price and performance based on NAV. The following discussion relates to performance based on NAV. Over the one-year period, the Fund benefited from the declining interest rate environment (bond prices rise as interest rates fall), the flattening of the yield curve (long interest rates fell more than short and intermediate rates) and tightening of credit spreads. The Fund s exposure to zero-coupon bonds and the health sector had a positive impact on performance as these holdings derived the greatest benefit from the decline in interest rates and spread tightening during the period. The Fund s strategy for hedging interest rate risk was a modest detractor from performance as the Fund held a short position in US Treasury futures while rates generally declined.

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Fund Information

Symbol on NYSE	MYM
Initial Offering Date	February 28, 1992
Yield on Closing Market Price as of July 31, 2012 ($14.52)[1]	5.70%
Tax Equivalent Yield[2]	8.77%
Current Monthly Distribution per Common Share[3]	$ 0.0690
Current Annualized Distribution per Common Share[3]	$ 0.8280
Economic Leverage as of July 31, 2012[4]	36%

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 rate is not constant and is subject to change.

4 Represents VRDP Shares and TOBs as a percentage of total managed assets, which is the total assets of the Fund, including any assets attributable to VRDP Shares and TOBs, minus the sum of accrued liabilities. For a discussion of leveraging techniques utilized by the Fund, please see The Benefits and Risks of Leveraging on page 10.

The table below summarizes the changes in the Fund s market price and NAV per share:

	7/31/12	7/31/11	Change	High	Low
Market Price	$ 14.52	$ 12.28	18.24%	$ 15.80	$ 12.17
Net Asset Value	$ 15.14	$ 13.53	11.90%	$ 15.18	$ 13.53

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

Sector Allocations

	7/31/12	7/31/11
County/City/Special District/School District	27%	23%
Health	18	14
Utilities	14	17
State	14	11
Education	12	9
Transportation	8	11
Housing	4	4
Corporate	3	11

Credit Quality Allocations[5]

	7/31/12	7/31/11
AAA/Aaa	1%	