BLACKROCK MUNIHOLDINGS CALIFORNIA QUALITY FUND, INC. Form N-CSRS April 02, 2015

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 811-08573

Name of Fund: BlackRock MuniHoldings California Quality Fund, Inc. (MUC)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

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

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

Date of fiscal year end: 07/31/2015

Date of reporting period: 01/31/2015

Item 1 Report to Stockholders

JANUARY 31, 2015

SEMI-ANNUAL REPORT (UNAUDITED)

BlackRock MuniHoldings California Quality Fund, Inc. (MUC) BlackRock MuniHoldings New Jersey Quality Fund, Inc. (MUJ) BlackRock MuniYield Investment Quality Fund (MFT) BlackRock MuniYield Michigan Quality Fund, Inc. (MIY) BlackRock MuniYield New Jersey Quality Fund, Inc. (MJI) BlackRock MuniYield Pennsylvania Quality Fund (MPA)

Not FDIC Insured May Lose Value No Bank Guarantee

Table of Contents

	Page
The Markets in Review	3
Semi-Annual Report:	
Municipal Market Overview	4
The Benefits and Risks of Leveraging	5
Derivative Financial Instruments	5
Fund Summaries	6
Financial Statements:	
Schedules of Investments	18
Statements of Assets and Liabilities	44
Statements of Operations	45
Statements of Changes in Net Assets	46
Statements of Cash Flows	49
Financial Highlights	50
Notes to Financial Statements	56
Officers and Directors	66
Additional Information	67

2

SEMI-ANNUAL REPORT

The Markets in Review

Dear Shareholder,

Market volatility, while remaining below the long-term average level, increased over the course of 2014 and into 2015, driven largely by higher valuations in risk assets (such as equities and high yield bonds), escalating geopolitical risks, uneven global economic growth and expectations around policy moves from the world s largest central banks. Surprisingly, U.S. interest rates trended lower through the period even as the U.S. Federal Reserve (the Fed) gradually reduced its bond buying program, which ultimately ended in October.

The first half of 2014 was generally a strong period for most asset classes; however, volatility ticked up in the summer as geopolitical tensions intensified in Ukraine and the Middle East and investors feared that better U.S. economic indicators may compel the Fed to increase short-term interest rates sooner than previously anticipated. Global credit markets tightened as the U.S. dollar strengthened versus other currencies, ultimately putting a strain on investor flows, and financial markets broadly weakened in the third quarter.

Several themes dominated the markets in the fourth quarter that resulted in the strong performance of U.S. markets versus other areas of the world. Economic growth strengthened considerably in the United States while the broader global economy showed signs of slowing. The European Central Bank and the Bank of Japan took aggressive measures to stimulate growth while the Fed moved toward tighter policy, causing further strengthening in the U.S. dollar. Fixed income investors piled into U.S. Treasuries where yields, although persistently low, were comparatively higher than yields on international sovereign debt, while equity investors favored the relative stability of U.S.-based companies amid rising global risks.

Oil prices, which had been gradually declining since mid-summer, suddenly plummeted in the fourth quarter due to a global supply-and-demand imbalance. Energy stocks sold off sharply and oil-exporting economies struggled, mainly within emerging markets. Conversely, the consumer sectors benefited from lower oil prices as savings at the gas pumps freed up discretionary income for other goods and services.

These trends shifted at the beginning of 2015. U.S. equity markets starkly underperformed international markets due to stretched valuations and uncertainty around the Fed s pending rate hike. In addition, the stronger U.S. dollar began to hurt earnings of large cap companies. The energy sector continued to struggle, although oil prices showed signs of stabilizing toward the end of January as suppliers became more disciplined in their exploration and production efforts.

At BlackRock, we believe investors need to think globally, extend their scope across a broad array of asset classes and be prepared to move freely as market conditions change over time. We encourage you to talk with your financial advisor and visit blackrock.com for further insight about investing in today s markets.

Sincerely,

Rob Kapito

President, BlackRock Advisors, LLC

Rob Kapito

President, BlackRock Advisors, LLC

Total Returns as of January 31, 2015

	6-month	12-month
U.S. large cap equities	4.37%	14.22%
(S&P 500 [®] Index)		
U.S. small cap equities	4.72	4.41
(Russell 2000 [®] Index)		
International equities	(6.97)	(0.43)
(MSCI Europe, Australasia,		

Far East Index)		
Emerging market equities	(9.05)	5.23
(MSCI Emerging Markets		
Index)		
3-month Treasury bills	0.01	0.03
(BofA Merrill Lynch		
3-Month U.S. Treasury		
Bill Index)		
U.S. Treasury securities	9.29	12.25
(BofA Merrill Lynch		
10-Year U.S. Treasury Index)		
U.S. investment-grade bonds	4.36	6.61
(Barclays U.S.		
Aggregate Bond Index)		
Tax-exempt municipal	4.51	8.81
bonds (S&P Municipal		
Bond Index)	(2.22)	0.44
U.S. high yield bonds	(0.89)	2.41
(Barclays U.S. Corporate		
High Yield 2% Issuer		
Capped Index)		

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

THIS PAGE NOT PART OF YOUR FUND REPORT

Municipal Market Overview

For the Reporting Period Ended January 31, 2015 Municipal Market Conditions

Municipal bonds generated strong performance in 2014, thanks to a favorable supply-and-demand environment and declining interest rates. (Bond prices rise as rates fall.) Investor demand for municipal bonds was strong from the start of the year when U.S. economic data softened amid one of the harshest winters on record. Interest rates proceeded to move lower even as the U.S. Federal Reserve (the Fed) scaled back its open-market bond purchases. This surprising development, coupled with reassurance from the Fed that short-term rates would remain low for a considerable amount of time, resulted in strong demand for fixed income investments in 2014, with municipal bonds being one of the stronger performing sectors for the year. For the 12-month period ended January 31, 2015, municipal bonds garnered net inflows of approximately \$32 billion (based on data from the Investment Company Institute).

From a historical perspective, total new issuance for the 12 months ended January 31, remained relatively strong at \$342 billion (slightly higher than the \$326 billion issued in the prior 12-month period). A noteworthy portion of new supply during this period was attributable to refinancing activity (roughly 45%) as issuers took advantage of lower interest rates to reduce their borrowing costs.

S&P Municipal Bond Index Total Returns as of January 31, 2015 6 months: 4.51% 12 months: 8.81%

A Closer Look at Yields

From January 31, 2014 to January 31, 2015, yields on AAA-rated 30-year municipal bonds decreased by 135 basis points (bps) from 3.85% to 2.50%, while 10-year rates decreased 81 bps from 2.53% to 1.72% and 5-year rates decreased 16 bps from 1.10% to 0.94% (as measured by Thomson Municipal Market Data). Overall, the municipal yield curve remained relatively steep over the 12-month period even as the spread between 2- and 30-year maturities flattened by 146 bps and the spread between 2- and 10-year maturities flattened by 92 bps.

During the same time period, U.S. Treasury rates fell by 136 bps on 30-year bonds, 99 bps on 10-year bonds and 32 bps in 5-year issues. Accordingly, tax-exempt municipal bond performance was generally in line with Treasuries on both the long and short ends of the curve, while lagging in the intermediate portion of the curve as a result of increased supply. Municipals modestly outperformed Treasuries in the very short end of the curve as expectations around future Fed policy changes pressured short-term U.S. Treasury prices. Positive performance on the long end of the curve was driven largely by a supply/demand imbalance within the municipal market as investors sought income and incremental yield in an environment where opportunities had become scarce. More broadly, municipal bonds benefited from the greater appeal of tax-exempt investing in light of the higher tax rates implemented in 2014. The asset class is known for its lower relative volatility and preservation of principal with an emphasis on income as tax rates rise. The municipal market continues to be an attractive avenue for investors seeking yield in the low-rate environment. However, opportunities have not been as broad-based as in 2011 and 2012, warranting a more flexible approach to security selection and yield curve positioning going forward.

Financial Conditions of Municipal Issuers Continue to Improve

Following an extended period of nation-wide austerity and de-leveraging as states sought to balance their budgets, solid revenue growth exceeding pre-recession levels coupled with the elimination of more than 625,000 jobs in recent years have put state and local governments in a better financial position. Many local municipalities, however, continue to face increased health care and pension costs passed down from the state level. BlackRock maintains the view that municipal bond defaults will remain minimal and in the periphery, and that the overall market is fundamentally sound. We continue to advocate careful credit research and believe that a thoughtful approach to structure and security selection remain imperative amid uncertainty in a modestly improving economic environment.

Investing involves risk including loss of principal. Bond values fluctuate in price so the value of your investment can go down depending on market conditions. Fixed income risks include interest-rate and credit risk. Typically, when interest rates rise, there is a corresponding decline in bond values. Credit risk refers to the possibility that the bond issuer will not be able to make principal and interest payments. There may be less information on the financial condition of municipal issuers than for public corporations. The market for municipal bonds may be less liquid than for taxable bonds. Some investors may be subject to Alternative Minimum Tax (AMT). Capital gains distributions, if any, are taxable.

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

SEMI-ANNUAL REPORT

4

The Benefits and Risks of Leveraging

The Funds may utilize leverage to seek to enhance the yield and net asset value (NAV) of their common shares (Common Shares). However, these objectives cannot be achieved in all interest rate environments.

In general, the concept of leveraging is based on the premise that the financing cost of leverage, which is based on short-term interest rates, is normally lower than the income earned by a Fund on its longer-term portfolio investments purchased with the proceeds from leverage. To the extent that the total assets of the Fund (including the assets obtained from leverage) are invested in higher-yielding portfolio investments, the Fund s shareholders benefit from the incremental net income. The interest earned on securities purchased with the proceeds from leverage is paid to shareholders in the form of dividends, and the value of these portfolio holdings is reflected in the per share NAV.

To illustrate these concepts, assume a Fund s Common Shares capitalization is \$100 million and it utilizes leverage for an additional \$30 million, creating a total value of \$130 million available for investment in longer-term income securities. If prevailing short-term interest rates are 3% and longer-term interest rates are 6%, the yield curve has a strongly positive slope. In this case, the Fund s financing costs on the \$30 million of proceeds obtained from leverage are based on the lower short-term interest rates. At the same time, the securities purchased by the Fund with the proceeds from leverage earn income based on longer-term interest rates. In this case, the Fund s financing cost of leverage is significantly lower than the income earned on the Fund s longer-term investments acquired from leverage proceeds, and therefore the holders of Common Shares (Common Shareholders) are the beneficiaries of the incremental net income.

However, in order to benefit Common Shareholders, the return on assets purchased with leverage proceeds must exceed the ongoing costs associated with the leverage. If interest and other costs of leverage exceed the Fund s return on assets purchased with leverage proceeds, income to shareholders is lower than if the Fund had not used leverage. Furthermore, the value of the Fund s portfolio investments generally varies inversely with the direction of long-term interest rates, although other factors can influence the value of portfolio investments. In contrast, the value of the Fund s obligations under its leverage arrangement generally does not fluctuate in relation to interest rates. As a result, changes in interest rates can influence the Fund s NAVs positively or negatively. Changes in the future direction of interest rates are very difficult to predict accurately, and there is no assurance that a Fund s intended leveraging strategy will be successful.

Leverage also generally causes greater changes in the Funds NAVs, market prices and dividend rates than comparable portfolios without leverage. In a declining market, leverage is likely to cause a greater decline in the net asset value and market price of a Fund s Common Shares than if the Fund were not leveraged. In addition, the Fund may be required to sell portfolio securities at inopportune times or at distressed values in order to comply with regulatory requirements applicable to the use of leverage or as required by the terms of leverage instruments, which may cause the Fund to incur losses. The use of leverage may limit the Fund s ability to invest in certain types of securities or use certain types of hedging strategies. The Fund incurs expenses in connection with the use of leverage, all of which are borne by Common Shareholders and may reduce income to the Common Shares.

To obtain leverage, each Fund has issued Variable Rate Demand Preferred Shares (VRDP Shares) or Variable Rate Muni Term Preferred Shares (VMTP Shares) (collectively, Preferred Shares) and/or leveraged its assets through the use of tender option bond trusts (TOBs) as described in the Notes to Financial Statements.

Under the Investment Company Act of 1940 (the 1940 Act), each Fund is permitted to issue debt up to 33 1/3% of its total managed assets or equity securities (e.g., Preferred Shares) up to 50% of its total managed assets. A Fund may voluntarily elect to limit its leverage to less than the maximum amount permitted under the 1940 Act. In addition, a Fund may also be subject to certain asset coverage, leverage or portfolio composition requirements imposed by the Preferred Shares governing instruments or by agencies rating the Preferred Shares, which may be more stringent than those imposed by the 1940 Act.

If a Fund segregates or designates on its books and records cash or liquid assets having a value not less than the value of the Fund s obligations under the TOB (including accrued interest), a TOB is not considered a senior security and is not subject to the foregoing limitations and requirements under the 1940 Act.

Derivative Financial Instruments

The Funds may invest in various derivative financial instruments. Derivative financial instruments are used to obtain exposure to a security, index and/or market without owning or taking physical custody of securities or to manage market, equity, credit, interest rate, foreign currency exchange rate, commodity and/or other risks. Derivative financial instruments may give rise to a form of economic leverage. Derivative financial instruments also involve risks, including the imperfect correlation between the value of a derivative financial instrument and the underlying asset, possible default of the counterparty to the transaction or illiquidity of the derivative financial instrument. The Funds ability to use a derivative financial instrument successfully depends on the investment advisor s ability to predict pertinent market movements accurately, which cannot be assured. The use of derivative financial instruments may result in losses greater than if they had not been used, may limit the amount of appreciation a Fund can realize on an investment and/or may result in lower distributions paid to shareholders. The Funds investments in these instruments are discussed in detail in the Notes to Financial Statements.

SEMI-ANNUAL REPORT

Fund Summary as of January 31, 2015

BlackRock MuniHoldings California Quality Fund, Inc.

Fund Overview

BlackRock MuniHoldings California Quality Fund, Inc. s (MUC) (the Fund) investment objective is to provide shareholders with current income exempt from federal and California income taxes. The Fund seeks to achieve its investment objective by investing primarily 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 at least 80% of its assets in investment grade 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 six-month period ended January 31, 2015, the Fund returned 10.28% based on market price and 6.00% based on NAV. For the same period, the closed-end Lipper California Municipal Debt Funds category posted an average return of 12.10% based on market price and 7.85% 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.

Municipal bonds generally delivered strong performance during the six-month period, with yields declining as prices rose. California issues gained an additional boost from the state s improving credit profile. Longer-term municipal bonds generally outperformed shorter-term issues. In this environment, the Fund s exposure to the long end of the yield curve had a positive impact on performance. Its positions in AA-rated issues, tax-backed bonds issued by local authorities, and the health care, transportation and utilities sectors also helped returns. Leverage on the Fund s assets amplified the positive effect of falling rates on performance.

There were no detractors from performance on an absolute basis as all areas of the Fund s investment universe appreciated during 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.

Symbol on New York Stock Exchange (NYSE)	MUC
Initial Offering Date	February 27, 1998
Yield on Closing Market Price as of January 31, 2015 (\$15.05) ¹	5.38%
Tax Equivalent Yield ²	10.96%
Current Monthly Distribution per Common Share ³	\$0.0675
Current Annualized Distribution per Common Share ³	\$0.8100
Economic Leverage as of January 31, 2015 ⁴	35%

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 marginal federal and state tax rate of 50.93%, which includes the 3.8% Medicare tax. Actual tax rates will vary based on income, exemptions and deductions. Lower taxes will result in lower tax equivalent yields.

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

Represents VMTP Shares and 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 5.

SEMI-ANNUAL REPORT

6

BlackRock MuniHoldings California Quality Fund, Inc.

Market Price and Net Asset Value Per Share Summary					
Market Price	1/31/15 \$15.05	7/31/14	Change	High \$15.09	Low
Net Asset Value	\$15.05 \$16.30	\$14.04 \$15.82	7.19% 3.03%	\$16.30	\$13.98 \$15.82

Market Price and Net Asset Value History For the Past Five Years

Overview of the Fund s Total Investments*

Sector Allocation	1/31/15	7/31/14
County/City/Special District/School District	34%	37%
Utilities	26	25
Transportation	13	14
Health	13	12
Education	7	6
State	7	6

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

Credit Quality Allocation ¹	1/31/15	7/31/14
AAA/Aaa	9%	15%
AA/Aa	74	76
A	17	9

¹ For financial reporting purposes, credit quality ratings shown above reflect the highest rating assigned by either Standard & Poor s (S&P) or Moody s Investors Service (Moody s) if ratings differ. These rating agencies are independent, nationally recognized statistical rating organizations and are widely used. Investment grade ratings are credit ratings of BBB/Baa or higher. Below investment grade ratings are credit ratings of BB/Ba or lower. Investments designated N/R are not rated by either rating agency. Unrated investments do not necessarily indicate low credit quality. Credit quality ratings are subject to change.

Call/Maturity Schedule²

Calendar Year Ended December 31,	
2015	8%
2016	9
2017	13
2018	13
2019	17

² Scheduled maturity dates and/or bonds that are subject to potential calls by issuers over the next five years.

* Excludes short-term securities.

SEMI-ANNUAL REPORT

JANUARY 31, 2015

7

Fund Summary as of January 31, 2015

BlackRock MuniHoldings New Jersey Quality Fund, Inc.

Fund Overview

BlackRock MuniHoldings New Jersey Quality Fund, Inc. s (MUJ) (the Fund) investment objective is to provide shareholders with current income exempt from federal income tax and New Jersey personal 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) and New Jersey personal income taxes. 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.

On December 5, 2014, the Boards of the Fund and BlackRock MuniYield New Jersey Quality Fund, Inc. (MJI) approved the reorganization of MJI with and into the Fund, with the Fund continuing as the surviving fund after the reorganization. At a special shareholder meeting on March 12, 2015, the requisite shareholders of the Fund approved the reorganization of MJI with and into the Fund, which is expected to be completed in April 2015.

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

Performance

For the six-month period ended January 31, 2015, the Fund returned 10.11% based on market price and 8.60% based on NAV. For the same period, the closed-end Lipper New Jersey Municipal Debt Funds category posted an average return of 8.91% based on market price and 7.86% based on NAV. All returns reflect reinvestment of dividends. The Fund s discount to NAV narrowed during the period, 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 duration positioning made the largest contribution to performance, as yields on municipal bonds decreased substantially during the period. (Bond prices rise as yields fall; duration measures sensitivity to interest rate movements). The income generated from the Fund s holdings of New Jersey tax-exempt municipal bonds contributed to performance as well. The Fund s exposure to the long end of the yield curve helped performance as the yield curve flattened substantially over the period (long-term rates fell much more than intermediate rates, while two-year rates rose). The Fund also benefited from its credit exposure as spreads generally tightened, especially in the tax-backed state, tax-backed local and health care sectors. In addition, the Fund s use of leverage amplified the positive effect of falling rates on performance.

There were no detractors from performance on an absolute basis as all areas of the Fund s investment universe appreciated during 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 NYSE	MUJ
Initial Offering Date	March 11, 1998
Yield on Closing Market Price as of January 31, 2015 (\$15.07) ¹	5.89%
Tax Equivalent Yield ²	11.43%
Current Monthly Distribution per Common Share ³	\$0.074
Current Annualized Distribution per Common Share ³	\$0.888
Economic Leverage as of January 31, 2015 ⁴	37%

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 marginal federal and state tax rate of 48.48%, which includes the 3.8% Medicare tax. Actual tax rates will vary based on income, exemptions and deductions. Lower taxes will result in lower tax equivalent yields.
- 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 5.

8

SEMI-ANNUAL REPORT

BlackRock MuniHoldings New Jersey Quality Fund, Inc.

Market Price and Net Asset Value Per Share Summary

Market Price Net Asset Value	1/31/15 \$ 15.07 \$ 16.58	7/31/14 \$ 14.11 \$ 15.74	Change 6.80%	High \$ 15.18	Low \$ 13.84
Net Asset value	ψ 10.50	ψ 15.74			