

Summary Prospectus

BlackRock California Municipal Series Trust | Investor and Institutional Shares

- **BlackRock California Municipal Opportunities Fund**

Investor A: MECMX • Investor C: MFCMX • Institutional: MACMX

Before you invest, you may want to review the Fund's prospectus, which contains more information about the Fund and its risks. You can find the Fund's prospectus (including amendments and supplements), reports to shareholders and other information about the Fund, including the Fund's statement of additional information, online at <https://www.blackrock.com/prospectus>. You can also get this information at no cost by calling (800) 441-7762 or by sending an e-mail request to prospectus.request@blackrock.com, or from your financial professional. The Fund's prospectus and statement of additional information, both dated September 25, 2025, as amended and supplemented from time to time, are incorporated by reference into (legally made a part of) this Summary Prospectus.

This Summary Prospectus contains information you should know before investing, including information about risks. Please read it before you invest and keep it for future reference.

The Securities and Exchange Commission has not approved or disapproved these securities or passed upon the adequacy of this Summary Prospectus. Any representation to the contrary is a criminal offense.

Not FDIC Insured • May Lose Value • No Bank Guarantee

Summary Prospectus

Key Facts About BlackRock California Municipal Opportunities Fund

Investment Objective

The investment objective of BlackRock California Municipal Opportunities Fund (the “California Fund” or the “Fund”) is to provide shareholders with income exempt from Federal and California income taxes.

Fees and Expenses of the Fund

This table describes the fees and expenses that you may pay if you buy, hold and sell shares of the Fund. **You may pay other fees, such as brokerage commissions and other fees to your financial professional or your selected securities dealer, broker, investment adviser, service provider or industry professional (including BlackRock Advisors, LLC (“BlackRock”) and its affiliates) (each, a “Financial Intermediary”), which are not reflected in the table and example below.** You may qualify for sales charge discounts if you and your family invest, or agree to invest in the future, at least \$100,000 in the fund complex advised by BlackRock or its affiliates. More information about these and other discounts is available from your Financial Intermediary and in the “Details About the Share Classes” and the “Intermediary-Defined Sales Charge Waiver Policies” sections on pages 50 and A-1, respectively, of the Fund’s prospectus and in the “Purchase of Shares” section on page II-95 of Part II of the Fund’s Statement of Additional Information.

Shareholder Fees (fees paid directly from your investment)	Investor A Shares	Investor C Shares	Institutional Shares
Maximum Sales Charge (Load) Imposed on Purchases (as a percentage of offering price)	4.25%	None	None
Maximum Deferred Sales Charge (Load) (as a percentage of offering price or redemption proceeds, whichever is lower)	None ¹	1.00% ²	None
Annual Fund Operating Expenses (expenses that you pay each year as a percentage of the value of your investment)	Investor A Shares	Investor C Shares	Institutional Shares
Management Fee ³	0.37%	0.37%	0.37%
Distribution and/or Service (12b-1) Fees	0.25%	1.00%	None
Other Expenses	0.08%	0.10%	0.11%
Miscellaneous Other Expenses	0.06%	0.08%	0.09%
Interest Expense	0.02%	0.02%	0.02%
Acquired Fund Fees and Expenses ⁴	0.01%	0.01%	0.01%
Total Annual Fund Operating Expenses ⁴	0.71%	1.48%	0.49%
Fee Waivers and/or Expense Reimbursements ^{3,5}	—	(0.01)%	(0.02)%
Total Annual Fund Operating Expenses After Fee Waivers and/or Expense Reimbursements ^{3,5}	0.71%	1.47%	0.47%

¹ A contingent deferred sales charge (“CDSC”) of 1.00% is assessed on certain redemptions of Investor A Shares made within 18 months after purchase where no initial sales charge was paid at the time of purchase as part of an investment of \$250,000 or more.

² There is no CDSC on Investor C Shares after one year.

³ As described in the “Management of the Funds” section of the Fund’s prospectus beginning on page 66, BlackRock has contractually agreed to waive the management fee with respect to any portion of the Fund’s assets estimated to be attributable to investments in other equity and fixed-income mutual funds and exchange-traded funds managed by BlackRock or its affiliates that have a contractual management fee, through June 30, 2027. In addition, BlackRock has contractually agreed to waive its management fees by the amount of investment advisory fees the Fund pays to BlackRock indirectly through its investment in money market funds managed by BlackRock or its affiliates, through June 30, 2027. The contractual agreements may be terminated upon 90 days’ notice by a majority of the non-interested trustees of BlackRock California Municipal Series Trust or by a vote of a majority of the outstanding voting securities of the Fund.

⁴ The Total Annual Fund Operating Expenses do not correlate to the ratios of expenses to average net assets given in the Fund’s most recent Annual Financial Statements and Additional Information, which do not include Acquired Fund Fees and Expenses.

⁵ As described in the “Management of the Funds” section of the Fund’s prospectus beginning on page 66, BlackRock has contractually agreed to waive and/or reimburse fees or expenses in order to limit Total Annual Fund Operating Expenses After Fee Waivers and/or Expense Reimbursements (excluding Dividend Expense, Interest Expense, Acquired Fund Fees and Expenses and certain other Fund expenses) to 0.69% (for Investor A Shares), 1.44% (for Investor C Shares) and 0.44% (for Institutional Shares) of average daily net assets through June 30, 2027. The contractual agreement may be terminated upon 90 days’ notice by a majority of the non-interested trustees of the Trust or by a vote of a majority of the outstanding voting securities of the Fund.

Example:

This Example is intended to help you compare the cost of investing in the Fund with the cost of investing in other mutual funds. The Example assumes that you invest \$10,000 in the Fund for the time periods indicated and then redeem all of your shares at the end of those periods. The Example also assumes that your investment has a 5% return each year and that the Fund's operating expenses remain the same. Although your actual costs may be higher or lower, based on these assumptions your costs would be:

	1 Year	3 Years	5 Years	10 Years
Investor A Shares	\$494	\$642	\$803	\$1,270
Investor C Shares	\$250	\$467	\$807	\$1,559
Institutional Shares	\$ 48	\$155	\$272	\$ 614

You would pay the following expenses if you did not redeem your shares:

	1 Year	3 Years	5 Years	10 Years
Investor C Shares	\$150	\$467	\$807	\$1,559

Portfolio Turnover:

The Fund pays transaction costs, such as commissions, when it buys and sells securities (or "turns over" its portfolio). A higher portfolio turnover rate may indicate higher transaction costs and may result in higher taxes when shares are held in a taxable account. These costs, which are not reflected in annual fund operating expenses or in the Example, affect the Fund's performance. During the most recent fiscal year, the Fund's portfolio turnover rate was 117% of the average value of its portfolio.

Principal Investment Strategies of the Fund

Under normal circumstances, the Fund will invest at least 80% of its assets in California municipal bonds. For the purposes of the foregoing 80% policy, "assets" are the Fund's net assets, plus the amount of any borrowings for investment purposes. The Fund's investments in derivatives will be counted toward the Fund's 80% policy to the extent that they provide investment exposure to the securities included within that policy or to one or more market risk factors associated with such securities. California municipal bonds are debt obligations issued by or on behalf of a governmental entity in California or other qualifying issuer that pay interest that, in the opinion of bond counsel, is excludable from gross income for Federal income tax purposes (except that interest may be includable in taxable income for purposes of the Federal alternative minimum tax) and exempt from California income tax.

Municipal bonds also include short-term tax-exempt obligations like municipal notes, variable rate demand obligations, private activity bonds and insured municipal bonds. The Fund may invest in both fixed rate and variable rate obligations.

At least 50% of the Fund's assets will be invested in investment grade securities. Investment grade securities are securities which are rated in the four highest categories by at least one of the major rating agencies or determined by the management team to be of similar quality. The Fund may invest up to 50% of its assets in non-investment grade bonds (commonly called "high yield" or "junk bonds"). Non-investment grade bonds are bonds that, at the time of acquisition, are rated in the lower rating categories of the major rating agencies (BB or lower by S&P Global Ratings or Fitch Ratings or Ba or lower by Moody's Investor Service, Inc.) or are determined by Fund management to be of similar quality. Split rated bonds will be considered to have the higher credit rating. Split rated bonds are bonds that receive different ratings from two or more rating agencies.

The Fund may invest in bonds of any maturity. Under normal circumstances, the Fund seeks to maintain an average portfolio duration of zero to ten years. Duration is a mathematical calculation of the average life of a bond (or bonds in a bond fund) that serves as a useful measure of its price risk. Each year of duration represents an expected 1% change in the net asset value of a bond fund for every 1% immediate change in interest rates. For example, if a bond fund has an average duration of ten years, its net asset value would be expected to fall about 10% when interest rates rise by one percentage point, assuming all other factors remain equal. Conversely, the bond fund's net asset value would be expected to rise about 10% when interest rates fall by one percentage point, assuming all other factors remain equal. Duration, which measures price sensitivity to interest rate changes, is not necessarily equal to average maturity. The Fund's average weighted duration may vary significantly from time to time depending on the views of Fund management.

The Fund's investment process begins with bottom-up, fundamental analysis focused on sector and security selection, and then incorporates a macroeconomic framework for evaluating and managing risk, including geographic, technical and economic risk. The Fund's investment process is generally expected to place greater emphasis on duration management and capital structure compared to that of a more traditional municipal fixed income fund. When selecting investments for the Fund, Fund management considers a variety of factors, including the credit quality of issuers and the yield and duration of the obligations.

The Fund is permitted to engage in transactions in certain derivatives, such as interest rate futures, financial futures contracts and options thereon, for hedging purposes (including anticipatory hedges) or to seek to enhance returns. The Fund may also invest in other derivatives, such as swap agreements, including credit default swap agreements, for hedging purposes (including anticipatory hedges) or to enhance income. Derivatives are financial instruments whose value is derived from another security or an index. The Fund may use derivative instruments to hedge its investments or to seek to enhance returns. Derivatives allow the Fund to increase or decrease its risk exposure more quickly and efficiently than other types of instruments. The Fund may also invest in indexed and inverse floating rate obligations.

The Fund may invest up to 20% of its assets in securities that are not California municipal bonds (including, but not limited to, taxable municipal bonds, U.S. Treasury and Government agency issues, and investment grade corporate bonds).

The Fund may leverage its assets through the use of proceeds received through tender option bond transactions. In a tender option bond transaction, the Fund transfers municipal bonds or other municipal securities into a special purpose entity (a "TOB Trust"). A TOB Trust typically issues two classes of beneficial interests: short-term floating rate interests ("TOB Floaters"), which are sold to third party investors, and residual inverse floating rate interests ("TOB Residuals"), which are generally issued to the Fund. The Fund may invest in TOB Residuals and may also invest in TOB Floaters. The Fund will look through to the underlying municipal bond held by a TOB Trust for purposes of the Fund's 80% policy.

The Fund may also buy when-issued securities and participate in delayed delivery transactions.

The Fund may engage in active and frequent trading of portfolio securities to achieve its primary investment strategies.

Principal Risks of Investing in the Fund

Risk is inherent in all investing. The value of your investment in the Fund, as well as the amount of return you receive on your investment, may fluctuate significantly from day to day and over time. You may lose part or all of your investment in the Fund or your investment may not perform as well as other similar investments. The following is a summary description of principal risks of investing in the Fund. The relative significance of each risk factor below may change over time and you should review each risk factor carefully.

■ **Debt Securities Risk** — Debt securities, such as bonds, involve risks, such as credit risk, interest rate risk, extension risk, and prepayment risk, each of which are described in further detail below:

Credit Risk — Credit risk refers to the possibility that the issuer of a debt security (i.e., the borrower) will not be able to make payments of interest and principal when due. Changes in an issuer's credit rating or the market's perception of an issuer's creditworthiness may also affect the value of the Fund's investment in that issuer. The degree of credit risk depends on both the financial condition of the issuer and the terms of the obligation.

Interest Rate Risk — The market value of bonds and other fixed-income securities changes in response to interest rate changes and other factors. Interest rate risk is the risk that prices of bonds and other fixed-income securities will increase as interest rates fall and decrease as interest rates rise.

The Fund may be subject to a greater risk of rising interest rates during a period of historically low interest rates. For example, if interest rates increase by 1%, assuming a current portfolio duration of ten years, and all other factors being equal, the value of the Fund's investments would be expected to decrease by 10%. (Duration is a measure of the price sensitivity of a debt security or portfolio of debt securities to relative changes in interest rates.) The magnitude of these fluctuations in the market price of bonds and other fixed-income securities is generally greater for those securities with longer maturities. Fluctuations in the market price of the Fund's investments will not affect interest income derived from instruments already owned by the Fund, but will be reflected in the Fund's net asset value. The Fund may lose money if short-term or long-term interest rates rise sharply in a manner not anticipated by Fund management.

To the extent the Fund invests in debt securities that may be prepaid at the option of the obligor (such as mortgage-backed securities), the sensitivity of such securities to changes in interest rates may increase (to the detriment of the Fund) when interest rates rise. Moreover, because rates on certain floating rate debt securities typically reset

only periodically, changes in prevailing interest rates (and particularly sudden and significant changes) can be expected to cause some fluctuations in the net asset value of the Fund to the extent that it invests in floating rate debt securities.

These basic principles of bond prices also apply to U.S. Government securities. A security backed by the “full faith and credit” of the U.S. Government is guaranteed only as to its stated interest rate and face value at maturity, not its current market price. Just like other fixed-income securities, government-guaranteed securities will fluctuate in value when interest rates change.

A general rise in interest rates has the potential to cause investors to move out of fixed-income securities on a large scale, which may increase redemptions from funds that hold large amounts of fixed-income securities. Heavy redemptions could cause the Fund to sell assets at inopportune times or at a loss or depressed value and could hurt the Fund’s performance.

Extension Risk — When interest rates rise, certain obligations will be paid off by the obligor more slowly than anticipated, causing the value of these obligations to fall.

Prepayment Risk — When interest rates fall, certain obligations will be paid off by the obligor more quickly than originally anticipated, and the Fund may have to invest the proceeds in securities with lower yields.

- **Municipal Securities Risks** — Municipal securities risks include the ability of the issuer to repay the obligation, the relative lack of information about certain issuers of municipal securities, and the possibility of future legislative changes which could affect the market for and value of municipal securities. Budgetary constraints of local, state, and federal governments upon which the issuers may be relying for funding may also impact municipal securities. These risks include:

General Obligation Bonds Risks — Timely payments depend on the issuer’s credit quality, ability to raise tax revenues and ability to maintain an adequate tax base.

Revenue Bonds Risks — These payments depend on the money earned by the particular facility or class of facilities, or the amount of revenues derived from another source.

Private Activity Bonds Risks — Municipalities and other public authorities issue private activity bonds to finance development of industrial facilities for use by a private enterprise. The private enterprise pays the principal and interest on the bond, and the issuer does not pledge its full faith, credit and taxing power for repayment.

Moral Obligation Bonds Risks — Moral obligation bonds are generally issued by special purpose public authorities of a state or municipality. If the issuer is unable to meet its obligations, repayment of these bonds becomes a moral commitment, but not a legal obligation, of the state or municipality.

Municipal Notes Risks — Municipal notes are shorter term municipal debt obligations. If there is a shortfall in the anticipated proceeds, the notes may not be fully repaid and the Fund may lose money.

Municipal Lease Obligations Risks — In a municipal lease obligation, the issuer agrees to make payments when due on the lease obligation. Although the issuer does not pledge its unlimited taxing power for payment of the lease obligation, the lease obligation is secured by the leased property.

Tax-Exempt Status Risk — The Fund and its investment manager will rely on the opinion of issuers’ bond counsel and, in the case of derivative securities, sponsors’ counsel, on the tax-exempt status of interest on municipal bonds and payments under derivative securities. Neither the Fund nor its investment manager will independently review the bases for those tax opinions, which may ultimately be determined to be incorrect and subject the Fund and its shareholders to substantial tax liabilities.

- **State Specific Risk** — Because the Fund invests primarily in California municipal securities, it is more exposed to adverse political, economic and regulatory developments within the state than a fund that invests more widely.

- **Derivatives Risk** — The Fund’s use of derivatives may increase its costs, reduce the Fund’s returns and/or increase volatility. Derivatives involve significant risks, including:

Leverage Risk — The Fund’s use of derivatives can magnify the Fund’s gains and losses. Relatively small market movements may result in large changes in the value of a derivatives position and can result in losses that greatly exceed the amount originally invested.

Market Risk — Some derivatives are more sensitive to interest rate changes and market price fluctuations than other securities. The Fund could also suffer losses related to its derivatives positions as a result of unanticipated market movements, which losses are potentially unlimited. Finally, BlackRock may not be able to predict correctly the direction of securities prices, interest rates and other economic factors, which could cause the Fund’s derivatives positions to lose value.

Counterparty Risk — Derivatives are also subject to counterparty risk, which is the risk that the other party in the transaction will be unable or unwilling to fulfill its contractual obligation, and the related risks of having concentrated exposure to such a counterparty.

Illiquidity Risk — The possible lack of a liquid secondary market for derivatives and the resulting inability of the Fund to sell or otherwise close a derivatives position could expose the Fund to losses and could make derivatives more difficult for the Fund to value accurately.

Operational Risk — The use of derivatives includes the risk of potential operational issues, including documentation issues, settlement issues, systems failures, inadequate controls and human error.

Legal Risk — The risk of insufficient documentation, insufficient capacity or authority of counterparty, or legality or enforceability of a contract.

Volatility and Correlation Risk — Volatility is defined as the characteristic of a security, an index or a market to fluctuate significantly in price within a short time period. A risk of the Fund's use of derivatives is that the fluctuations in their values may not correlate with the overall securities markets.

Valuation Risk — Valuation for derivatives may not be readily available in the market. Valuation may be more difficult in times of market turmoil since many investors and market makers may be reluctant to purchase complex instruments or quote prices for them.

Hedging Risk — Hedges are sometimes subject to imperfect matching between the derivative and the underlying security, and there can be no assurance that the Fund's hedging transactions will be effective. The use of hedging may result in certain adverse tax consequences.

Tax Risk — Certain aspects of the tax treatment of derivative instruments, including swap agreements and commodity-linked derivative instruments, are currently unclear and may be affected by changes in legislation, regulations or other legally binding authority. Such treatment may be less favorable than that given to a direct investment in an underlying asset and may adversely affect the timing, character and amount of income the Fund realizes from its investments.

■ **High Portfolio Turnover Risk** — The Fund may engage in active and frequent trading of its portfolio securities. High portfolio turnover (more than 100%) may result in increased transaction costs to the Fund, including brokerage commissions, dealer mark-ups and other transaction costs on the sale of the securities and on reinvestment in other securities. The sale of Fund portfolio securities may result in the realization and/or distribution to shareholders of higher capital gains or losses as compared to a fund with less active trading policies. These effects of higher than normal portfolio turnover may adversely affect Fund performance.

■ **Illiquid Investments Risk** — The Fund may not acquire any illiquid investment if, immediately after the acquisition, the Fund would have invested more than 15% of its net assets in illiquid investments. An illiquid investment is any investment that the Fund reasonably expects cannot be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment. Liquid investments may become illiquid after purchase by the Fund, particularly during periods of market turmoil. There can be no assurance that a security or instrument that is deemed to be liquid when purchased will continue to be liquid for as long as it is held by the Fund, and any security or instrument held by the Fund may be deemed an illiquid investment pursuant to the Fund's liquidity risk management program. The Fund's illiquid investments may reduce the returns of the Fund because it may be difficult to sell the illiquid investments at an advantageous time or price. In addition, if the Fund is limited in its ability to sell illiquid investments during periods when shareholders are redeeming their shares, the Fund will need to sell liquid securities to meet redemption requests and illiquid securities will become a larger portion of the Fund's holdings. An investment may be illiquid due to, among other things, the reduced number and capacity of traditional market participants to make a market in fixed-income securities or the lack of an active trading market. To the extent that the Fund's principal investment strategies involve derivatives or securities with substantial market and/or credit risk, the Fund will tend to have the greatest exposure to the risks associated with illiquid investments. Illiquid investments may be harder to value, especially in changing markets, and if the Fund is forced to sell these investments to meet redemption requests or for other cash needs, the Fund may suffer a loss. This may be magnified in a rising interest rate environment or other circumstances where investor redemptions from fixed-income mutual funds may be higher than normal. In addition, when there is illiquidity in the market for certain securities, the Fund, due to limitations on illiquid investments, may be subject to purchase and sale restrictions.

■ **Indexed and Inverse Securities Risk** — Indexed and inverse securities provide a potential return based on a particular index of value or interest rates. The Fund's return on these securities will be subject to risk with respect to the value of the particular index. These securities are subject to leverage risk and correlation risk. Certain indexed and inverse securities have greater sensitivity to changes in interest rates or index levels than other

securities, and the Fund's investment in such instruments may decline significantly in value if interest rates or index levels move in a way Fund management does not anticipate.

■ **Insurance Risk** — Insurance guarantees that interest payments on a municipal security will be made on time and that the principal will be repaid when the security matures. However, insurance does not protect against losses caused by declines in a municipal security's value. The Fund cannot be certain that any insurance company will make the payments it guarantees. If a municipal security's insurer fails to fulfill its obligations or loses its credit rating, the value of the security could drop.

■ **High Yield Bonds Risk** — Although junk bonds generally pay higher rates of interest than investment grade bonds, junk bonds are high risk investments that are considered speculative and may cause income and principal losses for the Fund.

■ **Leverage Risk** — Some transactions may give rise to a form of economic leverage. These transactions may include, among others, derivatives, and may expose the Fund to greater risk and increase its costs. The use of leverage may cause the Fund to liquidate portfolio positions when it may not be advantageous to do so to satisfy its obligations or to meet the applicable requirements of the Investment Company Act of 1940, as amended, and the rules thereunder. Increases and decreases in the value of the Fund's portfolio will be magnified when the Fund uses leverage.

■ **Market Risk and Selection Risk** — Market risk is the risk that one or more markets in which the Fund invests will go down in value, including the possibility that the markets will go down sharply and unpredictably. The value of a security or other asset may decline due to changes in general market conditions, economic trends or events that are not specifically related to the issuer of the security or other asset, or factors that affect a particular issuer or issuers, exchange, country, group of countries, region, market, industry, group of industries, sector or asset class. Local, regional or global events such as war, acts of terrorism, the spread of infectious illness or other public health issues like pandemics or epidemics, recessions, or other events could have a significant impact on the Fund and its investments. Selection risk is the risk that the securities selected by Fund management will underperform the markets, the relevant indices or the securities selected by other funds with similar investment objectives and investment strategies. This means you may lose money.

Recent policy initiatives undertaken by the U.S. government have the potential to impact international relations, trade agreements and the overall regulatory environment in ways that could create uncertainty and instability in domestic and global markets, and could adversely affect the investment performance of the Fund. In particular, actions taken by the U.S. government in respect of international trade relations could lead to trade wars, increased costs for imported goods, disruptions in supply chains, reduced foreign investment, and instability in regions where the Fund invests.

■ **Taxability Risk** — Investments in taxable municipal bonds, U.S. Treasury and Government agency issues, investment grade corporate bonds and taxable money market securities as well as some of the derivatives and other instruments discussed herein will cause the Fund to have taxable investment income. The Fund may also realize capital gains on the sale of its municipal bonds (and other securities and derivatives it holds). These capital gains will be taxable regardless of whether they are derived from a sale of municipal bonds. Fund investments may also cause the Fund to recognize taxable ordinary income from market discount. The Fund will report distributions from taxable investment income, from market discount and from realized capital gains as taxable to Fund shareholders. In order for the Fund to be eligible to report distributions of tax-exempt interest income from tax-exempt or municipal securities as tax-exempt income to Fund shareholders, at least half of the Fund's total assets must be invested in tax-exempt securities as of the end of each calendar quarter. If the Fund did not maintain that level of investment with respect to tax-exempt securities, the Fund would lose the ability to report distributions of tax-exempt interest income as tax-exempt income to Fund shareholders.

The Fund expects to use derivatives for hedging, among other things. The Federal income tax treatment of a derivative may not be as favorable as a direct investment in an underlying asset. Derivatives may produce taxable income and taxable realized gain. Derivatives may adversely affect the timing, character and amount of income the Fund realizes from its investments. As a result, a larger portion of the Fund's distributions may be treated as ordinary income rather than as tax-exempt income or as capital gains. In addition, certain derivatives are subject to mark-to-market or straddle provisions of the Internal Revenue Code of 1986, as amended (the "Internal Revenue Code"). If such provisions are applicable, there could be an increase (or decrease) in the amount of taxable dividends paid by the Fund. Payments received by the Fund from swap agreements will generally produce taxable income, while payments made by the Fund on swap agreements will be allocated against both tax-exempt and taxable gross income, decreasing the Fund's distributable net tax-exempt income. In addition, the tax treatment of certain derivatives, such as swaps, is unsettled and may be subject to future legislation, regulation or administrative pronouncements issued by the Internal Revenue Service.

■ **Legal Opinion Risk** — The Fund will rely on legal opinions of counsel to issuers of municipal securities as to the

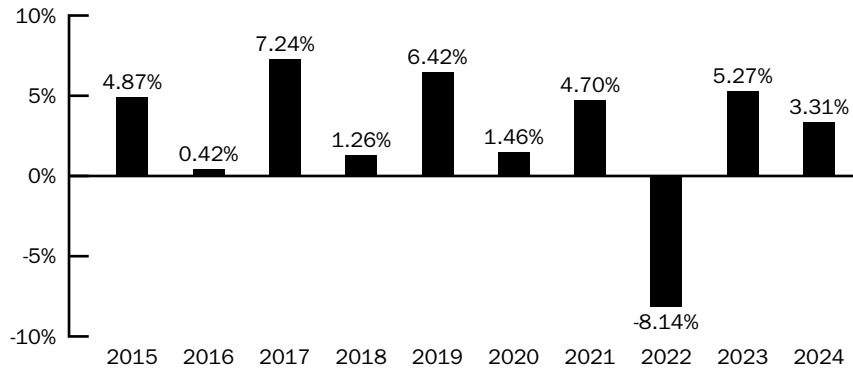
tax-exempt status of investments and will not do its own analysis. The status of a municipal security as tax-exempt may be affected by events that occur after the municipal security is issued.

- **Tender Option Bonds Risk** — The Fund's participation in tender option bond transactions may reduce the Fund's returns and/or increase volatility. Investments in tender option bond transactions expose the Fund to counterparty risk and leverage risk. An investment in a tender option bond transaction typically will involve greater risk than an investment in a municipal fixed rate security, including the risk of loss of principal. Distributions on TOB Residuals will bear an inverse relationship to short-term municipal security interest rates. Distributions on TOB Residuals paid to the Fund will be reduced or, in the extreme, eliminated as short-term municipal interest rates rise and will increase when short-term municipal interest rates fall. TOB Residuals generally will underperform the market for fixed rate municipal securities in a rising interest rate environment. The Fund may invest in TOB Trusts on either a non-recourse or recourse basis. If the Fund invests in a TOB Trust on a recourse basis, it could suffer losses in excess of the value of its TOB Residuals.
- **U.S. Government Obligations Risk** — Certain securities in which the Fund may invest, including securities issued by certain U.S. Government agencies and U.S. Government sponsored enterprises, are not guaranteed by the U.S. Government or supported by the full faith and credit of the United States. In addition, circumstances could arise that could prevent the timely payment of interest or principal on U.S. Government obligations, such as reaching the legislative "debt ceiling." Such non-payment could result in losses to the Fund and substantial negative consequences for the U.S. economy and the global financial system.
- **Utility Industry Risk** — When interest rates go up, the value of securities issued by utilities companies historically has gone down. In most countries and localities, the utilities industry is regulated by governmental entities, which can increase costs and delays for new projects and make it difficult to pass increased costs on to consumers. In certain areas, deregulation of utilities has resulted in increased competition and reduced profitability for certain companies, and increased the risk that a particular company will become bankrupt or fail completely. Reduced profitability, as well as new uses for or additional need of funds (such as for expansion, operations or stock buybacks), could result in reduced dividend payout rates for utilities companies. In addition, utilities companies face the risk of increases in the cost and reduced availability of fuel (such as oil, coal, natural gas or nuclear energy) and potentially high interest costs for borrowing to finance new projects. Energy conservation, prolonged changes in climatic conditions and climate policy may also adversely impact the utilities sector.
- **Variable Rate Demand Obligations Risks** — Variable rate demand obligations are floating rate securities that combine an interest in a long-term municipal bond with a right to demand payment before maturity from a bank or other financial institution. If the bank or financial institution is unable to pay, the Fund may lose money.
- **When-Issued and Delayed Delivery Securities and Forward Commitments Risk** — When-issued and delayed delivery securities and forward commitments involve the risk that the security the Fund buys will lose value prior to its delivery. There also is the risk that the security will not be issued or that the other party to the transaction will not meet its obligation. If this occurs, the Fund may lose both the investment opportunity for the assets it set aside to pay for the security and any gain in the security's price.

Performance Information

The information shows you how the Fund's performance has varied year by year and provides some indication of the risks of investing in the Fund. The Fund's returns prior to January 26, 2015 as reflected in the bar chart and the table are the returns of the Fund when it followed a different investment strategy under the name "BlackRock California Municipal Bond Fund." The table compares the Fund's performance to that of the Bloomberg Municipal Bond Index and a customized weighted index comprised of 85% Bloomberg Municipal Bond: California Exempt Total Return Index Unhedged USD; 10% California Bloomberg Municipal Bond: High Yield (non-Investment Grade) Total Return Index; and 5% Bloomberg Municipal Index California Taxable Bonds Total Return Index Value (the "California Customized Reference Benchmark"). The California Customized Reference Benchmark is relevant to the Fund because it has characteristics similar to the Fund's investment strategy. To the extent that dividends and distributions have been paid by the Fund, the performance information for the Fund in the chart and table assumes reinvestment of the dividends and distributions. As with all such investments, past performance (before and after taxes) is not an indication of future results. Sales charges are not reflected in the bar chart. If they were, returns would be less than those shown. However, the table includes all applicable fees and sales charges. If the Fund's investment manager and its affiliates had not waived or reimbursed certain Fund expenses during these periods, the Fund's returns would have been lower. Updated information on the Fund's performance, including its current net asset value, can be obtained by visiting www.blackrock.com or can be obtained by phone at (800) 882-0052.

Institutional Shares
ANNUAL TOTAL RETURNS
BlackRock California Municipal Opportunities Fund
As of 12/31



During the ten-year period shown in the bar chart, the highest return for a quarter was 6.40% (quarter ended December 31, 2023) and the lowest return for a quarter was -5.65% (quarter ended March 31, 2022). The year-to-date return as of June 30, 2025 was -0.64%.

For the periods ended 12/31/24
Average Annual Total Returns

	1 Year	5 Years	10 Years
BlackRock California Municipal Opportunities — Institutional Shares			
Return Before Taxes	3.31%	1.20%	2.59%
Return After Taxes on Distributions	3.09%	1.09%	2.45%
Return After Taxes on Distributions and Sale of Fund Shares	3.12%	1.40%	2.54%
BlackRock California Municipal Opportunities — Investor A Shares			
Return Before Taxes	(1.31)%	0.08%	1.90%
BlackRock California Municipal Opportunities — Investor C Shares			
Return Before Taxes	1.29%	0.19%	1.73%
Bloomberg Municipal Bond Index (Reflects no deduction for fees, expenses or taxes)	1.05%	0.99%	2.25%
California Customized Reference Benchmark (Reflects no deduction for fees, expenses or taxes)	1.55%	0.94%	—% ¹

1. The California Customized Reference Benchmark commenced in September 2016 and therefore the California Customized Reference Benchmark does not have a return for the 10-year period.

After-tax returns are calculated using the historical highest individual federal marginal income tax rates and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown, and the after-tax returns shown are not relevant to investors who hold their shares through tax-deferred arrangements, such as 401(k) plans or individual retirement accounts. After-tax returns are shown for Institutional Shares only, and the after-tax returns for Investor A Shares and Investor C Shares will vary.

Investment Manager

The Fund's investment manager is BlackRock Advisors, LLC (previously defined as "BlackRock").

Portfolio Managers

Portfolio Manager	Portfolio Manager of the Fund Since	Title
Walter O'Connor, CFA ¹	1993	Managing Director of BlackRock, Inc.
Michael Kalinoski, CFA	2015	Director of BlackRock, Inc.
Kevin Maloney, CFA	2022	Managing Director of BlackRock, Inc.
Ryan McDonald, CFA	2023	Managing Director of BlackRock, Inc.
Sean Carney	2023	Managing Director of BlackRock, Inc.

Portfolio Manager	Portfolio Manager of the Fund Since	Title
Patrick Haskell	2025	Managing Director of BlackRock, Inc.

¹ On or about March 17, 2026, Walter O'Connor, CFA, will no longer serve as a portfolio manager of the Fund.

Purchase and Sale of Fund Shares

You may purchase or redeem shares of the Fund each day the New York Stock Exchange is open. To purchase or sell shares you should contact your Financial Intermediary, or, if you hold your shares through the Fund, you should contact the Fund by phone at (800) 441-7762, by mail (c/o BlackRock Funds, P.O. Box 534429, Pittsburgh, Pennsylvania 15253-4429), or by the Internet at www.blackrock.com. The Fund's initial and subsequent investment minimums generally are as follows, although the Fund may reduce or waive the minimums in some cases:

	Investor A and Investor C Shares	Institutional Shares
Minimum Initial Investment	<p>\$1,000 for all accounts except:</p> <ul style="list-style-type: none"> • \$50, if establishing an Automatic Investment Plan. • There is no investment minimum for employer-sponsored retirement plans (not including SEP IRAs, SIMPLE IRAs or SARSEPs). • There is no investment minimum for certain fee-based programs. 	<p>There is no minimum initial investment for:</p> <ul style="list-style-type: none"> • Employer-sponsored retirement plans (not including SEP IRAs, SIMPLE IRAs or SARSEPs), state sponsored 529 college savings plans, collective trust funds, investment companies or other pooled investment vehicles, unaffiliated thrifts and unaffiliated banks and trust companies, each of which may purchase shares of the Fund through a Financial Intermediary that has entered into an agreement with the Fund's distributor to purchase such shares. • Clients of Financial Intermediaries that: (i) charge such clients a fee for advisory, investment consulting, or similar services or (ii) have entered into an agreement with the Fund's distributor to offer Institutional Shares through a no-load program or investment platform. • Clients investing through a self-directed IRA brokerage account program sponsored by a retirement plan record-keeper, provided that such program offers only mutual fund options and that the program maintains an account with the Fund on an omnibus basis. <p>\$2 million for individuals and "Institutional Investors," which include, but are not limited to, endowments, foundations, family offices, local, city, and state governmental institutions, corporations and insurance company separate accounts who may purchase shares of the Fund through a Financial Intermediary that has entered into an agreement with the Fund's distributor to purchase such shares.</p> <p>\$1,000 for:</p> <ul style="list-style-type: none"> • Clients investing through Financial Intermediaries that offer such shares on a platform that charges a transaction based sales commission outside of the Fund. • Tax-qualified accounts for insurance agents that are registered representatives of an insurance company's broker-dealer that has entered into an agreement with the Fund's distributor to offer Institutional Shares, and the family members of such persons.
Minimum Additional Investment	\$50 for all accounts (with the exception of certain employer-sponsored retirement plans which may have a lower minimum).	No subsequent minimum.

Tax Information

The Fund's dividends and distributions may be subject to U.S. federal income taxes and may be taxed as ordinary income or capital gains, unless you are a tax-exempt investor or are investing through a qualified tax-exempt plan described in section 401(a) of the Internal Revenue Code, in which case you may be subject to U.S. federal income tax when distributions are received from such tax-deferred arrangements.

The Fund intends to make distributions most of which will be excludable from gross income for federal income tax purposes and exempt from California personal income taxes.

Payments to Broker/Dealers and Other Financial Intermediaries

If you purchase shares of the Fund through a Financial Intermediary, the Fund and BlackRock Investments, LLC, the Fund's distributor, or its affiliates may pay the Financial Intermediary for the sale of Fund shares and related services.

These payments may create a conflict of interest by influencing the Financial Intermediary and your individual financial professional to recommend the Fund over another investment.

Ask your individual financial professional or visit your Financial Intermediary's website for more information.

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