

Nuveen California Municipal Value Fund 2
Form N-Q
July 30, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM N-Q

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT
COMPANY

Investment Company Act file number 811-22272

Nuveen California Municipal Value Fund 2
(Exact name of registrant as specified in charter)

Nuveen Investments
333 West Wacker Drive, Chicago, Illinois 60606
(Address of principal executive offices) (Zip code)

Kevin J. McCarthy
Vice President and Secretary
333 West Wacker Drive, Chicago, Illinois 60606
(Name and address of agent for service)

Registrant's telephone number, including area code: 312-917-7700

Date of fiscal year end: 2/28

Date of reporting period: 5/31/12

Form N-Q is to be used by management investment companies, other than small business investment companies registered on Form N-5 (§§ 239.24 and 274.5 of this chapter), to file reports with the Commission, not later than 60 days after the close of the first and third fiscal quarters, pursuant to rule 30b1-5 under the Investment Company Act of 1940 (17 CFR 270.30b1-5). The Commission may use the information provided on Form N-Q in its regulatory, disclosure review, inspection, and policymaking roles.

A registrant is required to disclose the information specified by Form N-Q, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-Q unless the Form displays a currently valid Office of Management and Budget ("OMB") control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. § 3507.

Item 1. Schedule of Investments

Portfolio of Investments (Unaudited)
 Nuveen California Municipal Value 2 Fund
 (NCB)
 May 31, 2012

Principal Amount (000)	Description (1)	Optional Call Provisions (2)	Ratings (3)	Value
\$ 3,500	Consumer Staples – 4.8% (4.8% of Total Investments) Tobacco Securitization Authority of Northern California, Tobacco Settlement Asset-Backed Bonds, Series 2005A-1, 5.500%, 6/01/45	6/15 at 100.00	B–	\$ 2,672,705
500	Education and Civic Organizations – 7.2% (7.3% of Total Investments) California Educational Facilities Authority, Revenue Bonds, University of Redlands, Series 2005A, 5.000%, 10/01/25	10/15 at 100.00	A3	521,250
920	California Educational Facilities Authority, Revenue Bonds, University of the Pacific, Series 2009, 5.500%, 11/01/39	11/19 at 100.00	A2	1,013,665
1,965	California State Public Works Board, Lease Revenue Bonds, University of California Department of Education Riverside Campus Project, Series 2009B, 5.750%, 4/01/23	4/19 at 100.00	A2	2,321,824
150	California Statewide Communities Development Authority, School Facility Revenue Bonds, Alliance College-Ready Public Schools, Series 2011A, 7.000%, 7/01/46	7/21 at 100.00	BBB	162,231
3,535	Total Education and Civic Organizations Health Care – 23.2% (23.4% of Total Investments)			4,018,970
1,000	ABAG Finance Authority for Non-Profit Corporations, California, Cal-Mortgage Insured Health Facility Revenue Bonds, Saint Rose Hospital, Series 2009A, 6.000%, 5/15/29	5/19 at 100.00	A–	1,114,270
1,900	California Health Facilities Financing Authority, Revenue Bonds, Catholic Healthcare West, Series 2009A, 6.000%, 7/01/39	7/19 at 100.00	A+	2,215,742
1,000			A	1,215,200

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	California Health Facilities Financing Authority, Revenue Bonds, Childrens Hospital of Orange County, Series 2009A, 6.500%, 11/01/38	11/19 at 100.00		
850	California Municipal Financing Authority, Certificates of Participation, Community Hospitals of Central California, Series 2007, 5.250%, 2/01/27	2/17 at 100.00	BBB	879,912
700	California Statewide Communities Development Authority, Revenue Bonds, Adventist Health System West, Series 2007B, 5.000%, 3/01/37 – AGC Insured	3/18 at 100.00	AA–	746,655
125	California Statewide Community Development Authority, Revenue Bonds, Kaiser Permanente System, Series 2006: 5.000%, 3/01/41	3/16 at 100.00	A+	130,034
2,000	5.250%, 3/01/45	3/16 at 100.00	A+	2,098,560
1,500	California Statewide Community Development Authority, Revenue Bonds, Sutter Health, Series 2004D, 5.050%, 8/15/38 – AGM Insured	8/18 at 100.00	AA–	1,612,575
800	Hospital Authority of Delaware County, Indiana, Hospital Revenue Bonds, Cardinal Health System, Series 2006, 5.000%, 8/01/24	8/16 at 100.00	Baa2	838,736
850	Illinois Finance Authority, Revenue Bonds, Sherman Health Systems, Series 2007A, 5.500%, 8/01/37	8/17 at 100.00	BBB	879,045
725	Palomar Pomerado Health Care District, California, Certificates of Participation, Series 2010, 6.000%, 11/01/41	11/20 at 100.00	Baa3	763,838
380	San Buenaventura, California, Revenue Bonds, Community Memorial Health System, Series 2011, 7.500%, 12/01/41	12/21 at 100.00	BB	451,467
11,830	Total Health Care Housing/Multifamily – 1.0% (1.1% of Total Investments)			12,946,034
230	California Municipal Finance Authority, Mobile Home Park Revenue Bonds, Caritas Projects Series 2010A, 6.400%, 8/15/45	8/20 at 100.00	BBB	250,272
70	California Municipal Finance Authority, Mobile Home Park Revenue Bonds, Caritas Projects Series 2012A, 5.500%, 8/15/47	8/22 at 100.00	BBB	72,257
250		8/22 at 100.00	A1	256,205

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	California Municipal Finance Authority, Mobile Home Park Revenue Bonds, Caritas Projects Series 2012B, 7.250%, 8/15/47			
550	Total Housing/Multifamily Housing/Single Family – 7.8% (7.9% of Total Investments)			578,734
440	California Department of Veteran Affairs, Home Purchase Revenue Bonds, Series 2007B, 5.150%, 12/01/27 (Alternative Minimum Tax)	12/16 at 100.00	AA	460,464
1,365	California Housing Finance Agency, California, Home Mortgage Revenue Bonds, Series 2008L, 5.500%, 8/01/38	2/18 at 100.00	BBB	1,393,488
2,500	California Housing Finance Agency, Home Mortgage Revenue Bonds, Series 2006K, 4.625%, 8/01/26 (Alternative Minimum Tax)	2/16 at 100.00	BBB	2,484,450
4,305	Total Housing/Single Family Industrials – 1.6% (1.6% of Total Investments)			4,338,402
900	California Enterprise Development Authority, Sewer Facilities Revenue, Anheuser-Busch Project, Senior Lien Series 2007, 5.300%, 9/01/47 (Alternative Minimum Tax) Long-Term Care – 2.1% (2.1% of Total Investments)	9/12 at 100.00	A	902,016
1,000	California Health Facilities Financing Authority, Insured Revenue Bonds, Community Program for Persons with Developmental Disabilities, Series 2011A, 6.250%, 2/01/26 Materials – 1.1% (1.1% of Total Investments)	2/21 at 100.00	A–	1,163,600
585	Courtland Industrial Development Board, Alabama, Solid Waste Revenue Bonds, International Paper Company Project, Series 2005A, 5.200%, 6/01/25 (Alternative Minimum Tax) Tax Obligation/General – 8.9% (8.9% of Total Investments)	6/15 at 100.00	BBB	602,492
2,000	California State, Various Purpose General Obligation Bonds, Series 2007, 5.000%, 6/01/37 – NPFPG Insured	6/17 at 100.00	A1	2,093,980
2,100	Carlsbad Unified School District, San Diego County, California, General Obligation Bonds, Series 2009B, 0.000%, 5/01/34	5/24 at 100.00	AA	1,608,747
1,120	Oakland, California, General Obligation Bonds, Measure DD Series 2009B, 5.250%, 1/15/29	1/19 at 100.00	Aa2	1,243,648

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5,220	Total Tax Obligation/General Tax Obligation/Limited – 18.2% (18.4% of Total Investments) California State Public Works Board, Lease Revenue Bonds, Various Capital Projects, Series			4,946,375
500	2010A-1, 6.000%, 3/01/35 City and County of San Francisco, California, Redevelopment Financing Authority, Tax Allocation Revenue Bonds, San Francisco Redevelopment Projects, Series 2009B, 6.625%, 8/01/39	3/20 at 100.00	A2	583,990
1,000	Fontana Redevelopment Agency, California, Jurupa Hills Redevelopment Project, Tax Allocation	8/19 at 100.00	A	1,149,000
160	Refunding Bonds, 1997 Series A, 5.500%, 10/01/27 Inglewood Redevelopment Agency, California, Tax Allocation Bonds, Merged Redevelopment Project, Subordinate Lien Series 2007A-1, 5.000%, 5/01/25 – AMBAC Insured Lancaster Redevelopment Agency, California, Tax Allocation Bonds, Combined	10/12 at 100.00	A–	160,573
145	Redevelopment Project Areas Housing Programs, Series 2009, 6.875%, 8/01/39 National City Community Development Commission, California, Tax Allocation Bonds, National City Redevelopment Project, Series 2011: 5.000%, 8/01/16	5/17 at 100.00	BBB+	144,176
1,000	6.500%, 8/01/24 Novato Redevelopment Agency, California, Tax Allocation Bonds, Hamilton Field Redevelopment Project, Series 2011, 6.750%, 9/01/40 Perris Union High School District Financing Authority, Riverside County, California, Revenue Bonds, Series 2011: 6.000%, 9/01/33	8/19 at 100.00	BBB+	1,114,490
1,135		No Opt. Call	A–	1,237,139
80		8/21 at 100.00	A–	94,014
30		9/21 at 100.00	A–	34,253
30		9/12 at 103.00	N/R	30,952
60		9/12 at 103.00	N/R	61,888
240	Pittsburg Redevelopment Agency, California, Tax Allocation Bonds, Los Medanos Community Development Project, Refunding Series 2008A, 6.500%, 9/01/28 Rancho Santa Fe CSD Financing Authority, California, Revenue Bonds, Superior Lien Series	9/18 at 100.00	BBB	259,632
95	2011A, 5.750%, 9/01/30	9/21 at 100.00	BBB+	103,297

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15	Riverside County Redevelopment Agency, California, Tax Allocation Bonds, Jurupa Valley Project	10/21 at 100.00	A-	16,649
	Area, Series 2011B, 6.500%, 10/01/25			
1,500	San Francisco City and County, California, Certificates of Participation, Multiple Capital Improvement Projects, Series 2009A, 5.250%, 4/01/31	4/19 at 100.00	AA-	1,673,190
15	San Francisco Redevelopment Finance Authority, California, Tax Allocation Revenue Bonds, Mission Bay North Redevelopment Project, Series 2011C, 6.750%, 8/01/41	2/21 at 100.00	A-	17,247
15	San Francisco Redevelopment Financing Authority, California, Tax Allocation Revenue Bonds, Mission Bay South Redevelopment Project, Series 2011D:			
	7.000%, 8/01/33	2/21 at 100.00	BBB	17,179
15	7.000%, 8/01/41	2/21 at 100.00	BBB	16,975
125	San Jose Redevelopment Agency, California, Tax Allocation Bonds, Merged Area Redevelopment Project, Series 2006C, 5.000%, 8/01/25 – NPFPG Insured	8/17 at 100.00	BBB	127,384
585	San Jose Redevelopment Agency, California, Tax Allocation Bonds, Merged Area Redevelopment Project, Series 2006D, 5.000%, 8/01/22 – AMBAC Insured	8/17 at 100.00	BBB	603,486
25	Signal Hill Redevelopment Agency, California, Project 1 Tax Allocation Bonds, Series 2011, 7.000%, 10/01/26	4/21 at 100.00	N/R	27,210
500	Val Verde Unified School District Financing Authority, California, Special Tax Revenue, Junior Lien Refunding Series 2003, 6.250%, 10/01/28	10/13 at 102.00	N/R	515,220
2,000	Westlake Village, California, Certificates of Participation, Financign Project, Series 2009, 5.000%, 6/01/39	6/16 at 100.00	AA+	2,126,040
40	Yorba Linda Redevelopment Agency, Orange County, California, Tax Allocation Revenue Bonds, Yorba Linda Redevelopment Project, Subordinate Lien Series 2011A, 6.000%, 9/01/26	9/21 at 100.00	A-	44,586
9,310	Total Tax Obligation/Limited Transportation – 1.0% (1.0% of Total Investments)			10,158,570
500	San Francisco Airports Commission, California, Revenue Bonds, San Francisco	5/16 at 100.00	A+	559,135

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	International			
	Airport, Second Series 2002, Issue 32G, 5.000%, 5/01/24 – FGIC Insured			
	U.S. Guaranteed – 0.2% (0.2% of Total Investments) (4)			
80	California Educational Facilities Authority, Revenue Bonds, University of the Pacific, Series	11/19 at 100.00	A2 (4)	104,162
	2009, 5.500%, 11/01/39 (Pre-refunded 11/01/19)			
	Utilities – 13.8% (13.9% of Total Investments)			
1,000	M-S-R Energy Authority, California, Gas Revenue Bonds, Series 2009C, 6.500%, 11/01/39	No Opt. Call	A	1,239,740
2,495	Roseville Natural Gas Financing Authority, California, Gas Revenue Bonds, Series 2007, 5.000%, 2/15/17	No Opt. Call	A	2,692,330
2,400	Southern California Public Power Authority, Natural Gas Project 1 Revenue Bonds, Series 2007A, 5.250%, 11/01/24	No Opt. Call	Baa1	2,613,240
1,000	Tuolumne Wind Project Authority, California, Revenue Bonds, Tuolumne Company Project, Series	1/19 at 100.00	A+	1,158,320
6,895	2009A, 5.625%, 1/01/29			7,703,630
	Total Utilities			
	Water and Sewer – 8.3% (8.3% of Total Investments)			
2,000	Orange County Sanitation District, California, Certificates of Participation, Series 2009, Trust 3020, 17.332%, 2/01/35 (IF)	2/19 at 100.00	AAA	2,930,760
1,000	San Francisco City and County Public Utilities Commission, California, Water Revenue Bonds, Series 2012A, 5.000%, 11/01/43 (WI/DD, Settling 6/07/12)	5/22 at 100.00	AA–	1,111,010
500	Western Riverside Water & Wastewater Financing Authority, California, Revenue Bonds, Western	8/19 at 100.00	AA	560,513
3,500	Municipal Water District, Series 2009, 5.625%, 9/01/39 – AGC Insured			4,602,283
\$ 51,710	Total Water and Sewer			55,297,108
	Total Investments (cost \$46,371,576) – 99.2%			464,939
	Other Assets Less Liabilities – 0.8% (5)			
	Net Assets Applicable to Common Shares – 100%			\$ 55,762,047

Investments in Derivatives at May 31, 2012

Forward Swaps
outstanding:

Counterparty	Notional Amount	Fund Pay/Receive Floating Rate	Floating Rate Index (Annualized)	Fixed Rate	Fixed Rate Payment Frequency	Effective Date (6)	Termination Date (6)	Unrealized Appreciation (Depreciation)
Barclays Bank PLC	\$1,000,000	Receive	USD-LIBOR 3-Month	3.190 %	Semi-Annually	4/30/14	4/30/34	\$ (107,859)

Fair Value Measurements

Fair value is defined as the price that the Fund would receive upon selling an investment or transferring a liability in an orderly transaction to an independent buyer in the principal or most advantageous market for the investment. A three-tier hierarchy is used to maximize the use of observable market data and minimize the use of unobservable inputs and to establish classification of fair value measurements for disclosure purposes. Observable inputs reflect the assumptions market participants would use in pricing the asset or liability. Observable inputs are based on market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability. Unobservable inputs are based on the best information available in the circumstances. The three-tier hierarchy of inputs is summarized in the three broad levels listed below:

Level 1 – Quoted prices in active markets for identical securities.

Level 2 – Other significant observable inputs (including quoted prices for similar securities, interest rates, prepayment speeds, credit risk, etc.).

Level 3 – Significant unobservable inputs (including management's assumptions in determining the fair value of investments).

The inputs or methodologies used for valuing securities are not an indication of the risk associated with investing in those securities. The following is a summary of the Fund's fair value measurements as of May 31, 2012:

	Level 1	Level 2	Level 3	Total
Long-Term Investments:				
Municipal Bonds	\$—	\$55,297,108	\$—	\$55,297,108
Derivatives:				
Forward Swaps*	—	(107,859)	—	(107,859)
Total	\$—	\$55,189,249	\$—	\$55,189,249

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* Represents net unrealized appreciation (depreciation) as reported in the Fund's Portfolio of Investments.

During the period ended May 31, 2012, the Fund recognized no transfers to or from Level 1, Level 2 or Level 3.

Derivative Instruments and Hedging Activities

The Fund records derivative instruments at fair value, with changes in fair value recognized on the Statement of Operations, when applicable. Even though the Fund's investments in derivatives may represent economic hedges, they are not considered to be hedge transactions for financial reporting purposes.

The following table presents the fair value of all derivative instruments held by the Fund as of May 31, 2012, the location of these instruments on the Statement of Assets and Liabilities, and the primary underlying risk exposure.

Underlying Risk Exposure	Derivative Instrument	Asset Derivatives Location Unrealized appreciation on forward swaps*	Location on the Statement of Assets and Liabilities		Value
			Value	Liability Derivatives Location Unrealized depreciation on forward swaps*	
Interest Rate	Swaps				\$107,859

* Represents cumulative gross unrealized appreciation (depreciation) of forward swap contracts as reported in the Portfolio of Investments.

Income Tax Information

The following information is presented on an income tax basis. Differences between amounts for financial statement and federal income tax purposes are primarily due to timing differences in recognizing taxable market discount, timing differences in recognizing certain gains and losses on investment transactions and the treatment of investments in inverse floating rate securities reflected as financing transactions, if any. To the extent that differences arise that are permanent in nature, such amounts are reclassified within the capital accounts on the Statement of Assets and Liabilities presented in the annual report, based on their federal tax basis treatment; temporary differences do not require reclassification. Temporary and permanent differences do not impact the net asset value of the Fund.

At May 31, 2012, the cost of investments (excluding investments in derivatives) was \$46,040,178.

Gross unrealized appreciation and gross unrealized depreciation of investments (excluding investments in derivatives) at May 31, 2012, were as follows:

Gross unrealized:	
Appreciation	\$9,256,930
Depreciation	—
Net unrealized appreciation (depreciation) of investments	\$9,256,930

- (1) All percentages shown in the Portfolio of Investments are based on net assets applicable to Common shares unless otherwise noted.
 - (2) Optional Call Provisions: Dates (month and year) and prices of the earliest optional call or redemption. There may be other call provisions at varying prices at later dates. Certain mortgage-backed securities may be subject to periodic principal paydowns.
 - (3) Ratings: Using the highest of Standard & Poor's Group ("Standard & Poor's"), Moody's Investors Service, Inc. ("Moody's") or Fitch, Inc. ("Fitch") rating. Ratings below BBB by Standard & Poor's, Baa by Moody's or BBB by Fitch are considered to be below investment grade. Holdings designated N/R are not rated by any of these national rating agencies.
 - (4) Backed by an escrow or trust containing sufficient U.S. Government or U.S. Government agency securities, which ensure the timely payment of principal and interest. Certain bonds backed by U.S. Government or agency securities are regarded as having an implied rating equal to the rating of such securities.
 - (5) Other Assets Less Liabilities includes the Unrealized Appreciation (Depreciation) of derivative investments as noted within Investments in Derivatives at May 31, 2012.
 - (6) Effective date represents the date on which both the Fund and Counterparty commence interest payment accruals on each forward swap contract.
- N/R Not rated.
- WI/DD Purchased on a when-issued or delayed delivery basis.
- (IF) Inverse floating rate investment.
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Item 2. Controls and Procedures.

- a. The registrant's principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the "1940 Act") (17 CFR 270.30a-3(c))) are effective, as of a date within 90 days of the filing date of this report that includes the disclosure required by this paragraph, based on their evaluation of the controls and procedures required by Rule 30a-3(b) under the 1940 Act (17 CFR 270.30a-3(b)) and Rule 13a-15(b) or 15d-15(b) under the Securities Exchange Act of 1934 (17 CFR 240.13a-15(b) or 240.15d-15(b)).

- b. There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act (17 CFR 270.30a-3(d))) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3. Exhibits.

File as exhibits as part of this Form a separate certification for each principal executive officer and principal financial officer of the registrant as required by Rule 30a-2(a) under the 1940 Act (17 CFR 270.30a-2(a)), exactly as set forth below: See EX-99 CERT attached hereto.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

(Registrant) Nuveen California Municipal Value Fund 2

By (Signature and Title) /s/ Kevin J. McCarthy
Kevin J. McCarthy
Vice President and Secretary

Date: July 30, 2012

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By (Signature and Title) /s/ Gifford R. Zimmerman
Gifford R. Zimmerman
Chief Administrative Officer (principal executive officer)

Date: July 30, 2012

By (Signature and Title) /s/ Stephen D. Foy
Stephen D. Foy
Vice President and Controller (principal financial officer)

Date: July 30, 2012