

NUVEEN INSURED CALIFORNIA PREMIUM INCOME MUNICIPAL FUND 2 IN
Form N-Q
July 29, 2011

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 811-7492

Nuveen Insured California Premium Income Municipal Fund 2, Inc.
(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: 5/31/11

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 Insured California Premium Income Municipal Fund 2, Inc.				
(NCL)				
May 31, 2011				
Principal Amount (000)	Description (1)	Optional Call Provisions (2)	Ratings (3)	Value
	Education and Civic Organizations – 5.2% (3.4% of Total Investments)			
\$ 585	California Educational Facilities Authority, Revenue Bonds, University of the Pacific, Series 2000, 5.875%, 11/01/20 – NPFPG Insured	9/11 at 100.00	A2	\$ 586,925
750	California Educational Facilities Authority, Student Loan Revenue Bonds, Cal Loan Program, Series 2001A, 5.400%, 3/01/21 – NPFPG Insured (Alternative Minimum Tax)	9/11 at 100.00	Baa1	750,158
1,500	California State University, Systemwide Revenue Bonds, Series 2005A, 5.000%, 11/01/25 – AMBAC Insured	5/15 at 100.00	Aa2	1,525,800
6,000	University of California, General Revenue Bonds, Series 2003A, 5.000%, 5/15/27 – AMBAC Insured (UB)	5/13 at 100.00	Aa1	6,093,060
8,835	Total Education and Civic Organizations			8,955,943
	Health Care – 4.7% (3.1% of Total Investments)			
1,410	California Statewide Communities Development Authority, Revenue Bonds, Saint Joseph Health System, Trust 2554, 18.728%, 7/01/47 – AGM Insured (IF)	7/18 at 100.00	AA+	1,070,472
4,690	Santa Clara County Financing Authority, California, Insured Revenue Bonds, El Camino Hospital, Series 2007A, 5.750%, 2/01/41 – AMBAC Insured	8/17 at 100.00	A+	4,653,277
2,000	The Regents of the University of California, Medical Center Pooled Revenue Bonds, Series 2007A, 4.500%, 5/15/37 – NPFPG Insured	5/15 at 101.00	Aa2	1,745,180
650	University of California, Hospital Revenue Bonds, UCLA Medical Center, Series 2004A, 5.500%, 5/15/18 – AMBAC Insured	5/12 at 101.00	N/R	666,894
8,750	Total Health Care			8,135,823
	Housing/Single Family – 0.9% (0.6% of Total Investments)			
215	California Housing Finance Agency, Home Mortgage Revenue Bonds, Series 2006H, 5.750%, 8/01/30 – FGIC Insured (Alternative Minimum Tax)	2/16 at 100.00	A3	218,032
1,350	California Housing Finance Agency, Home Mortgage Revenue Bonds, Series 2006K, 5.500%, 2/01/42 – AMBAC Insured (Alternative Minimum Tax)	2/16 at 100.00	N/R	1,373,760
1,565	Total Housing/Single Family			1,591,792

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	Long-Term Care – 1.4% (0.9% of Total Investments)			
1,575	California Health Facilities Financing Authority, Insured Revenue Bonds, California-Nevada	7/16 at 100.00	A–	1,412,318
	Methodist Homes, Series 2006, 5.000%, 7/01/36			
1,000	California Health Facilities Financing Authority, Insured Revenue Bonds, Community Program for Persons with Developmental Disabilities, Series 2011A, 6.250%, 2/01/26	No Opt. Call	A–	1,054,790
2,575	Total Long-Term Care			2,467,108
	Tax Obligation/General – 33.0% (21.9% of Total Investments)			
1,425	Bassett Unified School District, Los Angeles County, California, General Obligation Bonds, Series 2006B, 5.250%, 8/01/30 – FGIC Insured	8/16 at 100.00	A–	1,452,959
3,000	California State, General Obligation Bonds, Series 2006, 4.500%, 9/01/36 – AGM Insured	9/16 at 100.00	AA+	2,654,490
6,000	California State, General Obligation Bonds, Various Purpose Series 2010, 6.000%, 3/01/33	3/20 at 100.00	A1	6,538,080
4,200	Coast Community College District, Orange County, California, General Obligation Bonds, Series 2006C, 0.000%, 8/01/31 – AGM Insured	8/18 at 100.00	AA+	3,634,680
2,500	Corona-Norco Unified School District, Riverside County, California, General Obligation Bonds, Election 2006 Series 2009B, 5.375%, 2/01/34 – AGC Insured	8/18 at 100.00	AA+	2,553,450
	East Side Union High School District, Santa Clara County, California, General Obligation Bonds, 2008 Election Series 2010B:			
3,490	5.000%, 8/01/27 – AGC Insured	8/19 at 100.00	AA+	3,566,047
3,545	5.000%, 8/01/28 – AGC Insured	8/19 at 100.00	AA+	3,595,800
3,110	5.000%, 8/01/29 – AGC Insured	8/19 at 100.00	AA+	3,131,552
2,210	Fontana Unified School District, San Bernardino County, California, General Obligation Bonds, Trust 2668, 9.549%, 2/01/16 – AGM Insured (IF)	8/18 at 100.00	AA+	2,373,849
1,255	Los Angeles Community College District, Los Angeles County, California, General Obligation Bonds, Series 2005A, 5.000%, 8/01/24 – AGM Insured	8/15 at 100.00	AA+	1,307,898
4,000	Los Angeles Unified School District, Los Angeles County, California, General Obligation Bonds, Series 2007A, 4.500%, 7/01/24 – AGM Insured	7/17 at 100.00	AA+	4,053,000
	Los Rios Community College District, Sacramento, El Dorado and Yolo Counties, California, General Obligation Bonds, Series 2006C:			
2,110	5.000%, 8/01/21 – AGM Insured (UB)	8/14 at 102.00	AA+	2,253,986
3,250	5.000%, 8/01/22 – AGM Insured (UB)	8/14 at 102.00	AA+	3,589,658
3,395	5.000%, 8/01/23 – AGM Insured (UB)	8/14 at 102.00	AA+	3,722,618
1,270			A	1,298,499

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	Merced City School District, Merced County, California, General Obligation Bonds, Series 2004, 5.000%, 8/01/22 – FGIC Insured	8/13 at 100.00		
305	Roseville Joint Union High School District, Placer County, California, General Obligation Bonds, Series 2006B, 5.000%, 8/01/27 – FGIC Insured	8/15 at 100.00	AA–	311,820
2,500	Sacramento City Unified School District, Sacramento County, California, General Obligation Bonds, Series 2005, 5.000%, 7/01/27 – NPFG Insured	7/15 at 100.00	Aa2	2,554,950
1,125	San Diego Unified School District, San Diego County, California, General Obligation Bonds, Election of 1998, Series 1999A, 0.000%, 7/01/21 – FGIC Insured	No Opt. Call	Aa1	689,141
2,000	San Francisco Community College District, California, General Obligation Bonds, Series 2002A, 5.000%, 6/15/26 – FGIC Insured	6/11 at 101.00	Aa2	2,004,760
2,000	San Jacinto Unified School District, Riverside County, California, General Obligation Bonds, Series 2007, 5.250%, 8/01/32 – AGM Insured	No Opt. Call	AA+	2,011,880
1,000	San Ramon Valley Unified School District, Contra Costa County, California, General Obligation Bonds, Series 2004, 5.000%, 8/01/24 – AGM Insured	8/14 at 100.00	AA+	1,054,220
2,445	Washington Unified School District, Yolo County, California, General Obligation Bonds, Series 2004A, 5.000%, 8/01/21 – FGIC Insured	8/13 at 100.00	A+	2,569,353
56,135	Total Tax Obligation/General Tax Obligation/Limited – 61.9% (41.0% of Total Investments)			56,922,690
	Anaheim Public Finance Authority, California, Subordinate Lease Revenue Bonds, Public Improvement Project, Series 1997C:			
5,130	0.000%, 9/01/18 – AGM Insured	No Opt. Call	AA+	3,653,483
8,000	0.000%, 9/01/21 – AGM Insured	No Opt. Call	AA+	4,444,640
2,235	Antioch Public Financing Authority, California, Lease Revenue Refunding Bonds, Municipal Facilities Project, Refunding Series 2002A, 5.500%, 1/01/32 – NPFG Insured	7/11 at 100.00	A	2,095,022
	California Infrastructure Economic Development Bank, Revenue Bonds, North County Center for Self-Sufficiency Corporation, Series 2004:			
1,535	5.000%, 12/01/20 – AMBAC Insured	12/13 at 100.00	AA	1,612,425
1,780	5.000%, 12/01/23 – AMBAC Insured	12/13 at 100.00	AA	1,843,332
3,725	California State Public Works Board, Lease Revenue Bonds, Department of Corrections & Rehabilitation, Series 2005J, 5.000%, 1/01/17 – AMBAC Insured	1/16 at 100.00	A2	4,017,711
4,000	California State Public Works Board, Lease Revenue Bonds, Various Capital Projects, Series 2009G-1, 5.750%, 10/01/30	10/19 at 100.00	A2	4,080,520
380			BBB	363,633

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	Capistrano Unified School District, Orange County, California, Special Tax Bonds, Community Facilities District, Series 2005, 5.000%, 9/01/24 – FGIC Insured	9/15 at 100.00		
7,000	Chula Vista Public Financing Authority, California, Pooled Community Facility District Assessment Revenue Bonds, Series 2005A, 4.500%, 9/01/27 – NCFG Insured	9/15 at 100.00	Baa1	5,779,130
1,430	Cloverdale Community Development Agency, California, Tax Allocation Refunding Bonds, Cloverdale Redevelopment Project Series 2006, 5.000%, 8/01/36 – AMBAC Insured	No Opt. Call	A–	1,177,290
5,225	El Monte, California, Senior Lien Certificates of Participation, Department of Public Services Facility Phase II, Series 2001, 5.000%, 1/01/21 – AMBAC Insured	7/11 at 100.00	A2	5,227,351
8,280	Fontana Public Financing Authority, California, Tax Allocation Revenue Bonds, North Fontana Redevelopment Project, Series 2005A, 5.000%, 10/01/32 – AMBAC Insured	10/15 at 100.00	A	6,823,548
7,250	Golden State Tobacco Securitization Corporation, California, Enhanced Tobacco Settlement Asset-Backed Revenue Bonds, Series 2005A: 5.000%, 6/01/35 – FGIC Insured	6/15 at 100.00	AA+	6,494,913
7,500	5.000%, 6/01/45 – AGC Insured (4)	6/15 at 100.00	AA+	6,573,600
6,215	Golden State Tobacco Securitization Corporation, California, Enhanced Tobacco Settlement Asset-Backed Revenue Bonds, Tender Option Bonds Trust 4686, 9.139%, 6/01/45 – AGC Insured (IF)	6/15 at 100.00	AA+	4,679,646
2,000	Golden State Tobacco Securitization Corporation, California, Enhanced Tobacco Settlement Revenue Bonds, Tender Option Bonds Trust 2040, 10.555%, 6/01/45 – FGIC Insured (IF)	6/15 at 100.00	A2	1,103,480
875	Hesperia Public Financing Authority, California, Redevelopment and Housing Projects Tax Allocation Bonds, Series 2007A, 5.000%, 9/01/37 – SYNCORA GTY Insured	9/17 at 100.00	Ba1	577,561
1,700	Hesperia Unified School District, San Bernardino County, California, Certificates of Participation, Capital Improvement, Series 2007, 5.000%, 2/01/41 – AMBAC Insured	2/17 at 100.00	A–	1,395,785
5,000	La Quinta Redevelopment Agency, California, Tax Allocation Refunding Bonds, Redevelopment Project Area 1, Series 1998, 5.200%, 9/01/28 – AMBAC Insured	9/11 at 100.00	A+	4,693,350
2,185	Los Angeles Community Redevelopment Agency, California, Lease Revenue Bonds, Manchester Social Services Project, Series 2005, 5.000%, 9/01/37 – AMBAC Insured	9/15 at 100.00	A1	1,855,764
1,000	Los Angeles Community Redevelopment Agency, California, Tax Allocation Bonds, Bunker Hill	12/14 at 100.00	AA+	1,065,330

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	Project, Series 2004A, 5.000%, 12/01/20 – AGM Insured			
4,000	Los Angeles, California, Certificates of Participation, Municipal Improvement Corporation,	6/13 at 100.00	A+	3,986,760
	Series 2003AW, 5.000%, 6/01/33 – AMBAC Insured			
3,000	Los Angeles, California, Municipal Improvement Corporation, Lease Revenue Bonds, Police	1/17 at 100.00	A+	2,798,580
	Headquarters, Series 2006A, 4.750%, 1/01/31 – FGIC Insured			
6,120	Moreno Valley Community Redevelopment Agency, California, Tax Allocation Bonds, Series 2007A,	8/17 at 100.00	A–	4,978,865
	5.000%, 8/01/38 – AMBAC Insured			
2,810	Oakland Joint Powers Financing Authority, California, Lease Revenue Bonds, Administration	8/18 at 100.00	AA+	2,934,820
	Building Projects, Series 2008B, 5.000%, 8/01/21 – AGC Insured			
1,000	Palm Springs Financing Authority, California, Lease Revenue Bonds, Convention Center Project,	11/14 at 102.00	A	979,560
	Refunding Series 2004A, 5.500%, 11/01/35 – NPFPG Insured			
4,140	Plumas County, California, Certificates of Participation, Capital Improvement Program, Series	6/13 at 101.00	A	3,933,000
	2003A, 5.000%, 6/01/28 – AMBAC Insured			
390	Poway Redevelopment Agency, California, Tax Allocation Refunding Bonds, Paguay Redevelopment	12/12 at 100.00	Baa1	360,910
	Project, Series 2000, 5.750%, 6/15/33 – NPFPG Insured			
325	Rialto Redevelopment Agency, California, Tax Allocation Bonds, Merged Project Area, Series	9/15 at 100.00	A–	268,785
	2005A, 5.000%, 9/01/35 – SYNCORA GTY Insured			
1,000	Rocklin Unified School District, Placer County, California, Special Tax Bonds, Community	9/13 at 100.00	A–	938,270
	Facilities District 1, Series 2004, 5.000%, 9/01/25 – NPFPG Insured			
2,500	Roseville Financing Authority, California, Special Tax Revenue Bonds, Series 2007A, 5.000%,	9/17 at 100.00	N/R	1,958,775
	9/01/33 – AMBAC Insured			
405	Roseville, California, Certificates of Participation, Public Facilities, Series 2003A, 5.000%,	8/13 at 100.00	AA–	405,506
	8/01/25 – AMBAC Insured			
4,655	San Bernardino Joint Powers Financing Authority, California, Certificates of Participation	9/11 at 100.00	Baa1	4,656,676
	Refunding, Police Station Financing Project, Series 1999, 5.500%, 9/01/20 – NPFPG Insured			
1,500	San Jose Redevelopment Agency, California, Tax Allocation Bonds, Merged Project Area, Series	8/15 at 100.00	BBB+	1,250,100
	2005A, 5.000%, 8/01/28 – NPFPG Insured			
5,510	Sweetwater Union High School District Public Financing Authority, California, Special Tax	9/15 at 100.00	AA+	5,481,238
	Revenue Bonds, Series 2005A, 5.000%, 9/01/28 – AGM Insured			
1,205	Tustin Community Redevelopment Agency, California, Tax Allocation Housing Bonds Series 2010,	No Opt. Call	AA+	1,198,276
	5.000%, 9/01/30 – AGM Insured			
1,020	Washington Unified School District, Yolo County, California, Certificates of Participation,	8/17 at 100.00	A	974,671
	Series 2007, 5.125%, 8/01/37 – AMBAC Insured			
122,025	Total Tax Obligation/Limited			106,662,306

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Transportation – 7.6% (5.1% of Total Investments)				
6,500	Foothill/Eastern Transportation Corridor Agency, California, Toll Road Revenue Refunding Bonds, Series 1999, 0.000%, 1/15/18 – NPMFG Insured	7/11 at 70.31	Baa1	4,174,430
4,000	Orange County Transportation Authority, California, Toll Road Revenue Bonds, 91 Express Lanes Project, Series 2003A, 5.000%, 8/15/18 – AMBAC Insured	8/13 at 100.00	A1	4,237,760
5,000	San Francisco Airports Commission, California, Revenue Refunding Bonds, San Francisco International Airport, Second Series 2001, Issue 27A, 5.250%, 5/01/31 – NPMFG Insured (Alternative Minimum Tax)	11/11 at 100.00	A1	4,753,850
15,500	Total Transportation			13,166,040
U.S. Guaranteed – 5.7% (3.8% of Total Investments) (5)				
1,705	Central Unified School District, Fresno County, California, General Obligation Bonds, Series 1993, 5.625%, 3/01/18 – AMBAC Insured (ETM)	9/11 at 100.00	N/R (5)	1,725,613
1,000	Manteca Unified School District, San Joaquin County, California, General Obligation Bonds, Series 2004: 5.250%, 8/01/21 (Pre-refunded 8/01/14) – AGM Insured	8/14 at 100.00	AA+ (5)	1,146,010
1,000	5.250%, 8/01/22 (Pre-refunded 8/01/14) – AGM Insured	8/14 at 100.00	AA+ (5)	1,146,010
4,320	Riverside County, California, GNMA Mortgage-Backed Securities Program Single Family Mortgage Revenue Bonds, Series 1987B, 8.625%, 5/01/16 (Alternative Minimum Tax) (ETM)	No Opt. Call	AAA	5,736,312
8,025	Total U.S. Guaranteed			9,753,945
Utilities – 8.5% (5.6% of Total Investments)				
670	Merced Irrigation District, California, Electric System Revenue Bonds, Series 2005, 5.125%, 9/01/31 – SYNCORA GTY Insured	9/15 at 100.00	N/R	579,872
100	Sacramento City Financing Authority, California, Capital Improvement Revenue Bonds, Solid Waste and Redevelopment Projects, Series 1999, 5.800%, 12/01/19 – AMBAC Insured	12/11 at 100.00	N/R	100,234
1,950	Salinas Valley Solid Waste Authority, California, Revenue Bonds, Series 2002, 5.250%, 8/01/27 – AMBAC Insured (Alternative Minimum Tax)	8/12 at 100.00	A+	1,835,379
2,800	Santa Clara, California, Subordinate Electric Revenue Bonds, Series 2003A: 5.000%, 7/01/24 – NPMFG Insured	7/13 at 100.00	A1	2,864,904
5,000	5.000%, 7/01/28 – NPMFG Insured	7/13 at 100.00	A1	5,028,750
4,000	Southern California Public Power Authority, California, Milford Wind Corridor Phase I Revenue Bonds, Series 2010-1, 5.000%, 7/01/28	No Opt. Call	AA–	4,215,200
14,520	Total Utilities			14,624,339
Water and Sewer – 22.0% (14.6% of Total Investments)				

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1,100	Atwater Public Financing Authority, California, Wastewater Revenue Bonds, Tender Option Bond Trust 3145, 17.925%, 5/01/40 – AGM Insured (IF)	5/19 at 100.00	AA+	1,008,832
2,000	El Dorado Irrigation District, California, Water and Sewer Certificates of Participation, Series 2004A, 5.000%, 3/01/21 – FGIC Insured	3/14 at 100.00	A1	2,060,360
750	Fortuna Public Finance Authority, California, Water Revenue Bonds, Series 2006, 5.000%, 10/01/36 – AGM Insured	10/16 at 100.00	AA+	729,473
460	Healdsburg Public Financing Authority, California, Wastewater Revenue Bonds, Series 2006, 5.000%, 4/01/36 – NPMFG Insured	4/16 at 100.00	AA–	447,534
2,700	Los Angeles County Sanitation Districts Financing Authority, California, Senior Revenue Bonds, Capital Projects, Series 2003A, 5.000%, 10/01/21 – AGM Insured	10/13 at 100.00	AA+	2,898,558
2,000	Los Angeles, California, Wastewater System Revenue Bonds, Series 2005A, 4.500%, 6/01/29 – NPMFG Insured	6/15 at 100.00	AA	2,003,260
430	Marina Coast Water District, California, Enterprise Certificate of Participation, Series 2006, 5.000%, 6/01/31 – NPMFG Insured	6/16 at 100.00	AA–	428,654
12,000	Orange County Sanitation District, California, Certificates of Participation, Series 2003, 5.000%, 2/01/33 – FGIC Insured (UB)	8/13 at 100.00	AAA	12,113,280
1,520	San Buenaventura, California, Water Revenue Certificates of Participation, Series 2004, 5.000%, 10/01/25 – AMBAC Insured	10/14 at 100.00	AA	1,548,135
1,000	San Diego County Water Authority, California, Water Revenue Certificates of Participation, Series 2008A, 5.000%, 5/01/38 – AGM Insured	5/18 at 100.00	AA+	1,007,810
3,675	San Dieguito Water District, California, Water Revenue Bonds, Refunding Series 2004, 5.000%, 10/01/23 – FGIC Insured	10/14 at 100.00	AA+	3,900,939
1,400	Santa Clara Valley Water District, California, Certificates of Participation, Series 2004A: 5.000%, 2/01/19 – FGIC Insured	2/14 at 100.00	AA+	1,479,156
445	5.000%, 2/01/20 – FGIC Insured	2/14 at 100.00	AA+	467,441
465	5.000%, 2/01/21 – FGIC Insured	2/14 at 100.00	AA+	485,558
2,500	West Basin Municipal Water District, California, Revenue Certificates of Participation, Series 2003A, 5.000%, 8/01/30 – NPMFG Insured	8/13 at 100.00	Aa2	2,511,800
2,010	Yorba Linda Water District, California, Certificates of Participation, Highland Reservoir Renovation, Series 2003: 5.000%, 10/01/28 – FGIC Insured	10/13 at 100.00	AA+	2,067,747
2,530	5.000%, 10/01/33 – FGIC Insured	10/13 at 100.00	AA+	2,539,766

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36,985	Total Water and Sewer	37,698,3034
\$ 274,915	Total Investments (cost \$265,340,806) – 150.9%	259,978,289
	Floating Rate Obligations – (10.4)%	(17,880,000)
	Variable Rate Demand Preferred Shares, at Liquidation Value – (43.0)% (6)	(74,000,000)
	Other Assets Less Liabilities – 2.5% (7)	4,134,771
		\$
	Net Assets Applicable to Common Shares – 100%	172,233,060

Investments in Derivatives

Forward Swaps outstanding at May 31, 2011:

Counterparty	Notional Amount	Fund Pay/Receive Floating Rate	Floating Rate Index	Fixed Rate (Annualized)	Fixed Rate Payment Frequency	Effective Date (8)	Termination Date	Unrealized Appreciation (Depreciation)
Morgan Stanley	\$5,750,000	Receive	USD-LIBOR 3-Month	4.431%	Semi-Annually	2/17/12	2/17/30	\$(344,583)

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 of 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, 2011:

	Level 1	Level 2	Level 3	Total
Investments:				
Municipal Bonds	\$ —	\$259,978,289	\$ —	\$259,978,289
Derivatives:				
Forward Swaps*	—	(344,583)	—	(344,583)
Total	\$ —	\$259,633,706	\$ —	\$259,633,706

* Represents net unrealized appreciation (depreciation).

During the period ended May 31, 2011, the Fund recognized no significant transfers to/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, 2011, the location of these instruments on the Statement of Assets and Liabilities, and the primary underlying risk exposure.

Underlying Risk Exposure	Derivative Instrument	Location on the Statements of Assets and Liabilities			
		Asset Derivatives Location	Value	Liability Derivatives Location	Value
Interest Rate	Forward Swaps	Unrealized appreciation on forward swaps*	\$ —	Unrealized depreciation on forward swaps*	\$344,583

* Represents cumulative 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, 2011, the cost of investments (excluding investments in derivatives) was \$247,147,379.

Gross unrealized appreciation and gross unrealized depreciation of investments (excluding investments in derivatives) at May 31, 2011, were as follows:

Gross unrealized:	
Appreciation	\$ 5,033,453
Depreciation	(10,083,146)

Net unrealized appreciation (depreciation) of investments

\$ (5,049,693)

The Fund intends to invest at least 80% of its managed assets in municipal securities that are covered by insurance guaranteeing the timely payment of principal and interest.

All percentages shown in the Portfolio of Investments are based on net assets applicable to

- (1) 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 Investor 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) Investment, or portion of investment, has been pledged to collateralize the net payment obligations for investments in derivatives.
 - (5) 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. Such investments are normally considered to be equivalent to AAA rated securities.
 - (6) Variable Rate Demand Preferred Shares, at Liquidation Value as a percentage of Total Investments is 28.5%.
 - (7) Other Assets Less Liabilities includes the Value and/or the Unrealized Appreciation (Depreciation) of derivative instruments as listed within Investments in Derivatives.
 - (8) 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.
- (ETM) Escrowed to maturity.
- (IF) Inverse floating rate investment.
- (UB) Underlying bond of an inverse floating rate trust reflected as a financing transaction.
- USD-LIBOR United States Dollar-London Inter-Bank Offered. Rate.

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 Insured California Premium Income Municipal Fund 2, Inc.

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

Date July 29, 2011

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 29, 2011

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

Date July 29, 2011