NUVEEN CONNECTICUT PREMIUM INCOME MUNICIPAL FUND Form N-Q October 28, 2016

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, DC 20549

FORM N-O

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT COMPANY

Investment Company Act file number 811-07606

Nuveen Connecticut Premium Income Municipal Fund (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: 5/31

Date of reporting period: 8/31/16

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

Nuveen Connecticut Premium Income Municipal Fund (NTC) August 31, 2016 (Unaudited)

Principal		Optional Call		
Amount (000)	Description (1)	Provisions (2)	Ratings (3)	Value
	LONG-TERM INVESTMENTS – 151.5% (100.0% of Total Investments)			
	MUNICIPAL BONDS – 151.5% (100.0% of Total Investments))		
	Education and Civic Organizations – 29.8% (19.7% of Total Investments)			
\$ 840	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Chase Collegiate	7/17 at 100.00	AA	\$ 867,124
1,000	School, Series 2007A, 5.000%, 7/01/27 – RAAI Insured Connecticut Health and Educational Facilities Authority, Revenue Bonds, Connecticut College, Series 2007G, 4.500%, 7/01/37 – NPFG Insured	7/17 at 100.00	AA-	1,017,030
1,150	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Connecticut College, Series 2011H, 5.000%, 7/01/41	7/21 at 100.00	A2	1,324,202
	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Fairfield University, Series 2010-O:			
800	5.000%, 7/01/35	7/20 at 100.00	A-	904,072
4,000	5.000%, 7/01/40	7/20 at 100.00	A-	4,520,360
3,950	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Fairfield University, Series 2016Q-1, 5.000%, 7/01/46	7/26 at 100.00	A-	4,794,510
	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Loomis Chaffee School, Series 2005F:			
440	5.250%, 7/01/18 – AMBAC Insured	No Opt. Call		474,131
1,510	5.250%, 7/01/19 – AMBAC Insured Connecticut Health and Educational Facilities Authority,	No Opt. Call 7/23 at		1,687,908
1,125	Revenue Bonds, Norwich Free Academy, Series 2013B, 4.000%, 7/01/34	100.00	A1	1,238,535
7,030	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Quinnipiac University, Refunding Series 2015L, 5.000%, 7/01/45	7/25 at 100.00	A-	8,311,076

Connecticut Health and Educational Facilities Authority, Revenue Bonds, Quinnipiac University, Series 2016M: 7/26 at 260 5.000%, 7/01/34 317,616 A-100.00 7/26 at 1,650 5.000%, 7/01/35 А– 2,005,988 100.00 Connecticut Health and Educational Facilities Authority, Revenue Bonds, Sacred Heart University, Series 2011G: 7/21 at 250 5.125%, 7/01/26 BBB+ 286,500 100.00 7/21 at 3,260 5.625%, 7/01/41 BBB+ 3,744,990 100.00 Connecticut Health and Educational Facilities Authority, Revenue Bonds, Sacred Heart University, Series 2012H: 7/22 at 1,500 5.000%, 7/01/26 – AGM Insured AA 1,760,565 100.00 7/22 at 1,000 5.000%, 7/01/28 – AGM Insured 1,164,680 AA 100.00 Connecticut Health and Educational Facilities Authority, Revenue Bonds, The Loomis Chaffee School Issue, Series 2011-I: 7/21 at 560 5.000%, 7/01/23 – AGM Insured A2 652,473 100.00 7/21 at 225 5.000%, 7/01/24 – AGM Insured A2 262,897 100.00 Connecticut Health and Educational Facilities Authority, 7/17 at 17,000 17,613,870 AAA Revenue Bonds, Yale University, 100.00 Series 2007Z-3, 5.050%, 7/01/42 (UB) (4) Connecticut Health and Educational Facilities Authority, 11/23 at 5,580 AA-6,868,143 Revenue Bonds, Connecticut State 100.00 University System, Series 2013N, 5.000%, 11/01/31 Connecticut Health and Educational Facilities Authority, 11/26 at 2,425 AA-3,082,442 Revenue Bonds, Connecticut State 100.00 University System, Series 2016P-1, 5.000%, 11/01/28 (WI/DD, Settling 9/13/16) University of Connecticut, Student Fee Revenue Bonds, 11/19 at 515 Aa2 578,541 Refunding Series 2010A, 5.000%, 11/15/27 100.00 University of Connecticut, Student Fee Revenue Bonds, 1,500 No Opt. Call Aa2 1,821,105 Refunding Series 2012A, 5.000%, 11/15/29 Total Education and Civic Organizations 57,570 65,298,758 Health Care – 35.7% (23.6% of Total Investments) Connecticut Health and Educational Facilities Authority 7/25 at 5,500 6,447,925 A Revenue Bonds, Hartford HealthCare, 100.00 Series 2015F, 5.000%, 7/01/45 Connecticut Health and Educational Facilities Authority, 11/19 at 4,540 5,065,641 AA+ Revenue Bonds, Ascension Health 100.00 Series 2010A, 5.000%, 11/15/40

Connecticut Health and Educational Facilities Authority,

Revenue Bonds, Bristol Hospital, Series 2002B: 11/16 at 560 5.500%, 7/01/21 – RAAI Insured AA 561,865 100.00 11/16 at 3,000 5.500%, 7/01/32 – RAAI Insured AA 3,007,110 100.00 Connecticut Health and Educational Facilities Authority, 11/20 at 1,010 AA 1,124,332 Revenue Bonds, Catholic Health East 100.00 Series 2010, 4.750%, 11/15/29 Connecticut Health and Educational Facilities Authority, 11/16 at 200 200,308 Α Revenue Bonds, Danbury Hospital, 100.00 Series 2006H, 4.500%, 7/01/33 – AMBAC Insured Connecticut Health and Educational Facilities Authority, 10/16 at 20 AA 20,085 Revenue Bonds, Eastern Connecticut 100.00 Health Network, Series 2000A, 6.125%, 7/01/20 - RAAI Insured Connecticut Health and Educational Facilities Authority, 10/16 at 841,982 840 AA Revenue Bonds, Eastern Connecticut 100.00 Health Network, Series 2005, 5.000%, 7/01/25 – RAAI Insured Connecticut Health and Educational Facilities Authority, Revenue Bonds, Griffin Hospital, Series 2005B: 11/16 at 1,970 5.000%, 7/01/20 – RAAI Insured A3 1,975,733 100.00 11/16 at 1,050 5.000%, 7/01/23 – RAAI Insured A3 1,052,636 100.00 Connecticut Health and Educational Facilities Authority, 7/21 at 7,025 A 7,862,098 Revenue Bonds, Hartford HealthCare, 100.00 Series 2011A, 5.000%, 7/01/41 Connecticut Health and Educational Facilities Authority, 500 No Opt. Call A 586,275 Revenue Bonds, Hartford HealthCare, Series 2014E, 5.000%, 7/01/42 Connecticut Health and Educational Facilities Authority, Revenue Bonds, Hospital For Special Care, Series 2007C: 7/17 at 1,065 5.250%, 7/01/32 – RAAI Insured AA 1,100,816 100.00 7/17 at 300 5.250%, 7/01/37 - RAAI Insured AA 309,708 100.00 7/21 at Connecticut Health and Educational Facilities Authority, 2,000 2,241,240 A– Revenue Bonds, Lawrence and Memorial 100.00 Hospitals, Series 2011F, 5.000%, 7/01/36 Connecticut Health and Educational Facilities Authority, Revenue Bonds, Middlesex Hospital, Series 2011N: 7/21 at 1,105 5.000%, 7/01/25 A3 1,262,186 100.00 7/21 at 400 456,104 5.000%, 7/01/26 A3 100.00 7/21 at 500 5.000%, 7/01/27 A3 568,525 100.00

1,915	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Middlesex Hospital, Series 2015O, 5.000%, 7/01/36	7/25 at 100.00	A3	2,269,773
1,275	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Stamford Hospital, Series 2010-I, 5.000%, 7/01/30	7/20 at 100.00	A	1,438,825
7,000	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Stamford Hospital, Series 2012J, 5.000%, 7/01/42	7/22 at 100.00	A	7,869,329
3,235	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Stamford Hospital, Series 2016K, 4.000%, 7/01/46	7/26 at 100.00	A	3,490,015
2,600	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Trinity Health Credit Group, Series 2016 CT, 5.000%, 12/01/45	6/26 at 100.00	AA	3,174,340
3,905	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Western Connecticut Health, Series 2011M, 5.375%, 7/01/41	7/21 at 100.00	A	4,461,736
4,000	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Western Connecticut Health, Series 2011N, 5.000%, 7/01/29 Connecticut Health and Educational Facilities Authority, Revenue Bonds, Yale-New Haven Health Issue, Series 2014E:	7/21 at 100.00	A	4,538,320
2,610	5.000%, 7/01/32	7/24 at 100.00	Aa3	3,200,486
2,740	5.000%, 7/01/33	7/24 at 100.00	Aa3	3,348,746
900	5.000%, 7/01/34	7/24 at 100.00	Aa3	1,096,299
7,475	Monroe County Industrial Development Corporation, New York FHA Insured Mortgage Revenue Bonds, Unity Hospital of Rochester Project, Series 2010, 5.500%, 8/15/40	x,2/21 at 100.00	AA	8,785,439
69,240	Total Health Care Long-Term Care – 2.0% (1.3% of Total Investments)			78,357,877
1,100	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Duncaster, Inc., Series 2014A, 5.000%, 8/01/44	8/24 at 100.00	BBB-	1,184,414
100	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Healthcare Facility Expansion Church Home of Hartford Inc. Project, Series 2016A 5.000%, 9/01/46	9/26 at 100.00	ВВ	111,315
1,500	Connecticut Housing Finance Authority, Special Needs Housing Mortgage Finance Program Special Obligation Bonds, Series 2002SNH-1, 5.000%, 6/15/32 – AMBAC Insured	g 11/16 at 100.00	N/R	1,502,685
1,285	Connecticut Housing Finance Authority, State Supported Special Obligation Bonds, Refunding Series 2010-16, 5.000%, 6/15/30	16/20 at 100.00	AA-	1,456,586
3,985	Total Long-Term Care			4,255,000

Tax Obligation/General – 26.5% (17.5% of Total Investments) Bridgeport, Connecticut, General Obligation Bonds, Series 2014A:

	201111			
2,345	5.000%, 7/01/32 – AGM Insured	7/24 at 100.00	AA	2,790,855
1,600	5.000%, 7/01/34 – AGM Insured	7/24 at 100.00	AA	1,894,160
5,100	Connecticut State, General Obligation Bonds, Green Series 2014G, 5.000%, 11/15/31	11/24 at 100.00	AA-	6,187,881
2,100	Connecticut State, General Obligation Bonds, Refunding Series 2006E, 5.000%, 12/15/20	12/16 at 100.00	AA-	2,127,363
2,290	Connecticut State, General Obligation Bonds, Refunding Series 2012E, 5.000%, 9/15/32	100.00	AA-	2,704,650
2,740	Connecticut State, General Obligation Bonds, Refunding Series 2016B, 5.000%, 5/15/27	100.00	AA-	3,462,949
1,000	Connecticut State, General Obligation Bonds, Series 2011D, 5.000%, 11/01/31	11/21 at 100.00	AA-	1,169,380
2,600	Connecticut State, General Obligation Bonds, Series 2014A, 5.000%, 3/01/31	3/24 at 100.00	AA-	3,110,744
3,500	Connecticut State, General Obligation Bonds, Series 2014F, 5.000%, 11/15/34	11/24 at 100.00	AA-	4,199,965
2,630	Connecticut State, General Obligation Bonds, Series 2015F, 5.000%, 11/15/34	11/25 at 100.00	AA-	3,206,259
100	Greenwich, Connecticut, General Obligation Bonds, Refunding Series 2016, 4.000%, 7/15/33 Hamden, Connecticut, General Obligation Bonds, Series 2016:	7/24 at 100.00	Aaa	114,734
	namuen, Connecticut, General Congation Bonds, Series 2010.			
1,000	5.000%, 8/15/32 – BAM Insured	8/24 at 100.00	AA	1,191,260
250	4.000%, 8/15/34 – BAM Insured	8/24 at 100.00	AA	271,075
1,000	Hartford, Connecticut, General Obligation Bonds, Refunding Series 2013A, 5.000%, 4/01/31	4/23 at 100.00	A+	1,132,690
870	Hartford, Connecticut, General Obligation Bonds, Series 2009A, 5.000%, 8/15/28	100.00	AA	959,801
2,000	Hartford, Connecticut, General Obligation Bonds, Series 2013B, 5.000%, 4/01/33	100.00	A+	2,252,560
1,000	New Haven, Connecticut, General Obligation Bonds, Refunding Series 2016A, 5.000%, 8/15/36 – AGM Insured	8/26 at 100.00	AA	1,203,470
985	New Haven, Connecticut, General Obligation Bonds, Series 2014A, 5.000%, 8/01/33 – AGM Insured New Haven, Connecticut, General Obligation Bonds, Series	8/24 at 100.00	AA	1,174,110
	2015:			
790	5.000%, 9/01/32 – AGM Insured	9/25 at 100.00	AA	960,364
1,620	5.000%, 9/01/33 – AGM Insured	9/25 at 100.00	AA	1,964,963
500	5.000%, 9/01/35 – AGM Insured	9/25 at 100.00	AA	601,525
900	North Haven, Connecticut, General Obligation Bonds, Series 2006, 5.000%, 7/15/24	No Opt. Call	Aa1	1,135,233

3,890	Oregon State, General Obligation Bonds, Oregon University System Projects, Series 2011G, 5.000%, 8/01/36	8/21 at 100.00	AA+	4,558,458
2,500	Stamford, Connecticut, General Obligation Bonds, Refunding Series 2014, 3.000%, 8/15/22	8/21 at 100.00	AAA	2,738,525
600	Stratford, Connecticut, General Obligation Bonds, Series 2014, 5.000%, 12/15/32 Suffield, Connecticut, General Obligation Bonds, Refunding	12/22 at 100.00	AA	729,180
800 820 1,400	Series 2005: 5.000%, 6/15/17 5.000%, 6/15/19 5.000%, 6/15/21 Waterbury, Connecticut, General Obligation Bonds, Lot A	No Opt. Call No Opt. Call No Opt. Call	AA+	827,936 917,047 1,668,086
445	Series 2015: 5.000%, 8/01/30 – BAM Insured	8/25 at	AA	544,569
390	5.000%, 8/01/31 – BAM Insured	100.00 8/25 at 100.00	AA	475,500
610	5.000%, 8/01/32 – BAM Insured	8/25 at 100.00	AA	740,985
445	5.000%, 8/01/33 – BAM Insured	8/25 at 100.00	AA	539,358
445	5.000%, 8/01/34 – BAM Insured	8/25 at 100.00	AA	537,369
49,265	Total Tax Obligation/General Tax Obligation/Limited – 19.1% (12.6% of Total Investments)			58,093,004
2,500	Connecticut State, Special Tax Obligation Bonds, Transportation Infrastructure Purposes Series 2012A, 5.000%, 1/01/33	¹ No Opt. Call	AA	3,016,650
3,855	Connecticut State, Special Tax Obligation Bonds, Transportation Infrastructure Purposes Series	10/23 at 100.00	AA	4,740,995
1,380	2013A, 5.000%, 10/01/33 Connecticut State, Special Tax Obligation Bonds, Transportation Infrastructure Purposes Series 2015A, 5.000%, 8/01/33	100.00	AA	1,695,040
	Connecticut State, Special Tax Obligation Bonds, Transportation Infrastructure Purposes, Series 2014A:	1		
3,835	5.000%, 9/01/33	9/24 at 100.00	AA	4,691,164
1,000	5.000%, 9/01/34	9/24 at 100.00	AA	1,219,120
	Government of Guam, Business Privilege Tax Bonds, Series 2011A:	100.00		
840	5.250%, 1/01/36	1/22 at 100.00	A	936,860
3,200	5.125%, 1/01/42	1/22 at 100.00	A	3,528,576
3,000	Harbor Point Infrastructure Improvement District, Connecticut, Special Obligation Revenue Bonds, Harbor Point Project, Series 2010A, 7.875%, 4/01/39	4/20 at 100.00	N/R	3,539,430

1,500	Puerto Rico Municipal Finance Agency, Series 2002A, 5.250%, 8/01/21 – AGM Insured	11/16 at 100.00	AA	1,522,515
2,600	University of Connecticut, General Obligation Bonds, Series 2010A, 5.000%, 2/15/28	2/20 at 100.00	AA-	2,932,514
	University of Connecticut, General Obligation Bonds, Series 2013A:			
2,290	5.000%, 8/15/20	No Opt. Call	AA-	2,637,897
2,500	5.000%, 8/15/32	8/23 at 100.00	AA-	3,053,700
760	University of Connecticut, General Obligation Bonds, Series 2014A, 5.000%, 2/15/31	2/24 at 100.00	AA-	915,435
1,415	University of Connecticut, General Obligation Bonds, Series 2015A, 5.000%, 2/15/34	No Opt. Call	AA-	1,708,245
1,355	University of Connecticut, General Obligation Bonds, Series 2016A, 5.000%, 3/15/32	3/26 at 100.00	AA-	1,681,149
1,790	Virgin Islands Public Finance Authority, Gross Receipts Taxes Loan Note, Refunding Series	No Opt. Call	AA	1,957,455
2,150	2012A, 5.000%, 10/01/32 – AGM Insured Virgin Islands Public Finance Authority, Matching Fund Loan Notes Revenue Bonds, Senior Lien Series 2010A, 5.000%, 10/01/29	10/20 at 100.00	BBB	2,153,139
35,970	Total Tax Obligation/Limited Transportation – 0.2% (0.1% of Total Investments)			41,929,884
450	Virgin Islands Port Authority, Marine Revenue Bonds, Refunding Series 2014B, 5.000%, 9/01/44	9/24 at 100.00	BBB+	516,002
4,405	U.S. Guaranteed – 13.4% (8.8% of Total Investments) (5) Connecticut Health and Educational Facilities Authority, Revenue Bonds, Quinnipiac University, Series 2007-I, 5.000%, 7/01/25 (Pre-refunded 7/01/17) – NPFG Insured	7/17 at 100.00	AA-(5)	4,569,791
	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Renbrook School, Series 2007A:			
465	5.000%, 7/01/30 (Pre-refunded 7/01/17) – AMBAC Insured	7/17 at 100.00	N/R (5)	482,396
735	5.000%, 7/01/37 (Pre-refunded 7/01/17) – AMBAC Insured	7/17 at 100.00	N/R (5)	762,496
4,140	Connecticut Health and Educational Facilities Authority, Revenue Bonds, Wesleyan University,	7/20 at 100.00	AA (5)	4,801,034
775	Series 2010G, 5.000%, 7/01/35 (Pre-refunded 7/01/20) Connecticut Health and Educational Facilities Authority, Revenue Bonds, William W. Backus Hospital, Series 2005F, 5.125%, 7/01/35 (Pre-refunded 7/01/18)	7/18 at 100.00	AA (5)	838,767
1,240	AGM Insured Connecticut Health and Educational Facilities Authority, Revenue Bonds, Yale-New Haven Hospital, Series 2010M, 5.500%, 7/01/40 (Pre-refunded 7/01/20)	7/20 at 100.00	Aa3 (5)	1,459,306
1,125	Connecticut State Development Authority, Health Facilities Revenue Bonds, Alzheimer's Resource	8/17 at 100.00	N/R (5)	1,176,919

	Center of Connecticut, Inc., Series 2007, 5.500%, 8/15/27 (Pre-refunded 8/15/17)			
3,500	Connecticut State, General Obligation Bonds, Series 2006A, 4.750%, 12/15/24	12/16 at 100.00	AA- (5)	3,543,155
5,000	(Pre-refunded 12/15/16) Connecticut State, Special Tax Obligation Bonds, Transportation Infrastructure Series 2007A, 5.000%, 8/01/27 (Pre-refunded 8/01/17) – AMBAC Insured	18/17 at 100.00	AA (5)	5,205,650
870	Hartford, Connecticut, General Obligation Bonds, Series 2009A, 5.000%, 8/15/28 (Pre-refunded 8/15/19)	8/19 at 100.00	AA (5)	979,316
2,150	New Haven, Connecticut, General Obligation Bonds, Refunding Series 2006, 5.000%, 11/01/17	11/16 at 100.00	A-(5)	2,166,469
40	(Pre-refunded 11/01/16) – AMBAC Insured New Haven, Connecticut, General Obligation Bonds, Series 2002A, 5.250%, 11/01/17 – AMBAC Insured (ETM)	11/16 at 100.00	A-(5)	41,505
1,010	Puerto Rico Public Finance Corporation, Commonwealth Appropriation Bonds, Series 1998A, 5.125%, 6/01/24 – AMBAC Insured (ETM)	No Opt. Call	Aaa	1,202,839
1,725	Stamford, Connecticut, Special Obligation Revenue Bonds, Mill River Corridor Project, Series	4/21 at 100.00	N/R (5)	2,178,675
27,180	2011aA, 7.000%, 4/01/41 (Pre-refunded 4/01/21) Total U.S. Guaranteed			29,408,318
4,375	Utilities – 6.3% (4.2% of Total Investments) Connecticut Development Authority, Water Facility Revenue Bonds, Aquarion Water Company Project, Series 2007, 5.100%, 9/01/37 – SYNCORA GTY Insure	9/17 at 100.00	N/R	4,477,988
	(Alternative Minimum Tax) Connecticut Municipal Electric Energy Cooperative, Power Supply System Revenue Bonds, Tender Option Bond Trust 2016-XG0059:			
1,295	15.286%, 1/01/32 (IF) (4)	1/23 at 100.00	Aa3	2,219,008
410	15.151%, 1/01/38 (IF) (4)	1/23 at 100.00	Aa3	683,970
	Connecticut Transmission Municipal Electric Energy Cooperative, Transmission System Revenue Bonds, Series 2012A:			
655	5.000%, 1/01/31	1/22 at 100.00	Aa3	772,808
500	5.000%, 1/01/32	1/22 at 100.00	Aa3	589,085
2,830	5.000%, 1/01/42	1/22 at 100.00	Aa3	3,308,893
1,765	Eastern Connecticut Resource Recovery Authority, Solid Waste Revenue Bonds, Wheelabrator Lisbon Project, Series 1993A, 5.500%, 1/01/20 (Alternative		A-	1,776,614
11,830	Minimum Tax) Total Utilities Water and Sewer – 18.5% (12.2% of Total Investments)			13,828,366

Greater New Haven Water Pollution Control Authority, Connecticut, Regional Wastewater System Revenue Bonds, Refunding Series 2014B: 8/24 at 500 5.000%, 8/15/30 614,770 AA 100.00 8/24 at 1,000 5.000%, 8/15/31 AA 1,226,220 100.00 8/24 at 500 5.000%, 8/15/32 608,990 AA 100.00 Greater New Haven Water Pollution Control Authority, 11/16 at 55 AA55,199 Connecticut, Regional Wastewater System 100.00 Revenue Bonds, Series 2005A, 5.000%, 8/15/35 – NPFG Insured Guam Government Waterworks Authority, Water and 7/20 at 2,050 2,265,312 A-Wastewater System Revenue Bonds, Series 100.00 2010, 5.625%, 7/01/40 Guam Government Waterworks Authority, Water and 7/26 at 1,125 1,319,513 A-Wastewater System Revenue Bonds, Series 100.00 2016, 5.000%, 1/01/46 Hartford County Metropolitan District, Connecticut, Clean 11/24 at 6,815 8,245,399 AA Water Project Revenue Bonds, 100.00 Refunding Green Bond Series 2014A, 5.000%, 11/01/42 Hartford County Metropolitan District, Connecticut, Clean Water Project Revenue Bonds, Series 2013A: 4/22 at 4,100 5.000%, 4/01/36 AA 4,870,595 100.00 4/22 at 2,500 5.000%, 4/01/39 AA 2,964,000 100.00 South Central Connecticut Regional Water Authority Water 8/24 at 795 946,996 AA-System Revenue Bonds, Thirtieth 100.00 Series 2014A, 5.000%, 8/01/44 South Central Connecticut Regional Water Authority, Water System Revenue Bonds, Refunding Thirty-Second Series 2016B: 8/26 at 1,625 4.000%, 8/01/35 AA-1,845,529 100.00 8/26 at 1,470 4.000%, 8/01/36 AA-1,662,585 100.00 8/26 at 1,110 5.000%, 8/01/37 AA-1,375,479 100.00 8/26 at 930 5.000%, 8/01/38 AA-1,151,498 100.00 8/26 at 270 5.000%, 8/01/39 AA-332,691 100.00 South Central Connecticut Regional Water Authority, Water 8/21 at 5,681,634 4,870 AA-System Revenue Bonds, 100.00 Twentieth-Sixth Series, 2011, 5.000%, 8/01/41 South Central Connecticut Regional Water Authority, Water 4,000 No Opt. Call AA-4,804,640 System Revenue Bonds, Twenty-Seventh Series 2012, 5.000%, 8/01/33 500

613,765

AA+

	Stamford, Connecticut, Water Pollution Control System and Facility Revenue Bonds, Series 2013A, 5.250%, 8/15/43	8/23 at 100.00	
34,215	Total Water and Sewer		40,584,815
\$ 289,705	Total Long-Term Investments (cost \$306,824,427)		332,272,024
	Floating Rate Obligations – (5.8)%		(12,750,000)
	Variable Rate MuniFund Term Preferred Shares, at Liquidation Preference – (48.3)% (6)		(106,000,000)
	Other Assets Less Liabilities – 2.6%		5,742,870
	Net Assets Applicable to Common Shares – 100%		\$ 219,264,894

Fair Value Measurements

Fair Value is defined as the price that would be received 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 following is a summary of the three-tiered hierarch of valuation input levels.

Level 1 – Inputs are adjusted and prices are determined using quoted prices in active markets for identical securities.

Level 2 – Prices are determined using other significant observable inputs (including quoted prices for similar securities, interest rates, prepayment speeds, credit risk, etc.).

Level 3 – Prices are determined using 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 the end of the reporting period:

Level 1 Level 2 Level 3 Total

Long-Term Investments:

Municipal Bonds \$— \$332,272,024 \$— \$332,272,024

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 no require reclassification. Temporary and permanent differences do not impact the net asset value of the Fund. As of August 31, 2016, the cost of investments was \$293,976,842.

Gross unrealized appreciation and gross unrealized depreciation of investments as of August 31, 2016, were as follows:

Gross unrealized:

Appreciation \$25,545,182

Depreciation –

Net unrealized appreciation (depreciation) of investments \$25,545,182

- (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) For financial reporting purposes, the ratings disclosed are the highest of Standard & Poor's Group ("Standard & Poor's"), Moody's Investors Service, Inc. ("Moody's") or Fitch, Inc. ("Fitch") rating. This treatment of split-rated securities may differ from that used for other purposes, such as for Fund investment policies. 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 inverse floating rate transactions.
- 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 recognized as having an implied rating equal to the rating of such securities.
- (6) Variable Rate MuniFund Term Preferred Shares, at Liquidation Preference as a percentage of Total Investments is 31.9%.
- (ETM) Escrowed to maturity.
- (IF) Inverse floating rate investment.
- (UB) Underlying bond of an inverse floating rate trust reflected as a financing transaction.
- (WI/DD) Investment, or portion of investment, purchased on a when-issued or delayed delivery basis.

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 Connecticut Premium Income Municipal Fund

By (Signature and Title) /s/ Gifford R. Zimmerman Gifford R. Zimmerman

Vice President and Secretary

Date: October 28, 2016

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/ Cedric H. Antosiewicz

Cedric H. Antosiewicz

Chief Administrative Officer (principal executive officer)

Date: October 28, 2016

By (Signature and Title) /s/ Stephen D. Foy

Stephen D. Foy

Vice President and Controller (principal financial officer)

Date: October 28, 2016