NUVEEN SELECT MATURITIES MUNICIPAL FUND Form N-Q August 27, 2010

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 811-7056

Nuveen Select Maturities 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: 3/31

Date of reporting period: 6/30/10

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 Select Maturities Municipal Fund (NIM)
June 30, 2010

Principal

Amount (000) Description (1)

Alabama - 2.5%

- \$ 2,000 Alabama 21st Century Authority, Tobacco Settlement Revenue Bonds, Series 2001, 5.750%, 12/01/17
 - 180 Birmingham Special Care Facilities Financing Authority, Alabama, Revenue Bonds, Baptist Health System Inc., Series 2005A, 5.000%, 11/15/30
 - 500 Jefferson County, Alabama, Sewer Revenue Refunding Warrants, Series 2003B, 5.250%, 2/01/12 AGM Insured
 - 500 Marshall County Healthcare Authority, Alabama, Revenue Bonds, Series 2002A, 6.250%, 1/01/22
 - 3,180 Total Alabama

Arizona – 1.0%

Salt Verde Financial Corporation, Arizona, Senior Gas Revenue Bonds, Citigroup Energy Inc Prepay Contract Obligations, Series 2007:

- 100 5.000%, 12/01/17
- 85 5.250%, 12/01/19
- 35 5.000%, 12/01/32
- 380 5.000%, 12/01/37
- 750 Surprise Municipal Property Corporation, Arizona, Wastewater System Revenue Bonds, Series 2007, 4.500%, 4/01/17
- 1,350 Total Arizona

Arkansas – 3.2%

- 1,500 Jefferson County, Arkansas, Pollution Control Revenue Bonds, Entergy Arkansas Inc. Project, Series 2006, 4.600%, 10/01/17
- 1,000 Jonesboro, Arkansas, Industrial Development Revenue Bonds, Anheuser Busch Inc. Project, Series 2002, 4.600%, 11/15/12
- 1,380 North Little Rock, Arkansas, Electric Revenue Refunding Bonds, Series 1992A, 6.500%, 7/01/15 NPFG Insured
- 3,880 Total Arkansas

California – 1.8%

- 400 California Health Facilities Financing Authority, Revenue Bonds, Catholic Healthcare West, Series 2008H, 5.125%, 7/01/22
- 500 California State, General Obligation Bonds, Various Purpose Series 2010, 5.500%, 3/01/40
- 1,000 Ceres Unified School District, Stanislaus County, California, General Obligation Bonds, Series 2002B, 0.000%, 8/01/31 FGIC Insured
 - 255 Golden State Tobacco Securitization Corporation, California, Tobacco Settlement Asset-Backed

- Bonds, Series 2007A-1, 4.500%, 6/01/27
- 2,000 Palomar Pomerado Health, California, General Obligation Bonds, Series 2009A, 0.000%, 8/01/25 AGC Insured
- 4,155 Total California Colorado – 11.8%
- 2,895 Centennial Downs Metropolitan District, Colorado, General Obligation Bonds, Series 1999, 5.000%, 12/01/20 AMBAC Insured
- 1,140 Colorado Educational and Cultural Facilities Authority, Charter School Revenue Bonds, Douglas County School District RE-1 DCS Montessori School, Series 2002A, 6.000%, 7/15/22
- 1,175 Colorado Educational and Cultural Facilities Authority, Revenue Bonds, Classical Academy Charter School, Series 2003, 4.500%, 12/01/18 SYNCORA GTY Insured
 - 190 Colorado Housing Finance Authority, Single Family Program Senior Bonds, Series 2000D-2, 6.900%, 4/01/29 (Alternative Minimum Tax)
- 1,025 Denver Health and Hospitals Authority, Colorado, Healthcare Revenue Bonds, Series 2001A, 6.000%, 12/01/23 (Pre-refunded 12/01/11)
- 1,465 Denver West Metropolitan District, Colorado, General Obligation Refunding and Improvement Bonds, Series 2003, 4.500%, 12/01/18 RAAI Insured
- 1,500 E-470 Public Highway Authority, Colorado, Senior Revenue Bonds, Series 2007C-2, 5.000%, 9/01/39 (Mandatory put 9/01/13) NPFG Insured
- 1,000 E-470 Public Highway Authority, Colorado, Toll Revenue Bonds, Series 2004B, 0.000%, 3/01/36 NPFG Insured
 - 70 Northwest Parkway Public Highway Authority, Colorado, Revenue Bonds, Senior Series 2001A, 5.250%, 6/15/41 (Pre-refunded 6/15/11) AGM Insured
- 5,875 Northwest Parkway Public Highway Authority, Colorado, Senior Lien Revenue Bonds, Series 2001B, 0.000%, 6/15/27 (Pre-refunded 6/15/11) AMBAC Insured
- 2,845 University of Colorado Hospital Authority, Revenue Bonds, Series 2001A, 5.600%, 11/15/21 (Pre-refunded 11/15/11)
- 19,180 Total Colorado
 - Connecticut 1.5%
 - Eastern Connecticut Resource Recovery Authority, Solid Waste Revenue Bonds, Wheelabrator Lisbon Project, Series 1993A:
 - 335 5.500%, 1/01/14 (Alternative Minimum Tax)
 - 1,570 5.500%, 1/01/15 (Alternative Minimum Tax)
 - 1,905 Total Connecticut Florida – 5.6%
- 2,400 Deltona, Florida, Utility Systems Water and Sewer Revenue Bonds, Series 2003, 5.250%, 10/01/17 NPFG Insured
- 1,000 Florida Citizens Property Insurance Corporation, High Risk Account Revenue Bonds, Series 2007A, 5.000%, 3/01/15 NPFG Insured
 - 600 Florida Deparmtent of Environmental Protection, Florida Forever Revenue Bonds, Series 2007B, 5.000%, 7/01/19 NPFG Insured

- 30 JEA, Florida, Electric Revenue Certificates, Series 1973-2, 6.800%, 7/01/12 (ETM)
- 2,000 Orange County, Florida, Tourist Development Tax Revenue Bonds, Series 2005, 5.000%, 10/01/22 AMBAC Insured
 - 265 Port Everglades Authority, Florida, Port Facilities Revenue Bonds, Series 1986, 7.125%, 11/01/16 (ETM)
 - 500 South Miami Health Facilities Authority, Florida, Hospital Revenue, Baptist Health System Obligation Group, Series 2007, 5.000%, 8/15/27
- 6,795 Total Florida Georgia – 0.4%
 - 405 Cherokee County Water and Sewerage Authority, Georgia, Revenue Bonds, Series 1995, 5.200%, 8/01/25 (Pre-refunded 8/01/22) MBIA Insured Idaho 0.1%
 - 100 Madison County, Idaho, Hospital Revenue Certificates of Participation, Madison Memorial Hospital, Series 2006, 5.250%, 9/01/37 Illinois 15.0%
 - 550 Chicago, Illinois, Tax Increment Allocation Bonds, Irving/Cicero Redevelopment Project, Series 1998, 7.000%, 1/01/14
- 1,500 Cook County Township High School District 208, Illinois, General Obligation Bonds, Series 2006, 5.000%, 12/01/21 NPFG Insured
- 2,000 Huntley, Illinois, Special Service Area 9, Special Tax Bonds, Series 2007, 5.100%, 3/01/28 AGC Insured
- 4,780 Illinois Development Finance Authority, GNMA Collateralized Mortgage Revenue Bonds, Greek American Nursing Home Committee, Series 2000A, 7.600%, 4/20/40
- 2,000 Illinois Development Finance Authority, Revenue Refunding Bonds, Olin Corporation, Series 1993D, 6.750%, 3/01/16
- 2,000 Illinois Educational Facilities Authority, Revenue Bonds, Art Institute of Chicago, Series 2000, 4.450%, 3/01/34 (Mandatory put 3/01/15)
- 1,000 Illinois Educational Facilities Authority, Student Housing Revenue Bonds, Educational Advancement Foundation Fund, University Center Project, Series 2002, 6.625%, 5/01/17 (Pre-refunded 5/01/12)
 - 250 Illinois Finance Authority, Revenue Bonds, Roosevelt University, Series 2007, 5.250%, 4/01/22
 - 20 Illinois Health Facilities Authority, Revenue Bonds, Condell Medical Center, Series 2002, 5.250%, 5/15/12 (ETM)
 - 50 Illinois Health Facilities Authority, Revenue Bonds, Lutheran General Health System, Series 1993A, 6.125%, 4/01/12 AGM Insured (ETM)
 - 695 Illinois Health Facilities Authority, Revenue Bonds, Silver Cross Hospital and Medical Centers, Series 1999, 5.500%, 8/15/19
- 1,125 Illinois State, General Obligation Refunding Bonds, Series 2010, 5.000%, 1/01/19
- 1,355 Kane & DeKalb Counties, Illinois, Community United School District 301, General Obligation Bonds, Series 2006, 0.000%, 12/01/18 NPFG Insured
 - 700 Regional Transportation Authority, Cook, DuPage, Kane, Lake, McHenry and Will Counties,

Illinois, General Obligation Bonds, Series 1994D, 7.750%, 6/01/19 – FGIC Insured

- 18,025 Total Illinois
 - Indiana-0.4%
 - 250 Indiana Finance Authority, Educational Facilities Revenue Bonds, Drexel Foundation For Educational Excellence, Inc., Series 2009A, 6.000%, 10/01/21
 - 250 Jasper County, Indiana, Pollution Control Revenue Refunding Bonds, Northern Indiana Public Service Company Project, Series 1994A Remarketed, 5.850%, 4/01/19 MBIA Insured
 - 500 Total Indiana
 - Iowa 1.2%
 - 1,520 Iowa Tobacco Settlement Authority, Tobacco Settlement Asset-Backed Revenue Bonds, Series 2001B, 5.300%, 6/01/25 (Pre-refunded 6/01/11)

 Kansas 3.2%
- 3,500 Wichita, Kansas, Hospital Facilities Revenue Refunding and Improvement Bonds, Via Christi Health System Inc., Series 2001-III, 5.500%, 11/15/21
 - 250 Wyandotte County-Kansas City Unified Government, Kansas, Sales Tax Special Obligation Bonds, Redevelopment Project Area B, Series 2005, 5.000%, 12/01/20
 - 370 Wyandotte County-Kansas City Unified Government, Kansas, Sales Tax Special Obligation Capital Appreciation Revenue Bonds Redevelopment Project Area B Major Multi-Sport Athletic Complex Project, Subordinate Lien Series 2010B, 0.000%, 6/01/21
- 4,120 Total Kansas
 - Kentucky 1.0%
 - 325 Kentucky Economic Development Finance Authority, Louisville Arena Project Revenue Bonds, Louisville Arena Authority, Inc., Series 2008-A1, 5.750%, 12/01/28 AGC Insured
 - 920 Kentucky Housing Corporation, Housing Revenue Bonds, Series 2005G, 5.000%, 7/01/30 (Alternative Minimum Tax)
- 1,245 Total Kentucky
 - Louisiana 1.4%
- 1,010 Louisiana Public Facilities Authority, Revenue Bonds, Baton Rouge General Hospital, Series 2004, 5.250%, 7/01/24 NPFG Insured
 - Tobacco Settlement Financing Corporation, Louisiana, Tobacco Settlement Asset-Backed Bonds, Series 2001B:
 - 510 5.500%, 5/15/30
 - 245 5.875%, 5/15/39
- 1,765 Total Louisiana
 - Maryland 0.9%
- 1,100 Maryland Energy Financing Administration, Revenue Bonds, AES Warrior Run Project, Series 1995, 7.400%, 9/01/19 (Alternative Minimum Tax)
 - Massachusetts 1.9%
 - 500 Massachusetts Development Finance Agency, Revenue Bonds, Orchard Cove, Series 2007, 5.000%, 10/01/19
- 1,505 Massachusetts Housing Finance Agency, Rental Housing Mortgage Revenue Bonds, Series 2000H,

6.650%, 7/01/41 – NPFG Insured (Alternative Minimum Tax)

Massachusetts Port Authority, Special Facilities Revenue Bonds, Delta Air Lines Inc., Series 2001A:

- 100 5.200%, 1/01/20 AMBAC Insured (Alternative Minimum Tax)
- 435 5.000%, 1/01/27 AMBAC Insured (Alternative Minimum Tax)
- 2,540 Total Massachusetts

Michigan – 1.2%

- 1,000 Cornell Township Economic Development Corporation, Michigan, Environmental Improvement Revenue Refunding Bonds, MeadWestvaco Corporation-Escanaba Project, Series 2002, 5.875%, 5/01/18 (Pre-refunded 5/01/12)
 - 445 Michigan State Hospital Finance Authority, Hospital Revenue Refunding Bonds, Sinai Hospital, Series 1995, 6.625%, 1/01/16
- 1,445 Total Michigan
 Minnesota 1.6%
- 1,100 Becker, Minnesota, Pollution Control Revenue Bonds, Northern States Power Company, Series 1993A, 8.500%, 9/01/19
 - 250 Northern Municipal Power Agency, Minnesota, Electric System Revenue Bonds, Refunding Series 2009A, 5.000%, 1/01/15 AGC Insured
 - 440 White Earth Band of Chippewa Indians, Minnesota, Revenue Bonds, Series 2000A, 7.000%, 12/01/11 ACA Insured
- 1,790 Total Minnesota

Mississippi – 0.6%

Mississippi Hospital Equipment and Facilities Authority, Revenue Bonds, Baptist Memorial Healthcare, Series 2004B-1:

- 280 5.000%, 9/01/16
- 300 5.000%, 9/01/24
- 250 Warren County, Mississippi, Gulf Opportunity Zone Revenue Bonds, International Paper Company, Series 2006A, 4.800%, 8/01/30
- 830 Total Mississippi

Montana – 0.1%

- 70 University of Montana, Revenue Bonds, Series 1996D, 5.375%, 5/15/19 MBIA Insured (ETM) Nebraska 0.9%
- 1,000 Dodge County School District 1, Nebraska, Fremont Public Schools, General Obligation Bonds, Series 2004, 5.000%, 12/15/19 – AGM Insured Nevada – 1.2%
- 1,000 Clark County, Nevada, Airport Revenue Bonds, Subordinte Lien Series 2010B, 5.750%, 7/01/42 Director of Nevada State Department of Business and Industry, Revenue Bonds, Las Vegas Monorail Project, First Tier, Series 2000:
 - 800 0.000%, 1/01/15 AMBAC Insured
 - 35 0.000%, 1/01/16 AMBAC Insured
 - 120 0.000%, 1/01/18 AMBAC Insured

- 50 0.000%, 1/01/20 AMBAC Insured
- 250 Las Vegas Redevelopment Agency, Nevada, Tax Increment Revenue Bonds, Series 2009A, 8.000%, 6/15/30
- 2,255 Total Nevada New Jersey – 0.9%
 - 410 Bayonne Redevelopment Agency, New Jersey, Revenue Bonds, Royal Caribbean Cruises Project, Series 2006A, 4.750%, 11/01/16 (Alternative Minimum Tax)
- 1,730 New Jersey Transportation Trust Fund Authority, Transportation System Bonds, Capital Appreciation Series 2010A, 0.000%, 12/15/33
 - 425 Tobacco Settlement Financing Corporation, New Jersey, Tobacco Settlement Asset-Backed Bonds, Series 2007-1A, 4.500%, 6/01/23
- 2,565 Total New Jersey New York – 6.3%
 - 220 Brooklyn Areba Local Development Corporation, New York, Payment in Lieu of Taxes Revenue Bonds, Barclays Center Project, Series 2009, 6.000%, 7/15/30
- 1,000 Dormitory Authority of the State of New York, Revenue Bonds, Brooklyn Law School, Series 2003A, 5.500%, 7/01/15 RAAI Insured
 - 170 New York City Industrial Development Agency, New York, Civic Facility Revenue Bonds, Special Needs Facilities Pooled Program, Series 2008A-1, 5.700%, 7/01/13
- 1,500 New York State Energy Research and Development Authority, Facilities Revenue Bonds, Consolidated Edison Company Inc., Series 2001A, 4.700%, 6/01/36 (Mandatory put 10/01/12) (Alternative Minimum Tax) New York State Tobacco Settlement Financing Corporation, Tobacco Settlement Asset-Backed and State Contingency Contract-Backed Bonds, Series 2003A-1:
 - 20 5.500%, 6/01/14
 - 195 5.250%, 6/01/20 AMBAC Insured
 - 125 5.250%, 6/01/22 AMBAC Insured
 - 65 New York State Tobacco Settlement Financing Corporation, Tobacco Settlement Asset-Backed and State Contingency Contract-Backed Bonds, Series 2003B-1C, 5.500%, 6/01/22
- 4,300 Port Authority of New York and New Jersey, Special Project Bonds, JFK International Air Terminal LLC, Sixth Series 1997, 7.000%, 12/01/12 NPFG Insured (Alternative Minimum Tax)
- 7,595 Total New York North Carolina – 1.6%
- 1,880 Union County, North Carolina, Certificates of Participation, Series 2003, 5.000%, 6/01/18 AMBAC Insured
 Ohio 1.3%
 - 770 Buckeye Tobacco Settlement Financing Authority, Ohio, Tobacco Settlement Asset-Backed Revenue Bonds, Senior Lien, Series 2007A-2, 5.125%, 6/01/24
- 1,000 Toledo-Lucas County Port Authority, Ohio, Port Revenue Bonds, Cargill Inc., Series 2004B, 4.500%, 12/01/15
- 1,770 Total Ohio

1

- Pennsylvania 7.3%
- 200 Luzerne County Industrial Development Authority, Pennsylvania, Guaranteed Lease Revenue Bonds, Series 2009, 7.750%, 12/15/27
- 400 Pennsylvania Economic Development Financing Authority, Pollution Control Revenue Bonds, PPL Electric Utilities Corporation, Refunding Series 2008, 4.850%, 10/01/23 (Mandatory put 10/01/10)
- 770 Pennsylvania Higher Educational Facilities Authority, College Revenue Bonds, Ninth Series 1976, 7.625%, 7/01/15 (ETM)
- 225 Pennsylvania Higher Educational Facilities Authority, Revenue Bonds, University of the Arts, Series 1999, 5.150%, 3/15/20 RAAI Insured (ETM)
- 4,120 Philadelphia Gas Works, Pennsylvania, Revenue Bonds, Eighteenth Series 2004, 5.000%, 8/01/15 AMBAC Insured
- 1,435 Philadelphia Gas Works, Pennsylvania, Revenue Bonds, Twelfth Series 1990B, 7.000%, 5/15/20 MBIA Insured (ETM)
 - 250 Philadelphia Hospitals and Higher Education Facilities Authority, Pennsylvania, Hospital Revenue Bonds, Temple University Hospital, Series 1993A, 6.625%, 11/15/23
- 1,085 Pittsburgh School District, Allegheny County, Pennsylvania, General Obligation Bonds, Series 2006B, 5.000%, 9/01/12 AMBAC Insured
- 8,485 Total Pennsylvania
 - Puerto Rico 0.6%
- 1,000 Puerto Rico Sales Tax Financing Corporation, Sales Tax Revenue Bonds, First Subordinate Series 2009A, 0.000%, 8/01/32

Rhode Island – 0.7%

Rhode Island Tobacco Settlement Financing Corporation, Tobacco Settlement Asset-Backed Bonds, Series 2002A:

- 255 6.125%, 6/01/32
- 725 6.250%, 6/01/42
- 980 Total Rhode Island South Carolina – 5.4%
- 750 Berkeley County School District, South Carolina, Installment Purchase Revenue Bonds, Securing Assets for Education, Series 2003, 5.250%, 12/01/19
- 1,540 Piedmont Municipal Power Agency, South Carolina, Electric Revenue Bonds, Series 1991, 6.750%, 1/01/19 FGIC Insured (ETM)
- 2,835 Piedmont Municipal Power Agency, South Carolina, Electric Revenue Bonds, Series 1991, 6.750%, 1/01/19 FGIC Insured
 - 5 South Carolina JOBS Economic Development Authority, Economic Development Revenue Bonds, Bon Secours Health System Inc., Series 2002A, 5.625%, 11/15/30 (Pre-refunded 11/15/12)
 - 20 South Carolina JOBS Economic Development Authority, Economic Development Revenue Bonds, Bon Secours Health System Inc., Series 2002B, 5.625%, 11/15/30
 - 450 South Carolina JOBS Economic Development Authority, Hospital Revenue Bonds, Palmetto Health Alliance, Series 2000A, 7.000%, 12/15/10 (ETM)

1

1

- 195 Tobacco Settlement Revenue Management Authority, South Carolina, Tobacco Settlement Asset-Backed Bonds, Series 2001B, 6.000%, 5/15/22 (Pre-refunded 5/15/12)
- 5,795 Total South Carolina South Dakota – 0.8%
- 1,000 South Dakota Health and Educational Facilities Authority, Revenue Bonds, Sanford Health, Series 2007, 5.000%, 11/01/27

Tennessee -2.1%

- Shelby County Health, Educational and Housing Facilities Board, Tennessee, Hospital Revenue Bonds, Methodist Healthcare, Series 2002:
- 750 6.000%, 9/01/17 (Pre-refunded 9/01/12)
- 1,250 6.000%, 9/01/17 (Pre-refunded 9/01/12)
 - 400 The Tennessee Energy Acquisition Corporation, Gas Revenue Bonds, Series 2006A, 5.000%, 9/01/13
- 2,400 Total Tennessee Texas – 6.8%
- 1,055 Austin, Texas, General Obligation Bonds, Series 2004, 5.000%, 9/01/20 NPFG Insured
 - 565 Bexar County Housing Finance Corporation, Texas, FNMA Guaranteed Multifamily Housing Revenue Bonds, Villas Sonterra Apartments Project, Series 2007A, 4.700%, 10/01/15 (Alternative Minimum Tax)
 - 25 Brazos River Authority, Texas, Collateralized Pollution Control Revenue Bonds, Texas Utilities Electric Company, Series 2003D, 5.400%, 10/01/29 (Mandatory put 10/01/14)
- 2,000 Brazos River Authority, Texas, Collateralized Revenue Refunding Bonds, CenterPoint Energy Inc., Series 2004B, 4.250%, 12/01/17 FGIC Insured
 - 500 Brazos River Authority, Texas, Pollution Control Revenue Refunding Bonds, TXU Electric Company, Series 2001C, 5.750%, 5/01/36 (Mandatory put 11/01/11) (Alternative Minimum Tax)
 - 15 Brazos River Authority, Texas, Pollution Control Revenue Refunding Bonds, TXU Energy Company LLC, Series 2003A, 6.750%, 4/01/38 (Mandatory put 4/01/13) (Alternative Minimum Tax)
- 1,875 Denton Independent School District, Denton County, Texas, General Obligation Bonds, Series 2006, 5.000%, 8/15/20
 - 5 Galveston Property Finance Authority Inc., Texas, Single Family Mortgage Revenue Bonds, Series 1991A, 8.500%, 9/01/11
 - 300 Kerrville Health Facilities Development Corporation, Texas, Revenue Bonds, Sid Peterson Memorial Hospital Project, Series 2005, 5.125%, 8/15/26
 - 325 North Texas Thruway Authority, Second Tier System Revenue Refunding Bonds, Series 2008, 5.750%, 1/01/38
 - 25 Sabine River Authority, Texas, Pollution Control Revenue Bonds, TXU Energy Company LLC Project, Series 2001B, 5.750%, 5/01/30 (Mandatory put 11/01/11) (Alternative Minimum Tax)
- 1,500 Texas Municipal Gas Acquisition and Supply Corporation I, Gas Supply Revenue Bonds, Series 2006B, 0.910%, 12/15/17
 - 215 Tri-County Mental Health and Retardation Center, Texas, Revenue Bonds, Facilities Acquisition Program, Series 1995E, 6.500%, 3/01/15 AGM Insured
 - 145 Weslaco Health Facilities Development Corporation, Texas, Hospital Revenue Bonds, Knapp

Medical Center, Series 2002, 6.000%, 6/01/17 (Pre-refunded 6/01/12)

8,550 Total Texas

Utah - 0.2%

235 Bountiful, Davis County, Utah, Hospital Revenue Refunding Bonds, South Davis Community Hospital Project, Series 1998, 6.000%, 12/15/10

Virginia – 0.2%

250 Virginia College Building Authority, Educational Facilities Revenue Refunding Bonds, Marymount University, Series 1998, 5.100%, 7/01/18 – RAAI Insured Washington – 0.7%

- 295 Washington Public Power Supply System, Revenue Refunding Bonds, Nuclear Project 3, Series 1989B, 7.125%, 7/01/16 NPFG Insured
- 520 Washington State Tobacco Settlement Authority, Tobacco Settlement Asset-Backed Revenue Bonds, Series 2002, 6.500%, 6/01/26
- 815 Total Washington

Wisconsin – 3.7%

Badger Tobacco Asset Securitization Corporation, Wisconsin, Tobacco Settlement Asset-Backed Bonds, Series 2002:

- 465 6.125%, 6/01/27 (Pre-refunded 6/01/12)
- 1,480 6.375%, 6/01/32 (Pre-refunded 6/01/12)
- 1,000 Wisconsin Health and Educational Facilities Authority, Revenue Bonds, Agnesian Healthcare Inc., Series 2001, 6.000%, 7/01/21
- 1,150 Wisconsin Health and Educational Facilities Authority, Revenue Bonds, Aurora Health Care Inc., Series 1999A, 5.500%, 2/15/20 ACA Insured

Wisconsin Health and Educational Facilities Authority, Revenue Bonds, Wheaton Franciscan Healthcare System, Series 2006:

- 200 5.250%, 8/15/18
- 180 5.250%, 8/15/34
- 4,475 Total Wisconsin
- \$ 126,950 Total Long-Term Investments (cost \$119,722,319) 97.1%

Short-Term Investments – 1.0%

\$ 1,307 State Street Bank Euro Dollar Time Deposit, 0.010%, 7/01/10

Total Short-Term Investments (cost \$1,307,032)

Total Investments (cost \$121,029,351) – 98.1%

Other Assets Less Liabilities – 1.9%

Net Assets – 100%

Fair Value Measurements

In determining the value of the Fund's investments, various inputs are used. These inputs are 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 June 30, 2010:

	Level 1	Level 2	Level 3	Total
Investments:				
Municipal Bonds	\$ -	-\$123,593,973	\$ -\$12	23,593,973
Short-Term Investments	1,307,032	_	_	1,307,032
Total	\$1,307,032	\$123,593,973	\$ -\$ 12	24,901,005

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 and timing differences in recognizing certain gains and losses on investment transactions. 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 June 30, 2010, the cost of investments was \$120,915,820.

Gross unrealized appreciation and gross unrealized depreciation of investments at June 30, 2010, were as follows:

Gross unrealized:

Appreciation	\$ 5,386,749
Depreciation	(1,401,564)
Net unrealized appreciation (depreciation) of investments	\$ 3,985,185

- (1) All percentages shown in the Portfolio of Investments are based on net assets.
- (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.
- (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. Such investments are normally considered to be equivalent to AAA rated securities.

N/A Not applicable.

N/R Not rated.

(ETM) Escrowed to maturity.

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.

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 Select Maturities Municipal Fund

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

Vice President and Secretary

Date August 27, 2010

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 August 27, 2010

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

Stephen D. Foy

Vice President and Controller (principal financial officer)

Date August 27, 2010