

Report on the Sixth Annual Actuarial Valuation  
Of Other Postemployment Benefits  
Provided under the New York City Health Benefits Program

Prepared as of June 30, 2010 in Accordance with  
Governmental Accounting Standards Board  
Statements No. 43 and 45

For Fiscal Year Ended June 30, 2011

New York City Office of the Actuary

Robert C. North, Jr.  
Chief Actuary

September 21, 2011



## OFFICE OF THE ACTUARY

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ROBERT C. NORTH, JR.  
CHIEF ACTUARY

September 21, 2011

Honorable John C. Liu  
Comptroller  
The City of New York  
Municipal Building, Room 530  
One Centre Street  
New York, NY 10007

Re: GASB43/45 Actuarial Valuation Report

Dear Comptroller Liu:

This Report presents the results of the June 30, 2010 actuarial valuation of the Other Postemployment Benefits ("OPEB") provided under the New York City Health Benefits Program (the "Program"). These results are intended to form the basis for accounting and financial reporting under Governmental Accounting Standards Board ("GASB") Statement No. 45 ("GASB45") for Fiscal Year 2011 (i.e., July 1, 2010 to June 30, 2011) for the City of New York (the "City") and certain non-City entities ("Component Units").

Beginning with the June 30, 2008 OPEB actuarial valuation these results also form the basis for financial reporting under GASB Statement No. 43 ("GASB43") for the New York City Other Postemployment Benefits Plan (the "OPEB Plan" or the "Plan"). Where these results are applicable under both GASB43 and GASB45, the term "GASB43/45" is used.

Prior to the June 30, 2008 OPEB actuarial valuation, separate GASB43 results were presented which formed the basis for financial reporting under the New York City Retiree Health Benefits Trust ("NYCRHBT").

The results shown herein are based upon:

- The Office of the Actuary's ("OA") interpretation of GASB43 and GASB45.
- The OA's understanding of the benefits provided to eligible retirees and beneficiaries.
- Census data used in the June 30, 2010 actuarial valuations of the New York City Retirement Systems ("NYCRS")<sup>1</sup> to produce Preliminary Fiscal Year 2012 Employer Contributions and supplemental data provided to the OA by the New York City Office of Labor Relations ("OLR") and by the Educational Construction Fund ("ECF"), and data provided to Buck Consultants, LLC ("Buck") by the City University of New York ("CUNY") for participants in the Teachers Insurance Annuity Association - College Retirement Equities Fund ("TIAA-CREF" or "CUNY TIAA").
- Health insurance premium rates and related financial information for Fiscal Year 2011 provided to the OA by OLR.
- Welfare Fund contribution rates as of June 30, 2010, June 30, 2009 and June 30, 2008, as well as information about lump-sum payments made on behalf of retirees to Welfare Funds for Fiscal Years 2009, 2010 and 2011, provided to the OA by OLR.

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<sup>1</sup> New York City Employees' Retirement System ("NYCERS")  
New York City Teachers' Retirement System ("TRS")  
New York City Board of Education Retirement System ("BERS")  
New York City Police Pension Fund ("POLICE")  
New York City Fire Department Pension Fund ("FIRE")

- Certain Actuarial Assumptions<sup>2</sup> used in the actuarial valuations of the NYCERS that were adopted by the Boards of Trustees during Fiscal Year 2006. These assumptions are supplemented by:
  - Probabilities of retirement adopted by the Retirement Board of TRS and applicable to active participants in the optional 55/25 Plan established under Chapter 19 of the Laws of 2008.
  - Additional actuarial assumptions adopted by the Board of Trustees of POLICE for valuing the benefits payable to Tier III active members of POLICE.
  - Revised post-retirement mortality assumptions to reflect more recent experience and the Actuary's updated estimates of future experience.

Appendix G contains the tabular values of these supplemental assumptions.

- Additional OPEB-specific Actuarial Assumptions as described in Section V and Appendix D of this Report.
- An Actuarial Cost Method as described in Section V of this Report.
- Financial information provided by the Office of Management and Budget ("OMB") for City entities and by the administrative offices of the Component Units.
- Information on the Stabilization Fund provided by OLR and OMB.

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<sup>2</sup> Details provided in Appendix D - Details of Actuarial Assumptions and Certain Methods.

The results presented in this Report continue to take into account the current understanding of the Actuary of National Health Care Reform ("NHCR") (i.e., the Patient Protection and Affordable Care Act ("PPACA") signed into law on March 23, 2010 and the Health Care and Education Reconciliation Act ("HCERA") signed into law on March 30, 2010). This understanding is based primarily on information provided by the OA's actuarial consultants at Buck and on information available elsewhere in the public domain. This understanding reflects the newness of NHCR and recognizes that there currently exists significant disagreement among health care professionals about the magnitude and even the direction of the impact of NHCR on the cost of employer-sponsored retiree health care coverage.

The five prior OPEB actuarial valuation reports have included results for the New York City Off-Track Betting Corporation ("OTB").

This Report does not include results for OTB for Fiscal Year 2011.

It is the understanding of the Actuary that effective May 26, 2011, neither the City nor the Plan has any OPEB obligation for current or future OTB retirees.

The results contained in this Report are not meant for other purposes. In particular, the analysis in this Report is not to be relied upon by the employer, the retirees or any retiree representatives (such as unions) for any decisions regarding benefit design.

This Report is intended to present the OPEB obligations of the New York City Health Benefits Program as of the valuation date.

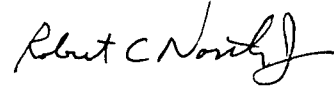
All costs, obligations and actuarial present values have been determined in accordance with generally accepted actuarial principles and procedures.

An Actuarial Certification is included in Section VIII.

Honorable John C. Liu  
September 21, 2011  
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The Table of Contents, which immediately follows, outlines in more detail the contents of this Report.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert C. North, Jr.", written in a cursive style.

Robert C. North, Jr.  
Chief Actuary

RCN/bs

Honorable John C. Liu  
September 21, 2011  
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cc: OA

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Ms. D.A. Wolfe

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**Prepared as of June 30, 2010 in Accordance with  
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Statements No. 43 and 45**

**For Fiscal Year Ended June 30, 2011**

**SECTION I - EXECUTIVE SUMMARY**

1. This actuarial report was prepared as of June 30, 2010 and presents the results of an actuarial valuation of the Other Postemployment Benefits ("OPEB") provided by the City of New York (the "City") and certain entities ("Component Units") to eligible retirees and beneficiaries through the New York City Health Benefits Program (the "Program").

The OPEB for which the City has financial responsibility are referred to as the OPEB Plan (the "Plan"). The Plan is distinguished from the Program based on which entity has financial responsibility for the OPEB.

The purpose of this OPEB actuarial valuation is to determine the Annual Required Contribution ("ARC") and measure the Annual OPEB Cost ("AOC") for the Plan and certain entities for Fiscal Year 2011 (i.e., July 1, 2010 to June 30, 2011) in accordance with Governmental Accounting Standards Board ("GASB") Statement No. 45 ("GASB45"). This OPEB actuarial valuation also measures the funded status of the Plan and determines the ARC for Fiscal Year 2011 in accordance with GASB Statement No. 43 ("GASB43").

2. This OPEB actuarial valuation measures the total actuarial present value of projected benefits for the New York City Housing Authority ("NYCHA") whose financial results are presented on a fiscal year differing from that of the City.

3. For the New York City Off-Track Betting Corporation ("OTB"), it is the understanding of the Actuary that neither the City nor the Plan has any OPEB obligation for current or future OTB retirees. This understanding is based, in part, on a unanimous Appellate Division decision (Roberts v. Paterson, Filed as Index No. 116602/10, 2011 NY Slip Op 04380 [84 AD3d 655]) rendered on May 26, 2011 that precluded the City from assuming the legal obligation to pay OTB retirees' health insurance benefits.

The Actuary further understands that the City is due approximately \$7 million in unreimbursed OPEB paid on behalf of OTB retirees for periods through May 26, 2011.

4. The results contained in this Report continue to take into account the current understanding of the Actuary of National Health Care Reform ("NHCR") (i.e., the Patient Protection and Affordable Care Act ("PPACA") signed into law on March 23, 2010 and the Health Care and Education Reconciliation Act ("HCERA") signed into law on March 30, 2010) and its impact on certain benefits and on certain OPEB-specific actuarial assumptions.

5. Presented in the following Table I-1 are the principal GASB45 results of the June 30, 2010 and the June 30, 2009 OPEB actuarial valuations:

<p style="text-align: center;"><b>TABLE I-1</b>  <b>SUMMARY OF PRINCIPAL GASB45 RESULTS OF THE OPEB ACTUARIAL VALUATIONS*</b>  <b>AS OF JUNE 30, 2010 AND JUNE 30, 2009</b>  <b>(\$ Millions)</b></p>						
Valuation Date	June 30, 2010			June 30, 2009		
Fiscal Year	2011			2010		
Entity	City	Component Units#	Total	City	Component Units#	Total
Total Actuarial Present Value of Projected Benefits (TPV)	\$123,023.8	\$10,606.1	\$133,629.9	\$115,095.9	\$10,262.5	\$125,358.4
Actuarial Asset Value (AAV)	\$ 3,022.6	\$ 0.0	\$ 3,022.6	\$ 3,103.2	\$ 0.0	\$ 3,103.2
Unfunded Actuarial Accrued Liability (UAAL)	\$ 79,017.7	\$ 4,008.3	\$ 83,026.0	\$ 70,550.1	\$ 3,485.4	\$ 74,035.5
Annual Required Contribution (ARC)	\$ 85,454.6	\$ 4,444.2	\$ 89,898.8	\$ 76,543.3	\$ 3,904.2	\$ 80,447.5
Net OPEB Obligation at End of Fiscal Year	\$ 83,882.1	\$ 4,338.4	\$ 88,220.5	\$ 74,962.7	\$ 3,804.3	\$ 78,767.0

\* For GASB43 results, see Section VI.

# Includes ECF, HHC, NYCHA (TPV Only), OTB (Fiscal Year 2010 TPV only), SCA and WFA.

6. Section II of this Report provides a summary of the census data used to prepare the June 30, 2010 OPEB actuarial valuation.
7. Section III of this Report provides an overview of the assets and other financial information used to prepare the June 30, 2010 and the June 30, 2009 OPEB actuarial valuations and used in the determination of the Net OPEB Obligation ("NOO") under GASB45 as of June 30, 2011 and June 30, 2010.
8. Section IV of this Report summarizes the OPEB provisions used in the June 30, 2010 OPEB actuarial valuation. The OPEB provisions as of June 30, 2010 remain unchanged from the provisions reflected in the prior actuarial valuation except for the extension of coverage to surviving spouses of retired uniformed members of the Departments of Correction and Sanitation who may elect to continue coverage for life by paying 102% of the stated premium. The June 30, 2010 OPEB actuarial valuation continues to include the assumption that the OPEB provisions will be amended based on legislative mandates under NHCR.

9. Section V of this Report describes the actuarial assumptions and methods employed in the June 30, 2010 actuarial valuation, including any changes in assumptions and methods since the June 30, 2009 OPEB actuarial valuation.
  
10. Section VI of this Report presents the results of the June 30, 2010 OPEB actuarial valuation and the development of the Fiscal Year 2011 Annual Required Contribution ("ARC") in accordance with GASB43. Section VI also provides a comparison with Fiscal Year 2010 results.
  
11. Section VII of this Report presents the results of the June 30, 2010 OPEB actuarial valuation and the development of the Fiscal Year 2011 ARC and the Annual OPEB Cost ("AOC") in accordance with GASB45 for the City and certain Component Units. Section VII also provides a comparison with Fiscal Year 2010 results.



12. Section VIII of this Report presents the Actuarial Certification. The Certification is signed by the Chief Actuary of the New York City Office of the Actuary (the "Actuary") who serves as the Actuary for the New York City Retirement Systems ("NYCRS")<sup>1</sup>. The Actuarial Certification is also signed by (1) the Division Head of the OA Valuation Services Division ("VSD") and (2) the Chief Actuary, Health and Productivity Practice, for Buck Consultants, LLC ("Buck").

This Report, and the information contained herein, was prepared by the staff of the VSD under the direction of its Division Head with assistance from and in coordination with the staff of Buck. Buck also served as consultant and advisor to the OA, developed the OPEB actuarial valuation programming and reviewed the results and the contents of this Report.

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<sup>1</sup> New York City Employees' Retirement System ("NYCERS")  
New York City Teachers' Retirement System ("TRS")  
New York City Board of Education Retirement System ("BERS")  
New York City Police Pension Fund ("POLICE")  
New York City Fire Department Pension Fund ("FIRE")

13. Appendix A of this Report presents a Statement of Net Assets and a Statement of Changes in Net Assets for the New York City Other Postemployment Benefits Plan for the Fiscal Years ended June 30, 2011 and June 30, 2010.
  
14. Appendix B of this Report presents detailed census data information.
  
15. Appendix C of this Report presents detailed results, including Required Supplementary Information ("RSI"), of the June 30, 2010 actuarial valuation under GASB45 for the City and certain Component Units. Appendix C also presents detailed GASB43 results for the OPEB Plan.

16. Appendix D of this Report provides details of the actuarial assumptions used in the June 30, 2010 actuarial valuation with comparisons to the actuarial assumptions used in the June 30, 2009 actuarial valuation, where different.

The June 30, 2010 actuarial assumptions and methods are unchanged from those used in the June 30, 2009 actuarial valuation with the following exceptions:

- Per capita claims costs have been updated to reflect more recent experience. In addition, the amount of additional cost assumed for the age adjustments to non-Medicare GHI premiums was reduced by 5% (unchanged from last year) to reflect estimated margin amounts anticipated to be returned to the New York City Retiree Health Benefits Trust ("NYCRHBT"). The age adjusted per capita claims costs are assumed to reflect any contributions to the Stabilization Fund for GHI/EBCBS premiums less than the benchmark HIP rates.

- In addition to age adjustment, the premiums for HIP HMO Medicare-eligible retirees were multiplied by the following factors for the June 30, 2010 OPEB actuarial valuation to reflect actual 2011 HIP premiums and anticipated changes in Medicare Advantage reimbursement rates. The adjustment factors used as of June 30, 2009 are shown for comparative purposes:

<b>Medicare Advantage Adjustment Factors</b>		
<b>Fiscal Year</b>	<b>Factor*</b>	
	<b>6/30/10 Valuation</b>	<b>6/30/09 Valuation</b>
2010	N/A	1.0000
2011	1.0000	1.5000
2012	1.0250	1.5800
2013	1.0850	1.6700
2014	1.1500	1.7200
2015	1.2000	1.7200
2016	1.2300	1.7200
Thereafter	1.2300	1.7200

\* Includes anticipated impact of National Health Care Reform.

In developing the adjustment factors for both the June 30, 2010 and June 30, 2009 OPEB actuarial valuations, it was assumed that the cost of HIP coverage would not be allowed to exceed the cost of GHI/EBCBS coverage for Medicare retirees.

- Welfare Fund contributions have been updated to reflect recent contribution rates. As with the previous OPEB actuarial valuation, a three-year trended average of reported annual contribution amounts for current retirees was used. The Welfare Fund rates reported for the previous two OPEB actuarial valuations were trended to current levels based on a historic increase rate of 2.4% for Fiscal Year 2010 and 3.9% for Fiscal Year 2009, approximating overall recent growth of Welfare Fund contributions. For the June 30, 2009 and June 30, 2010 OPEB actuarial valuations, certain lump-sum amounts have been included in calculating the three-year trended average. Furthermore, for the June 30, 2010 OPEB actuarial valuation, retroactive adjustments to the Welfare Fund contribution rates were used in the trended average as of the dates they were effective (i.e., using the retroactive date).

- Post-Retirement Mortality - The probabilities of death after service retirement and the probabilities of death after disability retirement have been revised to reflect the Actuary's updated estimates of future experience. The updated probabilities are based, in part, on experience studies as mandated under Section 96 of the New York City Charter and conducted by The Hay Group ("Hay") and the Segal Company ("Segal"). The Hay study was provided to the OA in draft form during June 2011. The Segal study was published during November 2006.

The probabilities used for the June 30, 2010 OPEB actuarial valuation are consistent with the probabilities the Actuary anticipates presenting to the Boards of Trustees of the NYCERS as a component of a package of proposed changes in actuarial assumptions and methods to be used to determine employer contributions for each NYCERS for fiscal years beginning on and after July 1, 2011 under One-Year Lag methodology (i.e., June 30, 2010 (Lag) actuarial valuation to determine Fiscal Year 2012 employer contributions). Tabular values and a brief explanation of the development of the probabilities appear in Appendix G-3.

- Active/Inactive Liabilities - An Active/Inactive member as of June 30, 2010 is:

- Not a Retiree in Receipt of OPEB.
- Not Terminated with a Vested right to OPEB.
- Not on the Active Payroll.
- Otherwise potentially eligible for OPEB.

A review of the Active/Inactive data over the past several years shows that a significant percentage terminate membership without becoming eligible for OPEB. For the June 30, 2010 OPEB actuarial valuation it was assumed that the liability for the Active/Inactive members would equal 40% of the measured liability of the Active/Inactive population. This is roughly equivalent to assuming 60% of the Active/Inactive members will terminate membership prior to vesting and not receive OPEB.

- Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2011. Due to the fact that there were no cost-of-living increases in Social Security benefits for Calendar Years 2010 and 2011, most Medicare Part B participants will not actually be charged the Medicare Part B Premium announced for 2011.

For anyone having their standard Medicare Part B Premium paid out of their Social Security check in 2009, the Medicare Part B Premium is frozen at the 2009 level. Individuals first collecting Social Security in 2010, or who first pay Medicare Part B Premiums in 2010 (e.g., turning age 65) would pay the full base 2010 premium of \$110.50. This will continue for 2011.



Individuals first collecting Social Security in 2011, or who first pay Medicare Part B Premiums in 2011 would pay the full base premium of \$115.40, while those who first were covered in 2010 would pay \$110.50 throughout 2011 as well. Individuals whose Medicare Part B Premiums are paid directly by other entities (e.g., Medicaid for individuals in a nursing home) would have \$110.50 paid on their behalf during 2010, and \$115.40 paid on their behalf during 2011.

Individuals who pay the Medicare Part B Income Related Monthly Adjustment Amount ("IRMAA") are not subject to the freeze, and paid greater amounts during 2010 that are predicted on the \$110.50. For 2011 they will pay greater amounts predicated on the \$115.40. The Federal government estimates that about 3/4 of Medicare retirees will owe only \$96.40 or \$110.50 per month during 2011.

For the June 30, 2009 OPEB actuarial valuation (i.e., Fiscal Year 2010), the annual premium used (i.e., \$1,179.64) equaled 6 months of the Calendar Year 2009 premium plus 6 months of:

- 73% of the Calendar Year 2009 monthly premium (i.e., \$96.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and
- 27% of the Calendar Year 2010 monthly premium (i.e., \$110.50), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2010 amount.

For the June 30, 2010 OPEB actuarial valuation (i.e., Fiscal Year 2011), the annual premium used (i.e., \$1,210.44) equaled 6 months of the Calendar Year 2010 premium (i.e., 73% of \$96.40 + 27% of \$110.50) plus 6 months of:

- 73% of the Calendar Year 2009 monthly premium (i.e., \$96.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and
- 27% of the announced Calendar Year 2011 monthly premium (i.e., \$115.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2011 amount.

These blended premiums reflect an approximation of the overall amount collected for Medicare Part B and are a better measure upon which to base future projections.

- The cost of the benefits assumed to be provided by the Stabilization Fund has been updated to reflect more recent experience. The Stabilization Fund load has been changed from 3/4% as of June 30, 2009 to .6% as of June 30, 2010.
- Beginning in 2018, NHCR will impose an excise tax on providers of certain "high cost plans" with total health care benefit values above certain thresholds (the so called "Cadillac Tax"). For the June 30, 2009 and June 30, 2010 OPEB valuations, a 1/2% load is applied to all Pre-Medicare Health Care liabilities, to all Medicare Health Care liabilities and to all Medicare Part B Premium liabilities to estimate the impact of the Cadillac Tax. The Cadillac Tax on any benefits provided by the Welfare Funds was assumed to be paid by the Welfare Funds, either directly, or through lower net Welfare Fund contributions. The Cadillac Tax on any optional riders was assumed to be included in the cost of the various riders. These assumptions estimate the financial impact of the Cadillac Tax that, under alternative assumptions and interpretations of the law, could result in a greater financial impact.

17. Appendix E of this Report presents information on the actuarial assumptions and methods used in the June 30, 2010 OPEB actuarial valuation for the New York City Educational Construction Fund ("ECF"), including references to an August 7, 2006 report entitled "Development of Recommended Actuarial Assumptions for New York State/SUNY GASB 45 Valuations - Participating Agency Version" that has been used as a basis for those actuarial assumptions. A comparison to the assumptions used in the June 30, 2009 OPEB actuarial valuation is shown where different.
18. Appendix F of this Report presents information on the actuarial assumptions and methods used in the June 30, 2010 OPEB actuarial valuation for CUNY TIAA employees. A comparison to the assumptions used in the June 30, 2009 OPEB actuarial valuation is shown where different.

19. Appendices G-1, G-2 and G-3 contain the tabular values of:

- The supplemental assumptions used to value the TRS optional 55/25 Plan.
  
- The supplemental assumptions used to value the Tier III benefits of POLICE.
  
- The post-retirement mortality tables used in the June 30, 2010 OPEB actuarial valuation.

20. Appendix H of this Report acknowledges those who assisted in the development of these results and the production of this Report.

**SECTION II - CENSUS DATA**

In general, the census data used in the June 30, 2010 OPEB actuarial valuation is based upon the census data used in the June 30, 2010 actuarial valuations of the NYCERS.

This census data was supplemented by information provided to the OA by the New York City Office of Labor Relations ("OLR") relating to eligible retirees and other eligible beneficiaries covered by the Program. The census data does not generally include employees who are not yet participants in the NYCERS.

The census data was also supplemented by information provided directly to Buck by the City University of New York ("CUNY") on individuals who elect to be covered under alternate retirement benefits provided through the Teachers Insurance Annuity Association - College Retirement Equities Fund ("TIAA-CREF" or "CUNY TIAA") rather than through the NYCERS.

In addition to the participants of NYCERS and CUNY TIAA, the actuarial valuation also includes 29 active CUNY employees and 4 inactive CUNY employees covered under the Cultural Institutions Retirement System ("CIRS"), who were also assumed to ultimately be eligible for certain OPEB outlined in this Report.

Effective with the June 30, 2007 OPEB actuarial valuation, the City has been recognized as responsible for payment of Welfare Fund benefits to non-pedagogical CUNY Senior College retirees of the NYCRS. The data for current retirees identified which individuals were non-pedagogical retirees (Welfare Funds other than 275, 276 and 277). Since a Union Welfare Fund code is not available in the active, inactive and deferred vested data, it was not possible to directly segregate pedagogical and non-pedagogical CUNY Senior College staff in these populations. Beginning with the June 30, 2007 OPEB actuarial valuation, an adjustment has been made to estimate these populations' Welfare Fund liabilities for the City. For the three Systems (NYCERS, TRS and BERS) with CUNY Senior College non-retiree participants, the CUNY Senior College Welfare Fund liability was allocated between CUNY and the City based on the ratio of each System's actual non-pedagogical to total CUNY Senior College retiree headcounts.

The Office of the Actuary ("OA") and Buck performed tests on this census data for reasonability and on the basis of these tests the Actuary believes the data is sufficiently complete and appropriate for determining the OPEB obligations in total for the City and for the OPEB Plan.



It was discovered during the first (i.e., June 30, 2005) OPEB actuarial valuation that the NYCRS retiree data did not always accurately incorporate Component Unit codes. For certain Component Units, some retirees were identified and valued as City retirees. For the June 30, 2006 OPEB actuarial valuation, OLR provided more detailed information about which entity was responsible for payment of benefits of each covered retiree. The overall census counts were provided to each Component Unit with a request for verification by the administrative staff of each Component Unit.

This issue also potentially applies to active/inactive and deferred vested members. However active census information includes payroll location. The OA has recently been capturing location information from the last payroll of formerly active employees. Thus, the number of individuals potentially impacted by this issue is declining over time.

Beginning with the June 30, 2007 OPEB actuarial valuation, each Component Unit is provided with a reconciliation, by employee group, in addition to overall census counts. This is followed by a request for verification of the data to be used in the OPEB actuarial valuation by the staff of each Component Unit.

For the June 30, 2007, the June 30, 2008, the June 30, 2009 and the June 30, 2010 OPEB actuarial valuations HHC, SCA and WFA confirmed the number of participants used in the valuation for the purposes of measuring OPEB costs. NYCHA did not confirm the counts of the participants provided by OA for the June 30, 2007 OPEB actuarial valuation. For the June 30, 2008, the June 30, 2009 and the June 30, 2010 OPEB actuarial valuations, NYCHA confirmed that the overall number of participants was within 1% of the number of participants used in the valuation. Based on these confirmations, the Actuary concluded that the valuation data was reasonable for the purpose of measuring OPEB costs.

For both the June 30, 2009 and June 30, 2010 OPEB actuarial valuations, subsequent to the receipt of the data confirmation, employer contribution (pay-as-you-go ("PAYG")) information provided to the OA by SCA indicated that the number of SCA retirees identified in the OA census data as in receipt of Welfare Fund benefits (140/151 as of June 30, 2009/June 30, 2010, respectively) is less than the number of retirees for whom SCA is paying OLR (approximately 170/187).

These discrepancies are under investigation.

The overall impact of these discrepancies is modest relative to the overall results for SCA, apparently less than 5% of Total Present Value of Projected Benefits, if the problem is limited to current retirees. It should be noted that the impact could be greater, perhaps 20% to 25% of Total Present Value of Projected Benefits, if data issues of similar magnitude affect the identification of future as well as current retirees. However, it appears that many of the retirees in question are being valued elsewhere in the OPEB actuarial valuation and are being charged to the City. Since SCA is a blended Component Unit of the City, the impact on the City results appears to be negligible.

PAYG amounts for Fiscal Years 2010 and 2011 and the Net OPEB Obligation as of June 30, 2010 and June 30, 2011 include the amounts actually paid by SCA.

In preparing the June 30, 2008 OPEB actuarial valuation, it was discovered that the issues of identifying location affected certain former employees who are participants in the NYCERS but who should not have been included in the June 30, 2008 OPEB actuarial valuation, either as a City participant or as a participant in one of the Component Units. For example, if the location code was missing for an individual who had last worked as a Transit employee but was now coded as active/inactive or deferred vested, the valuation includes the individual in measuring the obligation of the City. Since, as noted above, the OA has recently been capturing location information from the last payroll of formerly active employees, the number of individuals potentially impacted by this issue is de minimus and declining over time.

Overall, even taking into account the preceding comments, the Actuary believes the data as prepared for the June 30, 2010 OPEB actuarial valuation is sufficient for determining the OPEB obligations presented in this Report for the Component Units.

There are certain retirees who worked part-time and are entitled to full retiree medical benefits (pre-Medicare and Medicare Basic Coverage as well as reimbursement of the Medicare Part B Premium), but only a fractional portion of the Welfare Fund contributions available to retirees who were full-time active employees. Based on information provided by OLR, there were a total of 652 such part-time retirees as of June 30, 2009 and 683 such part-time retirees as of June 30, 2010. The data did not provide any individual information on these retirees such as age, gender or identification of their employers. The calculations herein do not reflect the reduced Welfare Fund contributions that would be paid on behalf of such retirees. It is estimated that the reduction in total liability had detailed information been available would be less than \$10 million as of both June 30, 2009 and June 30, 2010.

The census data is broken into the following major classifications as used in the NYCRS valuations:

- Actives (in payroll status as of the valuation date).
- Actives/Inactives (generally, still a NYCRS member but off payroll as of the valuation date).
- Deferred Vesteds and Deferred Retirees (separated from service, eligible for a benefit but not yet in receipt).
- Retirees and other Eligible Beneficiaries (in receipt).

In addition, census data was provided for the following groups not part of the NYCERS:

- Active employees of CUNY who participate in TIAA-CREF or CIRS.
- Retired employees of CUNY who participate in TIAA-CREF and have been participating in the New York City Health Benefits Program.
- Line-of-Duty Survivors who are currently receiving continued lifetime medical coverage and Medicare Part B Premium reimbursements.

Certain individuals who were classified as retired in the NYCERS valuation were not included in the census files provided by OLR that indicated medical plan elections and dependent coverage. Those individuals were assumed to have single coverage electing the GHI option, and were assumed to be on Medicare if over age 65. Approximately 4,000 individuals were valued using this assumption.

Census data was not available for individuals on COBRA continuation, including those surviving spouses of POLICE or FIRE members who are entitled to lifetime COBRA-like continuation coverage. This benefit is administered directly by the insurance carriers, so that OLR does not have any information. Effective with the June 30, 2010 OPEB actuarial valuation, the number and obligation for the surviving spouses with lifetime coverage were estimated based on current census of POLICE and FIRE retirees and projected number of deaths that would have occurred since the inception of this benefit on November 13, 2001.

Complete census data was not available for terminated CUNY employees who had participated in TIAA-CREF and who have a deferred vested right to receive Medicare Part B Premium reimbursements (and medical and Welfare Fund benefits if employed by a Community College) when they retire under certain conditions. The number and obligation for this vested group was estimated based on census information for CUNY TIAA employees who terminated within the last eight years.



Effective with the June 30, 2007 OPEB actuarial valuation, the City is responsible for the payment of medical benefits and Welfare Fund contributions for CUNY TIAA Community College retirees. The data for current active employees identified which individuals were Senior College versus Community College employees. Since a Senior College versus a Community College code is not available in the retiree data, it was not possible to directly segregate these populations.

An adjustment was made allocating retiree and deferred vested liabilities between CUNY and the City based on the historic ratio of CUNY Senior College and Community College employees in TIAA. The June 30, 2008 census indicated a greater proportion of Community College employees in TIAA than had previous census information. The June 30, 2009 census and June 30, 2010 census also indicated a greater proportion of Community College employees in TIAA. These observations are consistent with a long term historic increase in the proportion of CUNY students attending Community College.<sup>2</sup> The Actuary assumed that a historic proportion of TIAA employees in Community Colleges would be more representative of the employment of existing retirees.

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<sup>2</sup> Source: Statistics published by the CUNY Office of Institutional Research and Assessment.

In reviewing the active TIAA employee census data provided by CUNY for the June 30, 2009 OPEB actuarial valuation, Buck noted some discrepancies in reported dates of hire from the dates reported for the June 30, 2008 OPEB actuarial valuation. CUNY reported that there had been a significant data clean up in preparation for a move to a new human resources recordkeeping system. The calculations reflect the dates of hire reported with the June 30, 2009 census information.

The data provided by CUNY for the June 30, 2010 OPEB actuarial valuation came from its new human resources recordkeeping system, with the exception of information on the Retirement Plan code. All dates of birth and dates of hire were used as reported for the June 30, 2010 OPEB actuarial valuation. There were 463 Senior College employees who had been reported as participating in TIAA in the previous OPEB actuarial valuation who were reported with their Retirement Plan code blank. These individuals were assumed to continue to be participating in TIAA. Most of the blank Retirement Plan codes resulted from the need to report that information from the latest payroll file instead of the payroll as of June 30, 2010.

Attached in Appendix B are the following tables that set forth the census data used in this Report:

- Tables 1a-1g Plan Participation.
- Tables 2a-2e Welfare Fund Contributions.

Except for the Educational Construction Fund ("ECF"), generally all of the census data for the Component Units is included in the NYCRS census data. The majority of those participants in the Component Units who are included in the NYCRS census data participate in NYCERS.

Census data for ECF was supplied separately and directly by staff at ECF.

Census data for CUNY TIAA participants was supplied separately and directly to Buck by CUNY.

The following Table II-1 presents a summary of the census data used in the June 30, 2010 and June 30, 2009 OPEB actuarial valuations:

<p style="text-align: center;"><b>TABLE II-1</b>  <b>SUMMARY OF CENSUS DATA USED IN THE</b>  <b>JUNE 30, 2010 AND JUNE 30, 2009</b>  <b>OPEB ACTUARIAL VALUATIONS</b></p>						
Valuation Date	June 30, 2010			June 30, 2009		
Fiscal Year	2011			2010		
Group	City	Component Units#	Total	City	Component Units#	Total
Active	277,112	43,240	320,352	280,161	44,356	324,517
Active/Inactive	26,331	5,558	31,889	25,802	6,384	32,186
Deferred Vested	13,549	2,434	15,983	13,530	2,444	15,974
Retired	<u>203,655</u>	<u>26,292</u>	<u>229,947</u>	<u>200,502</u>	<u>26,914</u>	<u>227,416</u>
Total	520,647	77,524	598,171	519,995	80,098	600,093

# Includes ECF, HHC, NYCHA, OTB (Fiscal Year 2010 only), SCA and WFA.

**SECTION III - ASSETS**

The New York City Retiree Health Benefits Trust ("NYCRHBT") was legally established on June 12, 2006 and first funded as of June 21, 2006. The Trust was established to fund OPEB provided under the New York City Health Benefits Program for the exclusive benefit of retirees and their eligible beneficiaries for whom the City is directly obligated.

Wells Fargo Bank, N.A. is the Trustee and Custodian. The City represents the Grantor of the Trust.

Beginning with the June 30, 2008 OPEB actuarial valuation the Statement of Net Assets represents assets of the Plan instead of assets of the NYCRHBT. This reflects the interpretation by the OA, Buck and the City of Question and Answer ("Q&A") 8.81.4 of the GASB Comprehensive Implementation Guide.

Appendix A includes two tables showing the detailed financial position of the Plan as of June 30, 2011 and June 30, 2010.

Appendix A - Table 1 sets forth the assets of the Plan. Plan assets equal NYCRHBT assets.

Appendix A - Table 2 sets forth the changes in net assets and includes non-trust activity for Fiscal Years 2010 and 2011.

All amounts are assumed to be determined on an accrual basis.

Financial information was also supplied by the administrative staff of each Component Unit. None of the Component Units have separately identified OPEB assets as of June 30, 2010 or June 30, 2011.

A summary of the Net Assets Available for Benefits is set forth in the following Table III-1:

<p style="text-align: center;"><b>TABLE III-1</b></p> <p style="text-align: center;"><b>NEW YORK CITY OTHER POSTEMPLOYMENT BENEFITS PLAN</b></p> <p style="text-align: center;"><b>NET ASSETS AVAILABLE FOR BENEFITS*</b></p> <p style="text-align: center;"><b>(\$ Millions)</b></p>				
FYE June 30	2011 <sup>#</sup>	2010 <sup>#</sup>	2009 <sup>#</sup>	2008 <sup>#</sup>
Assets	\$3,081.3	\$3,347.7	\$3,482.0	\$3,565.3
Liabilities	<u>449.7</u>	<u>325.1</u>	<u>378.8</u>	<u>379.2</u>
Net Assets	\$2,631.6	\$3,022.6	\$3,103.2	\$3,186.1
<p>* For Fiscal Year 2008, assets of the NYCRHBT. For Fiscal Years 2009, 2010 and 2011, assets of the Plan.</p> <p><sup>#</sup> Source - Wells Fargo Statements and information from OMB.</p>				

**SECTION IV - SUMMARY OF OPEB PLAN PROVISIONS**

Following is a summary of the employer-provided Other Postemployment Benefits available to eligible retirees and other eligible beneficiaries covered under the Program. The OA believes these provisions form the "Substantive Plan" as defined in Paragraph 34.a(1) of GASB43 and 13.a(1) of GASB45 and that the Substantive Plan is derived from the Administrative Code of the City of New York ("ACNY"), the New York City Health Benefits Program Summary Plan Description, meetings with City officials and a review of historical information.

Note: The actuarial valuation results presented in this Report show the value of OPEB in effect during each fiscal year and do not represent an obligation of the City or the Component Units to continue, modify or eliminate OPEB in the future.

ACNY Section 12-126 defines OPEB payable to include:

- Health Insurance.
- Medicare Part B Premium Reimbursement.

Welfare Fund benefits are provided through Welfare Fund arrangements agreed upon, in most cases, through collective bargaining.



**Covered Benefits**

The City and certain Component Units provide OPEB through the New York City Health Benefits Program (the "Program"). In addition, the City provides certain Program benefits through the Stabilization Fund. The City and certain Component Units contribute to various Welfare Funds, generally negotiated with and administered by various labor organizations. The City and certain Component Units also reimburse Medicare Part B Premiums paid by eligible retirees and other eligible beneficiaries.

It is the understanding of the OA that no other OPEB, such as life insurance or long-term care benefits, are directly subsidized by the City. The City and the Component Units (except CUNY for certain retirees and ECF) generally provide most death and disability benefits through the NYCERS. Those benefits are measured as part of the obligations of the NYCERS and are not subject to GASB43 or GASB45.

Therefore, the OPEB actuarial valuation results presented herein reflect projected benefit costs only for the retiree health insurance, Welfare Fund contributions and Medicare Part B Premium reimbursements outlined in this Report.

Certain former New York State Court employees, who are covered under the New York State Health Insurance Program ("NYSHIP"), are not included in the actuarial valuation. The cash cost for these benefits paid from the Plan during Fiscal Year 2011 was less than \$1 million.

Note: The OPEB provisions applicable to ECF and CUNY TIAA retirees were provided by ECF and CUNY staff, respectively.

**Eligibility for OPEB**

Retirees:

- At least 10 years of credited service as a member of NYCERS (five years of credited service if employed on or before December 27, 2001 and no service requirement for disability retirements) and be working at least 20 hours a week at termination of active service, plus
- Receives a pension check from a NYCERS (or is eligible for certain Deferred Retirement benefits). Payability date varies by System and group.

Terminated Vested Members:

- Eligible for OPEB the same as retirees once in receipt of a pension benefit if the other eligibility rules for retirees are satisfied.

Members Eligible for Certain Deferred Retirement Benefits:

- Certain members of NYCERS, TRS and BERS who have at least 20 years of credited service are eligible for up to five years of OPEB coverage prior to commencement of pension benefits.

Members Terminated for Other than Immediate Retirement:

- Members who do not have retiree medical coverage under the retiree medical provisions are eligible to continue coverage under COBRA provisions. COBRA continuation coverage is generally limited to certain maximum periods (generally to the end of 36 months under New York State insurance law).

Surviving Spouses and Other Dependents:

- Dependent coverage is terminated when a retiree dies, except in the following situations:
  - (i) Lifetime coverage is provided to the surviving spouse or domestic partner and to children (coverage to age 26 based on legislative mandates under recently enacted National Health Care Reform) of uniformed members of the Police or Fire Departments who die in the Line of Duty.
  - (ii) Effective November 13, 2001, other surviving spouses of retired uniformed members of the Police and Fire Departments may elect to continue coverage for life by paying 102% of stated premium.
  - (iii) Effective August 31, 2010 surviving spouses of retired uniformed members of the Departments of Correction and Sanitation may elect to continue coverage for life by paying 102% of stated premium.

**ECF and CUNY TIAA Benefit Provisions**

The OPEB available to ECF and to CUNY TIAA retirees are described in Appendix E and Appendix F, respectively.

**Basic Coverage**

The City and certain Component Units currently provide Basic Medical Coverage ("Basic Coverage") at no cost if a non-Medicare-eligible retiree participates in HIP HMO or GHI/EBCBS indemnity arrangement, or a Medicare-eligible retiree participates in HIP HMO or GHI/EBCBS Senior Care. The same coverage arrangement covers individuals (active employees and retirees) who are not included in this valuation. The premiums for these individuals are paid by their current or former employer, which may be a New York City Payroll Agency (as listed on Table IV-1), or another entity (either governmental or non-governmental).

Basic Coverage includes hospital and physician coverage and excludes coverage for prescription drugs. GHI/EBCBS Senior Care coordinates with Medicare Part A and Medicare Part B. Under the HIP HMO, Medicare-eligible retirees generally participate in a Medicare Advantage Plan under Medicare Part C. Cost sharing provisions (e.g., deductibles, co-payments) are assumed to change over time to contain the overall cost of coverage.

Basic Coverage under other plans may require additional retiree contributions.

Other plans available to non-Medicare-eligible retirees for Fiscal Year 2011 include Aetna HMO, Aetna QPOS, CIGNA, DC 37 Med-Team, Empire HMO, GHI HMO, MetroPlus Health Plan and Vytra Health Plans.

Other plans available to Medicare-eligible retirees for Fiscal Year 2011 include Medicare supplemental plans, such as DC 37 Med-Team Senior Care, Empire Medicare-Related Coverage, as well as various Medicare Advantage and Medicare Cost HMOs.

Retirees of the Component Units herein, except for ECF, have the same coverage as City retirees. It is the understanding of the OA that ECF retirees are covered by NYSHIP.

Retirees may waive Basic Coverage. It is the understanding of the OA that most of those who waive Basic Coverage are dependents of other active or retired employees. The City and the Component Units do not provide both subscriber and dependent coverage for the same individual.

**Other OPEB Coverage**

The OA understands that the City and certain Component Units currently provide a Mental Health/Substance Abuse ("MH/SA") rider for non-Medicare-eligible HIP HMO retirees, through the mechanism of the Stabilization Fund discussed later in this Section.

Otherwise, the OA understands that medical benefits not provided under the Basic Coverage, such as prescription drug coverage, may be provided through optional riders. These optional riders are either fully paid by the retirees or are provided through various Welfare Funds.

**Health Care Benefits Cost Sharing Arrangement**

Based on current practice (the Substantive Plan), the City and certain Component Units pay the full cost of coverage for retirees who elect Basic Coverage. The costs of Basic Coverage are reflected in the OPEB actuarial valuation herein by using age-adjusted premium amounts. The estimated age of the covered population was used with the premiums for the HIP HMO and the non-Medicare GHI/EBCBS arrangement. For the GHI/EBCBS Medicare arrangement, enrollment information from OLR was compared with census information included in the valuation. The comparison indicated that over 95% of the participants of this group are included in the census data for this valuation. For the age adjustments used beginning with the June 30, 2007 OPEB actuarial valuation, the actual age distribution of these participants was used rather than an estimated age as was used in earlier OPEB actuarial valuations.



Claims data were generally not available to the OA for the HIP coverage. OLR provided a copy of the claims component of the Fiscal Year 2011 GHI and Empire Blue Cross renewals. For the non-Medicare participants, retiree claims were not segregated from active claims. The claims information provided was compared to the premium rates provided. Based on examination of the renewals and discussions with employees of the New York City Office of Management and Budget ("OMB"), it is understood that the GHI premium applied to the active and non-Medicare retiree population has, in recent years, included a margin to provide amounts in excess of those expected to be needed to support the current level of coverage. These amounts are expected to ultimately be refunded.

Since complete information about the financial arrangement was not available, nor were claims data segregated for the group reflected in the valuation, the practice of using the age-adjusted premium for valuation measurement was continued.

For the June 30, 2010, the June 30, 2009 and June 30, 2008 OPEB actuarial valuations, an estimate of the margin was removed from the GHI non-Medicare premium before age adjustment to better reflect the understanding about the cost of the underlying coverage.

GASB45 provides that costs for retirees should be segregated from costs for actives in developing per capita costs for valuation purposes, either via use of segregated claims experience or, as is done in this OPEB actuarial valuation, by approximation with age-adjusted premium rates. However, GASB45 provides an exception allowing community-rated plans to use unadjusted net premium rates charged for both active employees and retirees. An employer can use the community-rated exception if an actuary determines that the insurer/health program would offer the same premium to that employer if only the non-Medicare eligible retirees of that employer were covered (and not its active employees). The Actuary has determined that the New York City Health Benefits Program premiums for HIP and GHI/EBCBS members would not be the same if the premiums for those programs were determined based on a population that excluded the active employees included in the actuarial valuation.

This OPEB actuarial valuation includes liabilities for Component Units that are separate legal entities from the City. In issuing this OPEB actuarial valuation report, the Actuary is not opining on whether each Component Unit, when looked at from its own perspective, would have the same premiums if only their non-Medicare-eligible retirees were covered. That is, the Actuary is not opining on whether the community-rated exception would be appropriate for GASB45 measurement for any Component Unit.

A retiree who elects other basic medical coverage is required to contribute any amount by which the selected arrangement's premium exceeds the Basic Coverage cost benchmarks. The OPEB actuarial valuation herein reflects the benchmark premiums without age adjustment for retirees who elect other options. Net employer premium contributions for the various options were provided to the OA by OLR, allowing the OA to confirm that employer premiums were consistent with the stated policy regarding other coverage. Detailed information on total premium rates, financial arrangements and retiree contribution rates were not provided for other options. It is the understanding of the OA that many of these options are subject to New York State insurance law community rating mandates.

It is the understanding of the OA that the City has filed for and is receiving the Medicare Part D Retiree Drug Subsidy ("RDS") for a small number of retirees who make certain elections that include drug coverage. The value of the RDS is not reflected in this OPEB actuarial valuation in accordance with GASB Technical Bulletin No. 2006-1 on this issue.

It is the understanding of the OA that the City has filed for and is receiving the Early Retiree Reinsurance Program ("ERRP") benefits for certain of its early retirees. The value of the ERRP amounts is not reflected in this actuarial valuation due to the short-term nature of the ERRP arrangement. In addition, the Actuary believes that the value of such payments should not be reflected based on an analysis similar to that applied to RDS amounts under GASB Technical Bulletin No. 2006-1.

**Welfare Funds**

The City and certain Component Units pay annual per capita contributions directly to the various Welfare Funds that cover retirees for various health care benefits not provided through the Basic Coverage. Welfare Fund benefits may include (but are not limited to) prescription drug coverage, vision and dental coverage, sometimes with dollar limits. The Welfare Funds are generally separate legal entities, often administered by various labor organizations.

The Welfare Funds' per capita contributions apply to retirees only without any additional funds for covered dependents. The contributions are generally made on behalf of individuals who retired since 1971. Recently, a portion of the Welfare Fund contributions has been reimbursed by the Stabilization Fund.

The City and certain Component Units also sponsor a Welfare Fund for management employees, which, for purposes of this Report, is being treated the same as other Welfare Funds.

The per capita contribution amounts change periodically based on negotiated contract provisions. In addition, the collective bargaining agreements provide for ad hoc lump-sum payment amounts to the Welfare Funds. It is the understanding of the OA that the benefits provided from the Welfare Funds are adjusted from time to time so that costs to the Welfare Funds do not exceed available assets and income. For purposes of this Report this understanding was not verified at source but was confirmed in conversations with OLR.

It is the understanding of the OA that some of the Welfare Funds have applied for and receive the Retiree Drug Subsidy under Medicare Part D. The calculations in this Report reflect only the net employer Welfare Fund contributions and do not reflect this or any other underlying financial mechanisms of the Welfare Funds.

The OA is not aware of any actuarial valuations performed by the individual Welfare Funds for measurement under GASB43 or other purposes<sup>3</sup>. Thus, the OA has not considered the impact of any such calculations on the analyses herein.

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<sup>3</sup> Paragraph 13 of GASB45 provides that the employer should reflect the same assumptions and methods used by a plan if the amounts calculated would comply with the requirements of GASB45. Thus, any such analyses might require the use of differing assumptions for results under GASB45.

A review of the per capita contributions to the Welfare Funds showed that there were sometimes temporary supplemental contributions, resulting in an apparent leveling off of the Welfare Fund contributions or even an apparent decline in certain contribution rates for some groups. Beginning with the June 30, 2007 OPEB actuarial valuation, the actuarial assumptions for the starting Welfare Fund contributions were revised to reflect a three-year trended average of reported annual contribution amounts for current retirees. A trended average is used instead of a single reported Welfare Fund amount to smooth out negotiated variations. For the June 30, 2009 and June 30, 2010 OPEB actuarial valuations, certain lump-sum payments to the Welfare Funds on behalf of retirees are included in the three-year average. Furthermore, for the June 30, 2010 OPEB actuarial valuation, retroactive adjustments to Welfare Fund contribution rates were used in the trended average as of the dates they were effective (i.e., using the retroactive date).

Appendix D addresses the assumptions in more detail.



**Medicare Part B Premium Reimbursement**

Upon application, the City and certain Component Units reimburse the Medicare Part B Premium for all Medicare-eligible retirees and eligible covered dependents. Reimbursement is computed and paid on a calendar year basis. Due to administrative processing, reimbursement occurs during the following fiscal year. For example, Calendar Year 2010 Medicare Part B Premiums were generally reimbursed in August 2011.

The actuarial valuation herein projects Medicare Part B Premium reimbursements for premiums to be paid starting July 1, 2010. The OA understands that the City takes into account for Fiscal Year 2011 an estimate of the Medicare Part B Premiums for the period from January 1, 2011 through June 30, 2011 as well as actual Calendar Year 2010 costs.

It should also be noted that the Medicare Part B Premiums for retirees of certain Component Units and other entities are considered obligations of the City and have been included in the City results rather than as obligations of those particular Component Units.

Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2011. Due to the fact that there were no cost-of-living increases in Social Security benefits for Calendar Years 2010 and 2011, most Medicare Part B participants will not actually be charged the Medicare Part B Premium announced for 2011.

For anyone having their standard Medicare Part B Premium paid out of their Social Security check in 2009, the Medicare Part B Premium is frozen at the 2009 level. Individuals first collecting Social Security in 2010, or who first pay Medicare Part B Premiums in 2010 (e.g., turning age 65) would pay the full base 2010 premium of \$110.50. This will continue for 2011.

Individuals first collecting Social Security in 2011, or who first pay Medicare Part B Premiums would pay the full base premium of \$115.40, while those who first were covered in 2010 would pay \$110.50 throughout 2011 as well. Individuals whose Medicare Part B Premiums are paid directly by other entities (e.g., Medicaid for individuals in a nursing home) would have \$110.50 paid on their behalf during 2010, and \$115.40 paid on their behalf during 2011.

Individuals who pay the Medicare Part B Income Related Monthly Adjustment Amount ("IRMAA") are not subject to the freeze, and paid higher amounts during 2010 that are predicted on the \$110.50. For 2011 they will pay higher amounts predicated on the \$115.40. The Federal government estimates that about 3/4 of Medicare retirees will owe only \$96.40 or \$110.50 per month during 2011.

For the June 30, 2009 OPEB actuarial valuation (i.e., Fiscal Year 2010), the annual premium used (i.e., \$1,179.64) equaled 6 months of the Calendar Year 2009 premium plus 6 months of:

- 73% of the Calendar Year 2009 monthly premium (i.e., \$96.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and
- 27% of the Calendar Year 2010 monthly premium (i.e., \$110.50), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2010 amount.

For the June 30, 2010 OPEB actuarial valuation (i.e., Fiscal Year 2011), the annual premium used (i.e., \$1,210.44) equals 6 months of the Calendar Year 2010 premium (i.e., 73% of \$96.40 + 27% of \$110.50) plus 6 months of:

- 73% of the Calendar Year 2009 monthly premium (i.e., \$96.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and

- 27% of the announced Calendar Year 2011 monthly premium (i.e., \$115.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2011 amount.

These blended premiums reflect an approximation of the overall amount collected for Medicare Part B and are a better measure upon which to base future projections.

Additionally, experience shows that not all eligible retirees/dependents apply for Medicare Part B Premium reimbursement each year. Beginning with the June 30, 2008 OPEB actuarial valuation, this experience is reflected as a separate assumption (i.e., the percentage of eligible retirees/dependents assumed to apply for Medicare Part B Premium reimbursement). Effective with the June 30, 2010 OPEB actuarial valuation, OLR informed the OA that individuals who waive basic coverage are not permitted to apply for Medicare Part B Premium reimbursement. The Actuary has concluded that this provision is appropriately reflected in the separate assumption regarding the percentage of retirees/dependents assumed to apply for Medicare Part B Premium reimbursement.

### **Stabilization Fund**

The City maintains and annually contributes to the Health Insurance Stabilization Reserve Fund (the "Stabilization Fund"). Certain Component Units are understood to have contributed to the Stabilization Fund in situations where the GHI/EBCBS premiums paid would be lower than the HIP benchmark premium. In addition, the Stabilization Fund receives dividends from participating insurance carriers including the GHI/EBCBS arrangement.

The Stabilization Fund has been used for various purposes in the past. For example, when the non-Medicare GHI/EBCBS premium rate was greater than the non-Medicare HIP HMO premium rate for short periods historically, the Stabilization Fund made up the difference between the non-Medicare GHI/EBCBS premium rate and non-Medicare HIP HMO premium rates, until such time as the benefits provided under those arrangements were adjusted to bring the financing into balance. In recent years the Stabilization Fund has been used to provide the following health related benefits, based on financial information on the Stabilization Fund provided to the OA by OLR:

- A Mental Health/Substance Abuse rider to non-Medicare-eligible HIP HMO participants.
  
- A GHI Home Care benefit for certain non-Medicare participants.
  
- Welfare Fund contributions for the Line-of-Duty Survivors.

- Injectables and Chemotherapy Drug plan for certain non-Medicare participants (formerly referred to as "PICA" but psychotropic and asthma drugs are not currently covered).
- New York County Health Services Review Organization for utilization review for the GHI/EBCBS arrangement.

In addition, the Stabilization Fund has been used for the following purposes:

- Under the 2009 Health Benefits Agreement, certain funds were used by the City for purposes other than Program benefits.
- During Fiscal Year 2010, certain funds were used to set up a minimum premium account for the Empire insurance arrangement. The Stabilization Fund was reimbursed for those monies by the City in Fiscal Year 2011.
- The Stabilization Fund has reimbursed the City, the various Component Units and various other entities participating in the Program for a portion of Welfare Fund contributions.



The OA is not aware of any actuarial valuation performed by the Stabilization Fund for measurements under GASB43 or other purposes. Thus, the OA has not considered the impact of any such calculations on the analyses herein.

The City's current annual contribution of \$35 million to the Stabilization Fund provides benefits to both active and retired participants. In addition, the City can be considered to contribute additional amounts to the Stabilization Fund each year via the mechanism of the margin on the GHI non-Medicare insured rates. These amounts exceed the amount that is estimated to be used to provide benefits to current retirees, including the amounts estimated to provide Welfare Fund contributions on behalf of retirees.

The \$35 million contribution amount can be considered as a cap on employer contributions to the Stabilization Fund. Under Q&A 71 in the "Guide to Implementation of GASB Statements 43 and 45 on Other Postemployment Benefits" published by GASB in June 2005, such a cap is not considered part of the definition of benefits to be provided to retirees, and should not be considered in the projection of benefits until such a cap alters the established pattern of cost sharing as defined in the Substantive Plan. Thus, the calculations presented herein reflect an estimate of the current level of benefits provided by the Stabilization Fund directly to the retirees.

The calculations do not assume that any of the existing Stabilization Fund assets will be used for retiree benefits.

The amount reflected for the Stabilization Fund in the current OPEB actuarial valuation is based on an estimated allocation between active and retired participants of actual Fiscal Year 2011 Stabilization Fund benefits. This amount is used to develop a load that is only reflected in the OPEB actuarial valuation for the City.

The load used in the June 30, 2010 OPEB actuarial valuation was changed from 3/4% to .6%. Welfare Fund contributions reimbursed by the Stabilization Fund are considered a part of Welfare Fund benefits and not included in the determination of the Stabilization Fund load.

The Stabilization Fund load is added to both the GASB45 results for the City and the GASB43 results of the Plan.

**OPEB Coverage Groupings**

The City subsidizes only some of the OPEB described herein for various groups of NYCRS retirees.

Table IV-1 on the next page presents, by payroll agency, those benefits assumed provided by the City for purposes of the June 30, 2010 OPEB actuarial valuation.

Table IV-2 on the succeeding page presents, by payroll agency, those benefits assumed provided by the City for purposes of the June 30, 2009 OPEB actuarial valuation.

The only change in coverage from the prior actuarial valuation is reflected on the Off-Track Betting line.

For the Component Units included in the actuarial valuation the benefit categories not paid by the City are reflected in the results of the individual Component Units.

**Table IV - 1**  
**New York City Retirement Systems**  
**Components of Post-Retirement Medical Benefits**  
**Paid By New York City**  
**Fiscal Year 2011**

<b>Payroll Agency</b>	<b>Health Insurance</b>	<b>Welfare Fund <sup>1</sup></b>	<b>Medicare Part B</b>
Charter Schools	Yes	Yes	Yes
Custodial Engineer	Yes	Yes	Yes
CUNY - Senior Colleges	No*	Yes <sup>2</sup>	Yes
CUNY - Community Colleges	Yes	Yes	Yes
Correction Department	Yes	Yes	Yes
CP Engineers	No*	No	No
Courts (State)	Yes	Yes	Yes
DA Investigators	Yes	Yes	Yes
Department of Education	Yes	Yes	Yes
<b>HSG Develop Corp</b>	No	No	No
<b>Health and Hospital Corp</b>	No*	No	Yes
<b>Housing Authority</b>	No*	No	No*
Housing Police (Retirees Only)	Yes	Yes	No*
<b>Off-Track Betting<sup>3</sup></b>	NA	NA	NA
Regular	Yes	Yes	Yes
REMIC	NA	NA	NA
Sanitation	Yes	Yes	Yes
<b>School Construction Authority</b>	Yes	No	Yes
State Housing	No	No	No
Transit Authority	No*	No	No
Transit Police (Retirees Only)	Yes	Yes	Yes
Triboro Bridge	No	No	No
<b>Water Finance Authority</b>	No*	No	Yes
POLICE	Yes	Yes	Yes
FIRE	Yes	Yes	Yes
TIAA - Senior Colleges	No*	No	Yes
TIAA - Community Colleges	Yes	Yes	Yes
<b>ECF</b>	No	No	No
LOD Survivors	Yes	No	Yes

\* The City pays these benefits upfront, not out of the NYCRHBT, and then is reimbursed.

<sup>1</sup> Welfare Fund coverage not available to pre-1/1/1971 retirees. LOD death beneficiary coverage provided through Stabilization Fund.

<sup>2</sup> The City pays the Welfare Fund for non-pedagogical CUNY Senior Colleges retirees.

<sup>3</sup> Effective May 26, 2011, it is the understanding of the Actuary that neither the City nor the Plan has any OPEB obligation for current or future OTB retirees.

**Table IV - 2**  
**New York City Retirement Systems**  
**Components of Post-Retirement Medical Benefits**  
**Paid By New York City**  
**Fiscal Year 2010**

<b>Payroll Agency</b>	<b>Health Insurance</b>	<b>Welfare Fund <sup>1</sup></b>	<b>Medicare Part B</b>
Charter Schools	Yes	Yes	Yes
Custodial Engineer	Yes	Yes	Yes
CUNY - Senior Colleges	No*	Yes <sup>2</sup>	Yes
CUNY - Community Colleges	Yes	Yes	Yes
Correction Department	Yes	Yes	Yes
CP Engineers	No*	No	No
Courts (State)	Yes	Yes	Yes
DA Investigators	Yes	Yes	Yes
Department of Education	Yes	Yes	Yes
<b>HSG Develop Corp</b>	No	No	No
<b>Health and Hospital Corp</b>	No*	No	Yes
<b>Housing Authority</b>	No*	No	No*
Housing Police (Retirees Only)	Yes	Yes	No*
<b>Off-Track Betting</b>	No*	No	No <sup>3</sup>
Regular	Yes	Yes	Yes
REMIC	NA	NA	NA
Sanitation	Yes	Yes	Yes
<b>School Construction Authority</b>	Yes	No	Yes
State Housing	No	No	No
Transit Authority	No*	No	No
Transit Police (Retirees Only)	Yes	Yes	Yes
Triboro Bridge	No	No	No
<b>Water Finance Authority</b>	No*	No	Yes
POLICE	Yes	Yes	Yes
FIRE	Yes	Yes	Yes
TIAA - Senior Colleges	No*	No	Yes
TIAA - Community Colleges	Yes	Yes	Yes
<b>ECF</b>	No	No	No
LOD Survivors	Yes	No	Yes

\* The City pays these benefits upfront, not out of the NYCRHBT, and then is reimbursed.

<sup>1</sup> Welfare Fund coverage not available to pre-1/1/1971 retirees. LOD death beneficiary coverage provided through Stabilization Fund.

<sup>2</sup> The City pays the Welfare Fund for non-pedagogical CUNY Senior Colleges retirees.

<sup>3</sup> Effective on June 18, 2008.

**Subsequent Events**

The Actuary is not aware of any subsequent events that would have an impact on this OPEB actuarial valuation.

**SECTION V - ACTUARIAL ASSUMPTIONS AND METHODS**

The actuarial assumptions and methods used in the June 30, 2010 OPEB actuarial valuation are generally the same as those used in the June 30, 2009 OPEB actuarial valuation except that:

- The following have been reviewed and updated as necessary to reflect more recent experience:
  - Per capita claims costs.
  - Welfare Fund contributions.
  - Medicare Part B Premiums.
  - The Stabilization Fund load (3/4% last year, .6% this year).
  - The estimated margin amounts on non-Medicare GHI premiums expected to be returned and thus not reflected in the age-adjusted cost of coverage (no change).
  - Assumptions for dependent coverage and elections (no change).
  
- The factor applied to HIP Medicare HMO costs in addition to medical trend, to reflect expected changes in Medicare Advantage reimbursements, was modified to reflect actual 2011 HIP premiums and anticipated changes in Medicare Advantage reimbursement due to recent legislative and regulatory changes.



- Post-Retirement Mortality - The probabilities of death after service retirement and the probabilities of death after disability retirement have been revised to reflect the Actuary's updated estimates of future experience. The updated probabilities are based, in part, on experience studies as mandated under Section 96 of the New York City Charter and conducted by The Hay Group ("Hay") and the Segal Company ("Segal"). The Hay study was provided to the OA in draft form during June 2011. The Segal study was published during November 2006.

The probabilities used for the June 30, 2010 OPEB actuarial valuation are consistent with the probabilities the Actuary anticipates presenting to the Boards of Trustees of the NYCERS as a component of a package of proposed changes in actuarial assumptions and methods to be used to determine employer contributions for each NYCERS for fiscal years beginning on and after July 1, 2011 under One-Year Lag methodology (i.e., June 30, 2010 (Lag) actuarial valuation to determine Fiscal Year 2012 employer contributions). Values of the probabilities used in the June 30, 2010 OPEB actuarial valuation appear in Appendix G-3.

- Active/Inactive Liabilities - An Active/Inactive member as of June 30, 2010 is:
  - Not a Retiree in Receipt of OPEB.
  - Not Terminated with a Vested right to OPEB.
  - Not on the Active Payroll.
  - Otherwise potentially eligible for OPEB.

A review of the Active/Inactive data over the past several years shows that a significant percentage terminate membership without becoming eligible for OPEB. For the June 30, 2010 OPEB actuarial valuation it was assumed that the liability for the Active/Inactive members would equal 40% of the measured liability of the Active/Inactive population. This is roughly equivalent to assuming 60% of the Active/Inactive members will terminate membership prior to vesting and not receive OPEB.

- Welfare Fund contributions have been updated to reflect recent contribution rates. As with the previous OPEB actuarial valuation, a three-year trended average of reported annual contribution amounts for current retirees was used. The Welfare Fund rates reported for the previous two OPEB actuarial valuations were trended to current levels based on a historic increase rate of 2.4% for Fiscal Year 2010 and 3.9% for Fiscal Year 2009, approximating overall recent growth of Welfare Fund contributions. For the June 30, 2009 and June 30, 2010 OPEB actuarial valuations, certain lump-sum amounts have been included in calculating the three-year trended average. Furthermore, for the June 30, 2010 OPEB actuarial valuation, retroactive adjustments to Welfare Fund contribution rates were used in the trended average as of the dates they were effective (i.e., using the retroactive date).
- Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2011. Due to the fact that there were no cost-of-living increases in Social Security benefits for Calendar Years 2010 and 2011, most Medicare Part B participants will not actually be charged the Medicare Part B Premium announced for 2011.

For anyone having their standard Medicare Part B Premium paid out of their Social Security check in 2009, the Medicare Part B Premium is frozen at the 2009 level. Individuals first collecting Social Security in 2010, or who first pay Medicare Part B Premiums in 2010 (e.g., turning age 65) would pay the full base 2010 premium of \$110.50. This will continue for 2011.

Individuals first collecting Social Security in 2011, or who first pay Medicare Part B Premiums would pay the full base premium of \$115.40, while those who first were covered in 2010 would pay \$110.50 throughout 2011 as well. Individuals whose Medicare Part B Premiums are paid directly by other entities (e.g., Medicaid for individuals in a nursing home) would have \$110.50 paid on their behalf during 2010, and \$115.40 paid on their behalf during 2011.

Individuals who pay the Medicare Part B Income Related Monthly Adjustment Amount ("IRMAA") are not subject to the freeze, and paid higher amounts during 2010 that are predicted on the \$110.50. For 2011 they will pay higher amounts predicated on the \$115.40. The Federal government estimates that about 3/4 of Medicare retirees will owe only \$96.40 or \$110.50 per month during 2011.

For the June 30, 2009 OPEB actuarial valuation (i.e., Fiscal Year 2010), the annual premium used (i.e., \$1,179.64) equaled 6 months of the Calendar Year 2009 premium plus 6 months of:

- 73% of the Calendar Year 2009 monthly premium (i.e., \$96.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and
- 27% of the Calendar Year 2010 monthly premium (i.e., \$110.50), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2010 amount.

For the June 30, 2010 OPEB actuarial valuation (i.e., Fiscal Year 2011), the annual premium used (i.e., \$1,210.44) equals 6 months of the Calendar Year 2010 premium (i.e., 73% of \$96.40 + 27% of \$110.50) plus 6 months of:

- 73% of the Calendar Year 2009 monthly premium (i.e., \$96.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and
- 27% of the announced Calendar Year 2011 monthly premium (i.e., \$115.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2011 amount.

These blended premiums reflect an approximation of the overall amount collected for Medicare Part B and are a better measure upon which to base future projections.

Beginning with the June 30, 2008 OPEB actuarial valuation, the amount of Medicare Part B Premium assumed to be reimbursed was adjusted to reflect information about the portion of retirees who were claiming the greater income-related Medicare Part B Premium reimbursement. For this valuation, the assumption was reviewed and remains unchanged from the prior valuation.

Additional details regarding the actuarial assumptions and certain methods used in the June 30, 2010 OPEB actuarial valuation are set forth in Appendices D, E, F, G-1, G-2 and G-3.

**Actuarial Cost Method**

The Frozen Entry Age Actuarial Cost Method (one of the Actuarial Cost Methods set forth in GASB43 Paragraph 34.d and GASB45 Paragraph 13.d) is used to determine the Annual Required Contribution ("ARC") and the Unfunded Actuarial Accrued Liability ("UAAL"). The method is unchanged from the previous actuarial valuation.

Under this method, in general, the excess of the Actuarial Present Value of Projected Benefits ("APVB") over the sum of (1) the Actuarial Value of Assets ("AAV") plus (2) the Unfunded Frozen Actuarial Accrued Liability is allocated on a level basis over the earnings of the covered active employees between the valuation date and assumed exit. This allocation is performed for the group as a whole. The Frozen Actuarial Accrued Liability is determined using the Entry Age Actuarial Cost Method. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. Under this method, actuarial gains/losses, as they occur, reduce/increase future Normal Costs.



The method as used for determining covered earnings is somewhat complicated by the fact that the same individual could be earning benefits under the City and under a Component Unit at the same time (e.g., an HHC retiree will receive Medicare Part B Premium reimbursement from the City and Basic Medical and Welfare Fund benefits paid by HHC).

The actuarial valuation reflects the covered earnings of a participant only once, based on the participant's employer on the valuation date. This method is consistent with the method used in the previous valuation. For individuals who are not in one of the Component Units included in the Report but who have only partial City-provided benefits, their covered earnings are not included.

The Unfunded Frozen Actuarial Accrued Liability amounts were initially established using the Entry Age Accrued Liability as of Transition (i.e., as of June 30, 2005).

All other Unfunded Entry Age Accrued Liability amounts are described in their respective OPEB actuarial valuation reports.

A combined Unfunded Entry Age Accrued Liability amount has been established as of June 30, 2010 to reflect the following:

- Change in Post-Retirement Mortality Assumptions.
  
- Change in percent of Active/Inactive Members assumed to receive OPEB.
  
- Addition of lifetime continuation coverage for surviving spouses of retired uniformed members of the Departments of Correction and Sanitation.
  
- Addition of an assumption estimating the value of benefits for currently surviving spouses of POLICE and FIRE members.

**Actuarial Asset Valuation Method**

The Actuarial Value of Assets is equal to the Market Value of Assets. The method is unchanged from the previous actuarial valuation.

**Amortization of Transition Liability**

The Transition Liability was amortized over an open one-year period.

**Amortization of Changes to UAAL**

All changes in the Unfunded Actuarial Accrued Liability as of June 30, 2010 are being amortized over an open one-year period for purposes of calculating the ARC.

GASB45 requires the calculation of the Annual Required Contribution, but does not require that an employer actually contribute its "required" contribution. Amounts "required" but not actually set aside to pay for these benefits are accumulated on the employer's books as the Net OPEB Obligation ("NOO").

As noted earlier, the City and Component Units included in the OPEB actuarial valuation, in consultation with their auditors, have elected to amortize the initial UAAL and any subsequently established UAAL bases over an open one-year period. This is effectively equivalent to recognizing the entire UAAL into the ARC immediately.

The equivalent single-year period has been used to calculate the ARC Adjustment for purposes of the AOC. This approach is consistent with the language of GASB45 Paragraph 16 which states that the ARC Adjustment should be calculated using the same amortization period that was used in determining the ARC for the year. This approach was confirmed in GASB Technical Bulletin No. 2008-1 issued December 15, 2008.

The OA understands that there were no obligations for Other Postemployment Benefits on the books of the City or the Component Units as of Transition. Therefore, for Fiscal Year 2006, the Annual OPEB Cost was equal to the Annual Required Contribution.

**SECTION VI - PRINCIPAL RESULTS UNDER GASB43**

For the New York City OPEB Plan, the principal results of the June 30, 2010 and June 30, 2009 OPEB actuarial valuations, prepared in accordance with the requirements of GASB43, are set forth in the following Table VI-1:

<b>TABLE VI-1</b>		
<b>PRINCIPAL RESULTS OF THE GASB43</b>		
<b>ACTUARIAL VALUATIONS FOR THE NEW YORK CITY OPEB PLAN</b>		
<b>AS OF JUNE 30, 2010 AND JUNE 30, 2009</b>		
<b>(\$ Millions)</b>		
Valuation Date	June 30, 2010	June 30, 2009
Fiscal Year	2011	2010
Total Actuarial Value of Projected Benefits (TPV)	\$123,023.8	\$115,095.9
Actuarial Asset Value (AAV)	\$ 3,022.6	\$ 3,103.2
Unfunded Actuarial Accrued Liability (UAAL)	\$ 79,017.7	\$ 70,550.1
Annual Required Contribution (ARC)		
Normal Cost - BOY	\$ 3,150.2	\$ 3,049.2
UAAL Payment* - BOY	\$ 79,017.7	\$ 70,550.1
Interest to EOY	\$ <u>3,286.7</u>	\$ <u>2,944.0</u>
Total ARC	\$ 85,454.6	\$ 76,543.3
* Based on Open One-Year Amortization Period.		

Detailed results of the June 30, 2010 GASB43 actuarial valuation of the OPEB Plan are shown in Appendix C-7.

In Fiscal Years 2006, 2007 and 2008, financial statements under GASB43 were prepared for the NYCRHBT. Beginning in Fiscal Year 2009 NYCRHBT accounting was replaced by OPEB Plan accounting. As such, all GASB43 results are equal to the applicable GASB45 results shown in Table VII-1 and in Appendix C-6 of this Report.

GASB43 requires significant disclosures. One portion of this is the Required Supplementary Information including the Schedule of Funding Progress. These disclosures are also presented in Appendix C-7.

**SECTION VII - PRINCIPAL RESULTS UNDER GASB45**

For the City of New York (the "City") and certain of its Component Units, the principal results of the June 30, 2010 and the June 30, 2009 OPEB actuarial valuations, prepared in accordance with the requirements of GASB45, are set forth in the following Table VII-1:

<b>TABLE VII-1</b>						
<b>PRINCIPAL RESULTS OF THE GASB45 ACTUARIAL VALUATIONS</b>						
<b>AS OF JUNE 30, 2010 AND JUNE 30, 2009</b>						
<b>(\$ Millions)</b>						
Valuation Date	June 30, 2010			June 30, 2009		
Fiscal Year	2011			2010		
Entity	City	Component Units*	Total	City	Component Units*	Total
Total Actuarial Value of Projected Benefits (TPV)	\$123,023.8	\$10,606.1	\$133,629.9	\$115,095.9	\$10,262.5	\$125,358.4
Actuarial Asset Value (AAV)	\$ 3,022.6	\$ 0.0	\$ 3,022.6	\$ 3,103.2	\$ 0.0	\$ 3,103.2
Unfunded Actuarial Accrued Liability (UAAL)	\$ 79,017.7	\$ 4,008.3	\$ 83,026.0	\$ 70,550.1	\$ 3,485.4	\$ 74,035.5
Normal Cost	\$ 3,150.2	\$ 264.9	\$ 3,415.1	\$ 3,049.2	\$ 268.7	\$ 3,317.9
Annual Required Contribution (ARC)						
Normal Cost - BOY	\$ 3,150.2	\$ 264.9	\$ 3,415.1	\$ 3,049.2	\$ 268.7	\$ 3,317.9
UAAL Payment# - BOY	79,017.7	4,008.3	83,026.0	70,550.1	3,485.4	74,035.5
Interest to EOY	3,286.7	171.0	3,457.7	2,944.0	150.1	3,094.1
Total ARC	\$ 85,454.6	\$ 4,444.2	\$ 89,898.8	\$ 76,543.3	\$ 3,904.2	\$ 80,447.5
Net OPEB Obligation at End of Fiscal Year	\$ 83,882.1	\$ 4,338.4	\$ 88,220.5	\$ 74,962.7	\$ 3,804.3	\$ 78,767.0

\* ECF, HHC, NYCHA (TPV only), OTB (Fiscal Year 2010 TPV only), SCA and WFA.  
# Based on Open One-Year Amortization Period.

Detailed results of the June 30, 2010 GASB45 actuarial valuation for the City and certain Component Units are shown in Appendices C-1 through C-6.

GASB45 requires significant disclosures. One portion of this is the Required Supplementary Information including the Schedule of Funding Progress. These disclosures are also presented in Appendices C-1 through C-6.



**SECTION VIII - ACTUARIAL CERTIFICATION**

This Report presents the results of the June 30, 2010 actuarial valuation of the Other Postemployment Benefits ("OPEB") provided under the New York City Health Benefits Program (the "Program").

A comparison with the June 30, 2009 OPEB actuarial valuation results is also provided. For information on the June 30, 2009 OPEB actuarial valuation see "Report on the Fifth Annual Actuarial Valuation of Other Postemployment Benefits Provided under the New York City Health Benefits Programs" dated September 23, 2010.

These actuarial valuation results are intended to form the basis for financial reporting under Governmental Accounting Standards Board ("GASB") Statement No. 43 ("GASB43") for the New York City OPEB Plan (the "Plan") and for accounting and financial reporting under GASB Statement No. 45 ("GASB45") for the City of New York (the "City") and certain non-City entities ("Component Units").

Beginning with the June 30, 2008 OPEB actuarial valuation, the determination of annual employer contributions includes certain non-trust activity for the City and certain expenditures that had previously been nominally allocated to active costs rather than retiree costs (i.e., an approximate value of the Implicit Rate Subsidy) for HHC. These determinations were retroactive to Fiscal Year 2006 and the cumulative impact was included in Fiscal Year 2009 PAYG employer contributions and in the June 30, 2009 Net OPEB Obligation.

For Fiscal Years 2010 and 2011 the determination of annual employer contributions also includes certain non-trust activity for the City and an approximate value of the Implicit Rate Subsidy for HHC. For Fiscal Years 2010 and 2011 the Implicit Rate Subsidy was estimated directly from the assumptions and data used in the June 30, 2009 and June 30, 2010 OPEB actuarial valuations, respectively. For Fiscal Year 2009 the Implicit Rate Subsidy was estimated by the New York City Office of Management and Budget ("OMB").

The results contained in this Report are based upon census data and financial information provided by the City and certain Component Units.

The data used for the June 30, 2010 OPEB actuarial valuation is that of the New York City Retirement Systems ("NYCRS")<sup>4</sup> with supplemental data provided by the New York City Office of Labor Relations ("OLR"), ECF and CUNY.

Effective with the June 30, 2007 OPEB actuarial valuation, the City is responsible for payment of Welfare Fund benefits to non-pedagogical CUNY Senior College retirees of the NYCRS. The data for current CUNY retirees identified which individuals were non-pedagogical retirees (Welfare Funds other than 275, 276 and 277). Since a Union Welfare Fund code is not available in the active, inactive and deferred vested data, it was not possible to directly segregate pedagogical and non-pedagogical CUNY Senior College staff in these populations. An adjustment was made to estimate these populations' Welfare Fund liabilities for the City. For the three systems (NYCERS, BERS and TRS) with CUNY Senior College non-retiree participants, the CUNY Senior College Welfare Fund liability was allocated between CUNY and the City based on the ratio of each System's actual non-pedagogical to total CUNY Senior College retirees headcounts.

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<sup>4</sup> New York City Employees' Retirement System ("NYCERS")  
New York City Teachers' Retirement System ("TRS")  
New York City Board of Education Retirement System ("BERS")  
New York City Police Pension Fund ("POLICE")  
New York City Fire Department Pension Fund ("FIRE")

Effective with the June 30, 2007 OPEB actuarial valuation, the City is responsible for payment of medical benefits and Welfare Fund contributions for CUNY TIAA Community College retirees. The data for current active employees identified which individuals were Senior versus Community College employees. Since a Senior versus Community College code is not available in the retiree data, it was not possible to directly segregate these populations. An adjustment was made allocating retiree and deferred vested liability between CUNY and the City based on the historic ratio of CUNY Senior College and Community College employees in TIAA.

Effective with the June 30, 2010 OPEB actuarial valuation, results for the New York City Off-Track Betting Corporation ("OTB") are not included in GASB45 results. It is the understanding of the Actuary that effective May 26, 2011, neither the City nor the Plan has any OPEB obligation for current or future OTB retirees.

The Office of the Actuary ("OA") and Buck Consultants, LLC ("Buck") performed tests on this census data for reasonability and on the basis of these tests the Actuary believes the data is sufficiently complete and appropriate for use in the June 30, 2010 OPEB actuarial valuation.

The following discusses the June 30, 2010 census data for certain Component Units:

- ECF provided separate data directly to the OA. The ECF employees and retirees are not members of the NYCRS.
- HHC and WFA confirmed that the number of participants used in the OPEB actuarial valuation was reasonable for purposes of measuring OPEB costs.
- SCA confirmed that the number of participants used in the OPEB actuarial valuation was reasonable for purposes of measuring OPEB costs.

Subsequent to the receipt of the data confirmation, employer contribution (i.e., PAYG) information provided to the OA indicated that the number of SCA retirees identified in the OA census data as in receipt of Welfare Fund Benefits (151) is less than the number of retirees for whom SCA is paying OLR (approximately 187).

The discrepancy is under investigation.

The overall impact of these discrepancies is modest relative to the overall results for SCA, apparently less than 5% of Total Present Value of Projected Benefits, if the problem is limited to current retirees. It should be noted that the impact could be greater, perhaps 20% to 25% of Total Present Value of Projected Benefits, if data issues of similar magnitude affect the identification of future as well as current retirees. However, it appears that many of the retirees in question are being valued elsewhere in the OPEB actuarial valuation and are being charged to the City. Since SCA is a blended Component Unit of the City, the impact on the City results appears to be negligible.

As noted in the Fifth Annual OPEB Report, the NYCERS retiree data did not always accurately incorporate Component Unit codes. The issue also potentially applies to active/inactive and deferred vested employees, but active census information includes payroll location. The OA has recently been capturing location information from the last payroll of formerly active employees. Thus, the number of individuals potentially impacted by this issue is expected to be declining over time.

- NYCHA was provided counts for the census data used for its actuarial valuation. NYCHA essentially confirmed the number of participants used in the OPEB actuarial valuation was within 1% of those used for measuring OPEB costs. On this basis the Actuary concluded the data was reasonable for this purpose.
- The census data for CUNY TIAA participants lacked certain demographic details as set forth in Appendix F.

The actuarial assumptions outlined in this Report were selected for use for the City of New York rather than based on the experience of any individual entity. The obligations for OPEB for any individual Component Unit might differ if determined under its own, separate, actuarial valuation.

The determination of GASB43 and GASB45 costs and obligations have been made on the basis of the understanding of the OA regarding the Program (the "Substantive Plan") and on the interpretation by the OA of the requirements of GASB43 and GASB45. For the June 30, 2008, the June 30, 2009 and the June 30, 2010 OPEB actuarial valuations, the requirements of GASB43 and GASB45 have been interpreted to take into account the Question and Answer ("Q&A") 2009-8.81.4 of the GASB Comprehensive Implementation Guide.

This Report has been prepared in accordance with generally accepted actuarial principles and procedures. The actuarial assumptions used in the development of the GASB43 and GASB45 obligations include those used by the Chief Actuary of the New York City Office of the Actuary (the "Actuary") in his capacity as the Actuary for the NYCERS, to value the benefits payable by the NYCERS. However, for the June 30, 2010 OPEB actuarial valuation, the assumptions for post-retirement mortality have been revised to recognize the likelihood of increased longevity for retirees. These assumptions have been supplemented by additional, OPEB-related actuarial assumptions used to value the OPEB provided under the Program, as shown in Appendix D.

Note: Separate actuarial assumptions shown in Appendix E and Appendix F were used to value OPEB for ECF participants and for CUNY TIAA participants, respectively.



The Frozen Entry Age Actuarial Cost Method used to determine the Annual Required Contribution ("ARC"), the Annual OPEB Cost ("AOC") and the Net OPEB Obligation ("NOO") is one of the Actuarial Cost Methods permitted under GASB43 Paragraph 34.d and GASB45 Paragraph 13.d.

The Unfunded Actuarial Accrued Liability ("UAAL") is being amortized over an open one-year period. This period was chosen by the City and the Component Units included in this actuarial valuation in consultation with their respective auditors.

In preparing this Report, the staff of the OA has been assisted by and collaborated with the staff of Buck.

The Actuary states that this Report and its attachments is a Statement of Actuarial Opinion ("SAO"). The Actuary takes overall responsibility for the results herein.

The actuaries whose signatures appear below are Members of the American Academy of Actuaries ("AAA") and together meet the Qualification Standards of the AAA to render this SAO. The actuaries certify that they believe that the assumptions used in this Report are reasonable for the purposes of measurement of the obligations under GASB43 and GASB45 contained herein.

(SIGNED) Robert C. North, Jr.

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Robert C. North, Jr. FSA, FSPA, FCA, MAAA, EA  
Chief Actuary  
New York City Office of the Actuary

(SIGNED) John R. Gibney, Jr.

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John R. Gibney, Jr., MSPA, FCA, MAAA, EA  
Assistant Deputy Chief Actuary  
New York City Office of the Actuary

(SIGNED) Robin B. Simon

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Robin B. Simon, FSA, FCA, MAAA, EA, JD  
Principal, Consulting Actuary and  
Chief Actuary, Health and Productivity Practice  
Buck Consultants, LLC

**APPENDIX A**

**Appendix A - Table 1**

**NEW YORK CITY HEALTH BENEFITS PROGRAM**

**New York City Other Postemployment Benefits Plan**

**Statement of Net Assets**

**As of June 30, 2011 and June 30, 2010**

	June 30, 2011 <sup>1</sup>	June 30, 2010 <sup>2</sup>
<b>ASSETS</b>		
Cash		
Settled Cash	\$ 0	\$ 0
Receivables		
Trust	2,303,113	2,750,552
Medicare Part D	<u>290,536</u>	<u>256,257</u>
<b>Total Cash</b>	<b>\$ 2,593,649</b>	<b>\$ 3,006,809</b>
Cash Equivalents		
US Treasury Bills	\$ 0	\$ 49,797,871
Commercial Paper	1,780,487,611	2,067,992,962
Short Term Funds	49,946,500	3,434,849
Government Agency	<u>37,176,264</u>	<u>225,659,719</u>
<b>Total Cash Equivalents</b>	<b>\$ 1,867,610,375</b>	<b>\$ 2,346,885,401</b>
Fixed Income		
Corporate Bonds and Notes	\$ 194,309,164	\$ 50,802,250
Government and Agencies	<u>1,016,583,602</u>	<u>946,850,386</u>
<b>Total Fixed Income</b>	<b>\$ 1,210,892,766</b>	<b>\$ 997,652,636</b>
Prepaid Benefits / Expenses	\$ <u>204,240</u>	\$ <u>185,554</u>
<b>Total Prepaid</b>	<b>\$ 204,240</b>	<b>\$ 185,554</b>
<b>Total Assets</b>	<b>\$ 3,081,301,030</b>	<b>\$ 3,347,730,400</b>
<b>LIABILITIES</b>		
Medicare Part B	\$ 113,038,040	\$ 106,264,000
Benefits Payable	311,589,265	218,795,955
Trustee Fees Payable	24,170	26,384
Audit Fees Payable	20,000	20,000
Payables for Investment Securities Purchased	<u>25,045,208</u>	<u>0</u>
<b>Total Liabilities</b>	<b>\$ 449,716,683</b>	<b>\$ 325,106,339</b>
<b>NET ASSETS</b>		
<b>Held in Trust for Benefit Payments</b>	<b>\$ 2,631,584,347</b>	<b>\$ 3,022,624,061</b>

<sup>1</sup> Provided by OMB on September 14, 2011.

<sup>2</sup> Provided by OMB on August 27, 2010.

**Appendix A - Table 2**

**NEW YORK CITY HEALTH BENEFITS PROGRAM**

**New York City Other Postemployment Benefits Plan**

**Statement of Changes in Net Assets**

**As of June 30, 2011 and June 30, 2010**

	<b>June 30, 2011</b> <sup>1</sup>	<b>June 30, 2010</b> <sup>2</sup>
<b>ADDITIONS</b>		
Employer Contributions		
Pay-As-You-Go		
Trust	\$ 1,331,722,916 <sup>3</sup>	\$ 1,357,698,874
Non-Trust	240,790,299	222,893,106
Other	<u>0</u>	<u>0</u>
<b>Total Contributions</b>	<b>\$ 1,572,513,215</b>	<b>\$ 1,580,591,980</b>
 Earned Income		
Interest Income	\$ 17,339,455	\$ 34,390,849
Net Accrued Income	(492,648)	(6,738,756)
Net Realized Gain / (Loss)	<u>635,551</u>	<u>2,099,970</u>
<b>Total Investment Income</b>	<b>\$ 17,482,358</b>	<b>\$ 29,752,063</b>
 Net Unrealized Gain / (Loss)	<u>(907,841)</u>	<u>(1,440,047)</u>
 <b>TOTAL ADDITIONS</b>	<b>\$ 1,589,087,732</b>	<b>\$ 1,608,903,996</b>
<b>DEDUCTIONS</b>		
Benefit Payments		
Trust	\$ 1,739,050,022 <sup>3</sup>	\$ 1,466,290,121
Non-Trust	<u>240,790,299</u>	<u>222,893,106</u>
Sub-Total	\$ 1,979,840,321	\$ 1,689,183,227
Expenses		
Administrative Expenses	\$ 20,000	\$ 20,000
Legal Fees	0	275
Trustee Fees	<u>267,125</u>	<u>262,633</u>
Sub-Total	\$ 287,125	\$ 282,908
 <b>TOTAL DEDUCTIONS</b>	<b>\$ 1,980,127,446</b>	<b>\$ 1,689,466,135</b>
 <b>CHANGE IN NET ASSETS</b>	<b>\$ (391,039,714)</b>	<b>\$ (80,562,139)</b>
 <b>NET ASSETS HELD IN TRUST FOR BENEFIT PAYMENTS</b>		
<b>Beginning of Year</b>	<b>\$ 3,022,624,061</b>	<b>\$ 3,103,186,200</b>
<b>End of Year</b>	<b>\$ 2,631,584,347</b>	<b>\$ 3,022,624,061</b>

<sup>1</sup> Provided by OMB on September 14, 2011.

<sup>2</sup> Provided by OMB on August 27, 2010.

<sup>3</sup> Net of the Interfund Transfer of \$422,816,168 in Fiscal Year 2011.

**APPENDIX B**

**Appendix B - Table 1a**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**

**PLAN PARTICIPATION - NYCERS**

<b>Pre-Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City*	13,663	4,446	1,360	856	20,325
Component Units:					
HHC	2,420	643	169	98	3,330
NYCHA	1,190	594	102	56	1,942
WFA	0	0	0	0	0
<b>Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City*	30,259	8,408	2,069	2,576	43,312
Component Units:					
HHC	10,553	2,718	493	890	14,654
NYCHA	3,502	1,088	179	330	5,099
WFA	0	1	0	0	1

\* The City enrollment includes SCA retirees since the City is responsible for SCA's health insurance coverage.

**Appendix B - Table 1b**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**

**PLAN PARTICIPATION - TRS**

<b>Pre-Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	14,297	1,020	532	1,400	17,249
Component Units:					
HHC	2	0	0	0	2
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0
<b>Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	41,995	3,600	1,133	1,891	48,619
Component Units:					
HHC	2	0	0	1	3
NYCHA	2	1	0	0	3
WFA	0	0	0	0	0



**Appendix B - Table 1c**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**

**PLAN PARTICIPATION - BERS**

<b>Pre-Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City*	1,447	335	41	159	1,982
Component Units:					
HHC	0	0	0	0	0
NYCHA	2	0	1	0	3
WFA	0	0	0	0	0
<b>Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City*	8,441	1,831	198	639	11,109
Component Units:					
HHC	5	1	1	0	7
NYCHA	8	1	0	0	9
WFA	0	0	0	1	1

\* The City enrollment includes SCA retirees since the City is responsible for SCA's health insurance coverage.

**Appendix B - Table 1d**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**

**PLAN PARTICIPATION - POLICE**

<b>Pre-Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	19,642	2,613	2,003	1,034	25,292
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0
<b>Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	15,009	2,008	906	477	18,400
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

**Appendix B - Table 1e**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**

**PLAN PARTICIPATION - FIRE**

<b>Pre-Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	5,023	852	799	130	6,804
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0
<b>Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	7,416	1,347	545	188	9,496
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

**Appendix B - Table 1f**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**

**PLAN PARTICIPATION - TIAA**

<b>Pre-Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	27	3	3	0	33
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0
<b>Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	361	22	19	0	402
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

**Appendix B - Table 1g**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**

**PLAN PARTICIPATION - LODW**

<b>Pre-Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	53	13	3	0	69
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0
<b>Medicare Enrollment</b>	<b>GHI Indemnity</b>	<b>HIP HMO</b>	<b>Other HMO</b>	<b>Waived</b>	<b>Total</b>
City	584	107	23	0	714
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

**Appendix B - Table 2a**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**ANNUAL WELFARE FUND CONTRIBUTIONS - NYCERS**

UWF	Description	Count <sup>1</sup>	6/30/08 Rate <sup>2</sup>	6/30/09 Rate <sup>2</sup>	6/30/10 Rate <sup>2</sup>
001	NYC MANAGEMENT WELFARE FUND	6,625	\$1,640	\$1,840	\$1,640
005	ALLIED BUILDNG INSPECTORS	390	1,640	1,840	1,640
010	ASST DEP WARDENS ASSC SBF	367	1,290	1,603	1,490
030	CORRECTION CAPTAINS ASSOC	1,556	1,390	1,590	1,390
035	CORRECT OFFICRS BEN ASSOC	6,570	1,540	1,740	1,540
040	NYS COURT OFFICERS ASSOC	3	830	1,030	830
045	CWA LOCAL 1182 RETIREE SBF	281	1,640	1,840	1,640
046	CWA L1181 SEC BEN FND RET	233	1,640	1,840	1,640
048	DETECT END ASSN RET FUND	6	1,523	1,723	1,523
049	DET END ASSN RET FUND (T)	192	1,523	1,723	1,523
050	DET END ASSN RET FUND (H)	137	1,523	1,723	1,523
055	DEA RET FND(PBA OF THE DA)	96	1,523	1,723	1,523
060	DISTRICT COUNCIL 37	33,490	1,640	1,840	1,640
061	DC 37 - (TAPD CIVILIANS)	16	1,640	1,840	1,640
065	DC 37 UNIF MARINE ENGR	1	1,540	1,800	1,600
066	DC 37 MEBA - FERRYBOATS	116	1,640	2,007	1,640
070	DOCTORS CNCL RET WELF FND	449	1,540	1,740	1,540
075	LCL 3 IBEW ELECTR INSPECT	35	1,807	1,840	1,640
080	FIRE ALARM DSP BEN ASSOC	160	1,640	2,007	1,640
100	LPN RETIREE WELFARE FUND	651	1,640	2,007	1,640
105	OSA SUPV.EMG.MED.SVC.SPEC	13	1,540	2,007	1,640
106	OSA WELF FND-SCHOOL SEC/T	20	1,640	2,007	1,640
107	OSA WELF FUND -SAN CHIEFS	32	1,540	1,740	1,540
108	ORG OF STAFF ANALYSTS	1,413	1,807	1,840	1,640
109	LCL 14 MUN W F-CRANE OPER	42	1,640	1,840	1,640
110	L144 DIV OF L1199 NHHSEU	467	1,590	1,957	1,590
115	LOCAL 306 RETIR HLTH WELF	4	1,640	1,840	1,640
120	LOCAL 333 DOCKHANDS	195	1,640	1,840	1,640
129	UNKNOWN	228	1,640	1,840	1,640
130	LOCAL 832 RETIREES	50	2,007	2,240	1,840
131	UNKNOWN	69	1,640	1,840	1,640
135	RET CWA L1183 DOE H&W FND	137	1,540	2,120	1,753
140	1199 NHHSEU	270	1,640	2,007	1,640
155	LCL 1180 CWA RET BENE FND	5,437	1,842	1,875	1,675
156	L1180 RET BEN FD-TAPD CIV	2	1,842	1,875	1,675
160	NYC DEPY SHER ASS RET SBF	36	1,365	1,565	1,365
162	UFT WELFARE FUND	8	1,685	2,052	1,720
163	UFT WELFARE FUND	47	1,685	2,052	1,720
164	COUNCIL OF SUPERVISORS AND ADMINISTRATORS	8	1,685	2,052	1,720
165	RET WELF FND AUTO SVC WKR	31	1,640	1,840	1,640
170	PBA (NYPD)	8	1,865	1,721	1,679
171	PBA (NYPD) (TA)	1,712	1,865	1,721	1,679
172	PBA (NYPD) (HA)	644	1,865	1,721	1,679
185	NYS NURSES ASSOCIATION	2,520	1,807	1,840	1,640
187	PAVERS & RDBULDERS INSPCT	38	1,540	1,740	1,540
190	UNITED PROBATION OFFICERS	375	1,640	2,040	1,723
200	SANITATION OFF RET WEL FN	2,465	1,390	1,590	1,390
205	RETIRED FIREFIGHTERS SBF	1	1,640	1,920	1,720
225	SOC NYPD LT BENEV ASSOCIA	2	1,465	1,665	1,565
226	SOC NYPD CAPT ENDOW ASSOC	8	1,465	1,665	1,565
228	SOC NYPD LT BENEV ASS0(T)	116	1,465	1,665	1,565

**Appendix B - Table 2a**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**ANNUAL WELFARE FUND CONTRIBUTIONS - NYCERS**

<b>UWF</b>	<b>Description</b>	<b>Count<sup>1</sup></b>	<b>6/30/08 Rate<sup>2</sup></b>	<b>6/30/09 Rate<sup>2</sup></b>	<b>6/30/10 Rate<sup>2</sup></b>
229	SOC NYPD CAPT END ASS (T)	41	1,465	1,665	1,565
230	SBA HLTH&WELF FUND/RET(T)	251	1,660	1,860	1,660
231	SOC NYPD LT BENEV ASSO(H)	94	1,465	1,765	1,565
232	SOC NYPD CAPT END ASSN(H)	49	1,465	1,765	1,565
233	SBA HLTH&WELF FUND/RET(H)	144	1,660	1,860	1,660
235	L237 RETIREE BENE FND-CW	6,062	1,840	2,240	1,840
250	USA RETIREES' WELFARE FND	7,152	1,773	1,973	1,909
251	UNKNOWN	280	1,640	1,840	1,640
260	LCL 300 RETIREE WELF FUND	366	1,640	1,840	1,640
261	UNKNOWN	2	1,540	1,740	1,540
275	PROFESSIONAL STAFF CONGRESS	247	1,815	2,065	1,865
276	PROFESSIONAL STAFF CONGRESS	9	1,815	2,065	1,865
277	SBA HLTH & WELF FND/RETIR	1	1,815	2,065	1,865
555	CIVILIAN, TRANSIT POLICE DEPT. NYC TRANSIT	32	1,640	1,840	1,640
556	UNKNOWN	9	1,640	1,840	1,640
604	ASSCR WEL FND OF RETIREES	4	785	985	785
605	NYSCCA SEC BEN FND RETIRE	12	930	1,130	930
700	LCL 237 RWF(L621 SUP MEC)	191	1,640	1,840	1,640
701	LCL 237 RWF(L621 SUP I W)	8	1,640	1,840	1,640
702	LOCAL 237 RWF(L621 DDMEM)	6	1,640	1,840	1,640
703	L237 BRCKLYR RETIREES	107	2,007	2,040	1,840
704	L1969(L806 BRDG PAINTERS)	30	1,640	1,840	1,640
705	L.40 361&417 JT UN SEC FD	35	1,540	1,740	1,540
706	LCL 3 IBEW COMMUN ELEC ET	59	1,540	1,740	1,540
712	LCL 3 IBEW ELCTRCN SUP HL	348	1,640	1,840	1,640
713	UNKNOWN	27	1,640	1,840	1,640
714	LCL 237 ELEV MECH RETIREE	242	2,007	2,040	1,840
715	LCL237MASON'S HLPs RETIRE	20	2,007	2,040	1,840
717	LOCAL 1969, GLAZIERS	36	1,640	1,840	1,640
720	DC37 LOCKSMITH SUPV LKSMT	31	1,540	1,740	1,540
724	RET H&W FD L3 IBEW-SUP.ME	67	1,540	1,740	1,540
725	UNKNOWN	74	1,640	1,840	1,640
727	LCL 2 CIVIL SVC PLUMBERS	335	1,640	1,840	1,640
728	LCL 1969 NYC PAINTERS	277	1,807	1,840	1,640
730	PAVERS RDBLDR DC PAVERS	6	1,340	1,540	1,340
731	LCL 237 ROOF RETIREES	25	1,840	2,040	1,840
732	LCL237PLASTERERS RETIREES	117	2,007	2,040	1,840
736	RET.WF AUTO MECH-UPSTATE	1	1,640	1,840	1,640
737	LOCAL 3 IBEW ARMATURE WIN	1	1,040	1,240	1,040
738	RET WELF FND AUTO MECHNYC	749	1,640	1,840	1,640
739	RET WELF FUND-TRACT OPERS	6	1,640	1,840	1,640
740	RET WELF FND GEN MECHANIC	1	1,190	1,390	1,190
741	RET WELFARE FUND MOTOR GRA OPERATOR	18	1,640	1,840	1,640
742	LCL 14 PILE DRIVING ENGR	6	1,640	1,840	1,640
743	DC 37 HIGHWAY REPAIRERS	297	1,640	1,840	1,640
744	DC 37 FURNIT MAINTAINER	4	1,640	1,840	1,640
745	DC37 CYLD PRESS OPERATOR	18	1,640	1,840	1,640
746	LCL 300 HIGHWAY REPAIRERS	40	1,640	1,840	1,640
747	PAVERS RDBLDRS HW SP HW R	45	1,340	1,540	1,340
748	LCL 14-RETIR. GAS RLR ENG	15	1,640	1,840	1,640
749	DC37SUPERVISOR HIGHWAY RE	84	1,340	1,540	1,340

**Appendix B - Table 2a**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**ANNUAL WELFARE FUND CONTRIBUTIONS - NYCERS**

UWF	Description	Count <sup>1</sup>	6/30/08 Rate <sup>2</sup>	6/30/09 Rate <sup>2</sup>	6/30/10 Rate <sup>2</sup>
750	LCL300 SUPV.HWY REPAIRER	15	1,340	1,540	1,340
753	DC37 COMPOSITOR (JOB)	12	1,640	1,840	1,640
754	RET WEL FUND CARRGE UPHOL	6	1,640	1,840	1,640
756	LCL 237 CEMENT MAS RETIRE	58	2,007	2,040	1,840
777	UNKNOWN	4	0	0	0
782	LCL 237 HORSE/HARN RETIRE	2	2,007	2,040	1,840
786	DC37 CONSTRUCT LABORER	981	1,540	1,740	1,540
804	LCL 237 MAINT WKR RETIREE	854	2,007	2,040	1,840
808	LCL 30, OILER	143	1,640	1,840	1,640
812	DC37 RADIO REPAIR MECHANI	41	1,640	1,840	1,640
814	LCL 246 RWF RUBR TIRE REP	10	1,640	1,840	1,640
816	DC37 SEWAGE TRTMT WKRS	338	1,640	1,840	1,640
818	RET WEL FND SGN PTRS/LTRS	4	1,640	1,840	1,640
820	LCL 30 STAT ENG SR ST ENG	402	1,640	1,840	1,640
823	NYC DIST.COUNCIL OF CARPS	371	4,809	1,840	1,640
825	NYC DIST COUNCIL OF CARPS	4	4,809	1,840	1,640
826	LCL 3 IBEW SR STAT ENGR E	73	1,640	1,840	1,640
827	RET WEL FND SHEET MTL WKR	42	1,640	1,840	1,640
828	LCL 3 IBEW STATN ENGR ELE	144	1,640	1,840	1,640
832	DC 37 HI-PRESS PLANT TEND	155	1,807	1,840	1,640
837	UNKNOWN	46	1,640	1,840	1,640
838	NYC DIST. COUNCIL OF CARP	38	4,809	1,840	1,640
839	UNKNOWN	17	1,640	1,840	1,640
842	LCL 638 STMFTRS HLPR SUPR	71	1,807	1,840	1,640
843	LOCAL 15-GASOLINE RLR ENG	23	1,640	1,840	1,640
844	LOCAL 15-BASIN MACH OPERS	1	1,115	1,315	1,115
845	LCL 15 WELDERS FD	65	1,640	1,840	1,640
847	LCL 15 HIPRESS OPER.	4	965	1,165	965
848	LCL 15 TRACTOR OPER(SANI)	124	1,640	1,840	1,640
888		512	0	0	0
948		1	0	0	0
950	Either not entitled to Welfare Fund Benefits or UWF	6	0	0	0
960	contribution is not funded by the City. Medicare Part B	2	0	0	0
971	reimbursement.	1	0	0	0
999		127	0	0	0
Blank		2,692	0	0	0
<b>Total Count:</b>		<b>93,242</b>			

<sup>1</sup> Data includes entire population provided by OLR and supplemented by the OA, including Component Units and other groups not attributable to the City for GASB45 purposes.

<sup>2</sup> Rates used as of June 30, 2008, June 30, 2009 and June 30, 2010 include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate. Rates for Professional Staff Congress came from its website.



**Appendix B - Table 2b**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**ANNUAL WELFARE FUND CONTRIBUTIONS - TRS**

<b>UWF</b>	<b>Description</b>	<b>Count<sup>1</sup></b>	<b>6/30/08 Rate<sup>2</sup></b>	<b>6/30/09 Rate<sup>2</sup></b>	<b>6/30/10 Rate<sup>2</sup></b>
001	NYC MANAGEMENT WELFARE FUND	165	\$1,640	\$1,840	\$1,640
048	DETECT END ASSN RET FUND	1	1,523	1,723	1,523
055	DEA RET FUND (PBA OF THE DA)	1	1,523	1,723	1,523
060	DISTRICT COUNCIL 37	525	1,640	1,840	1,640
100	LPN RETIREE WELFARE FUND	1	1,640	2,007	1,640
108	ORG OF STAFF ANALYSTS	4	1,807	1,840	1,640
155	LCL 1180 CWA RET BENE FND	38	1,842	1,875	1,675
163	UFT	56,295	1,685	2,052	1,720
164	COUNCIL OF SUPERVISORS AND ADMINISTRATORS	6,685	1,685	2,052	1,720
185	NYS NURSES ASSOCIATION	2	1,807	1,840	1,640
190	UNITED PROBATION OFFICERS	1	1,640	2,040	1,723
200	SANITATION OFF RET WEL FN	2	1,390	1,590	1,390
235	L237 RETIREE BENE FND-CW	14	1,840	2,240	1,840
275	PROFESSIONAL STAFF CONGRESS	2,533	1,815	2,065	1,865
276	PROFESSIONAL STAFF CONGRESS	86	1,815	2,065	1,865
277	PROFESSIONAL STAFF CONGRESS	1	1,815	2,065	1,865
724	RET H&W Fd, L3, IBEW-SUP, ME	1	1,540	1,740	1,540
888	Either not entitled to Welfare Fund Benefits or UWF	92	0	0	0
999	contribution is not funded by the City. Medicare Part B	90	0	0	0
Blank	reimbursement.	1,456	0	0	0
<b>Total Count:</b>		<b>67,993</b>			

<sup>1</sup> Data includes entire population provided by OLR and supplemented by the OA, including Component Units and other groups not attributable to the City for GASB45 purposes.

<sup>2</sup> Rates used as of June 30, 2008, June 30, 2009 and June 30, 2010 include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate. Rates for Professional Staff Congress came from its website.

**Appendix B - Table 2c**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**ANNUAL WELFARE FUND CONTRIBUTIONS - BERS**

UWF	Description	Count <sup>1</sup>	6/30/08 Rate <sup>2</sup>	6/30/09 Rate <sup>2</sup>	6/30/10 Rate <sup>2</sup>
001	NYC MANAGEMENT WELFARE FUND	446	\$1,640	\$1,840	\$1,640
005	ALLIED BUILDNG INSPECTORS	1	1,640	1,840	1,640
035	CORRECT OFFICRS BEN ASSOC	2	1,540	1,740	1,540
045	CWA LOCAL 1182 SEC BEN FUND	1	1,640	1,840	1,640
060	DISTRICT COUNCIL 37	9,573	1,640	1,840	1,640
061	DC 37 - (TAPD CIVILIANS)	1	1,640	1,840	1,640
075	LCL 3 IBEW ELECTR INSPECT	1	1,807	1,840	1,640
106	OSA WELF FND-SCHOOL SEC/T	4	1,640	2,007	1,640
108	ORG OF STAFF ANALYSTS	15	1,807	1,840	1,640
115	LOCAL 306 RETIR HLTH WELF	10	1,640	1,840	1,640
130	LOCAL 832 RETIREES	261	2,007	2,240	1,840
131	DISTRICT COUNCIL 37	499	1,640	1,840	1,640
135	RET CWA L1183 DOE H&W FND	1	1,540	2,120	1,753
155	LCL 1180 CWA RET BENE FND	489	1,842	1,875	1,675
162	UFT WELFARE FUND	12	1,685	2,052	1,720
163	UFT WELFARE FUND	571	1,685	2,052	1,720
164	COUNCIL OF SUPERVISORS AND ADMINISTRATION	7	1,685	2,052	1,720
165	RET WELF FND AUTO SVC WKR	6	1,640	1,840	1,640
235	L237 RETIREE BENE FND-CW	410	1,840	2,240	1,840
260	LCL 300 RETIREE WELF FUND	48	1,640	1,840	1,640
275	PROFESSIONAL STAFF CONGRESS	10	1,815	2,065	1,865
555	CIVILIAN, TRANSIT POLICE DEPT. NYC TRANSIT	1	1,640	1,840	1,640
700	LCL 237 RWF(L621 SUP MEC)	7	1,640	1,840	1,640
703	L237 BRCKLYR RETIREES	2	2,007	2,040	1,840
708	LOCAL 246, DEPT OF EDUCATION	2	1,585	1,785	1,585
712	LCL 3 IBEW ELCTRCN SUP HL	25	1,640	1,840	1,640
714	LCL 237 ELEV MECH RETIREE	3	2,007	2,040	1,840
717	LOCAL1969 GLAZIERS	11	1,640	1,840	1,640
720	DC37 LOCKSMITH SUPV LKSMT	2	1,540	1,740	1,540
724	RET H&W FD L3 IBEW-SUP.ME	17	1,540	1,740	1,540
727	LCL 2 CIVIL SVC PLUMBERS	30	1,640	1,840	1,640
728	LCL 1969 NYC PAINTERS	20	1,807	1,840	1,640
731	LCL 237 ROOF RETIREES	6	1,840	2,040	1,840
732	LCL237PLASTERERS RETIREES	5	2,007	2,040	1,840
738	RET WELF FND AUTO MECHNYC	23	1,640	1,840	1,640
740	RET WELF FND GEN MECHANIC	2	1,190	1,390	1,190
744	DC 37 FURNIT MAINTAINER	7	1,640	1,840	1,640
745	DC37 CYLD PRESS OPER	1	1,640	1,840	1,640
756	LCL 237 CEMENT MAS RETIRE	2	2,007	2,040	1,840
760	LOCAL 246, DEPT OF EDUCATION	9	1,585	1,785	1,585
786	DC37 CONSTRUCT LABORER	16	1,540	1,740	1,540
804	LCL 237 MAINT WKR RETIREE	14	2,007	2,040	1,840
812	DC37 RADIO REPAIR MECHANI	4	1,640	1,840	1,640
820	LCL 30 STAT ENG SR ST ENG	1	1,640	1,840	1,640
823	NYC DIST.COUNCIL OF CARPS	77	4,809	1,840	1,640
826	LCL 3 IBEW SR SSTAT ENGR E	1	1,640	1,840	1,640
827	RET WEL FND SHEET MTL WKR	7	1,640	1,840	1,640
838	NYC DIST. COUNCIL OF CARP	34	4,809	1,840	1,640
839	LOCAL LODGE 5	1	1,640	1,840	1,640
842	LCL 638 STMFTRS HLPR SUPR	19	1,807	1,840	1,640
845	LCL 15 WELDERS FD	1	1,640	1,840	1,640

**Appendix B - Table 2c**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**ANNUAL WELFARE FUND CONTRIBUTIONS - BERS**

UWF	Description	Count <sup>1</sup>	6/30/08 Rate <sup>2</sup>	6/30/09 Rate <sup>2</sup>	6/30/10 Rate <sup>2</sup>
888	Either not entitled to Welfare Fund Benefits or UWF contribution is not funded by the City. Medicare Part B reimbursement.	18	0	0	0
999		84	0	0	0
Blank		321	0	0	0
<b>Total Count:</b>		<b>13,141</b>			

<sup>1</sup> Data includes entire population provided by OLR and supplemented by the OA, including Component Units and other groups not attributable to the City for GASB45 purposes.

<sup>2</sup> Rates used as of June 30, 2008, June 30, 2009 and June 30, 2010 include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate. Rates for Professional Staff Congress came from its website.

**Appendix B - Table 2d**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**ANNUAL WELFARE FUND CONTRIBUTIONS - POLICE**

<b>UWF</b>	<b>Description</b>	<b>Count</b>	<b>6/30/08 Rate<sup>1</sup></b>	<b>6/30/09 Rate<sup>1</sup></b>	<b>6/30/10 Rate<sup>1</sup></b>
001	NYC MANAGEMENT WELFARE FUND	98	\$1,640	\$1,840	\$1,640
048	DETECT END ASSN RET FUND	10,298	1,523	1,723	1,523
170	PBA (NYPD)	20,972	1,865	1,721	1,679
225	SOC NYPD LT BENEV ASSOCIATION	3,194	1,465	1,665	1,565
226	SOC NYPD CAPT ENDOW ASSOCIATION	1,338	1,465	1,665	1,565
227	SBA HLTH & WELF FND/RETIR	6,452	1,660	1,860	1,660
777	PATROLEMEN'S BENEVOLENT ASSOCIATION (LINE-OF-DUTY SURVIVORS)	161	0	0	0
888		989	0	0	0
925		6	0	0	0
926		6	0	0	0
927		17	0	0	0
928	Either not entitled to Welfare Fund benefits or UWF	9	0	0	0
930	contribution is not funded by the City. Medicare Part B	9	0	0	0
931	reimbursement.	4	0	0	0
948		46	0	0	0
949		13	0	0	0
971		4	0	0	0
Blank		76	0	0	0
<b>Total Count:</b>		<b>43,692</b>			

<sup>1</sup> Rates used as of June 30, 2008, June 30, 2009 and June 30, 2010 include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate.

**Appendix B - Table 2e**  
**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**ANNUAL WELFARE FUND CONTRIBUTIONS - FIRE**

<b>UWF</b>	<b>Description</b>	<b>Count</b>	<b>6/30/08 Rate<sup>1</sup></b>	<b>6/30/09 Rate<sup>1</sup></b>	<b>6/30/10 Rate<sup>1</sup></b>
001	NYC MANAGEMENT WELFARE FUND	74	\$1,640	\$1,840	\$1,640
057	UNKNOWN	1	1,640	1,840	1,640
060	DISTRICT COUNCIL 37	1	1,640	1,840	1,640
065	DC 37 UNIF MARINE ENGR	122	1,540	1,800	1,600
121	LCL 333 UNIFORMED WIPER	3	1,490	1,770	1,570
164	COUNCIL OF SUPERVISORS AND ADMINISTRATORS	1	1,685	2,052	1,720
205	RETIRED FIREFIGHTERS SBF	10,223	1,640	1,920	1,720
206	RET FIREFIGHTRS SBF-WIPER	8	1,490	1,770	1,570
240	UFOA LOCAL 854 RETIREES	4,789	1,535	1,735	1,595
888		567	0	0	0
905		250	0	0	0
906	Either not entitled to Welfare Fund Benefits or UWF	47	0	0	0
940	contribution is not funded by the City. Medicare Part B	126	0	0	0
941	reimbursement.	41	0	0	0
999		1	0	0	0
Blank		46	0	0	0
<b>Total Count:</b>		<b>16,300</b>			

<sup>1</sup> Rates used as of June 30, 2008, June 30, 2009 and June 30, 2010 include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate.

**APPENDIX C**

## New York City Health Benefits Program

June 30, 2010 OPEB Actuarial Valuation

### New York City Educational Construction Fund (ECF)

#### Summary of Data

	<b>TOTAL</b>
<b>1. Actives</b>	
a. Number	3
b. Salary	\$373,579
c. Average Age	47.87
d. Average Service	4.23
e. Average Salary	\$124,526
f. Present Value of Future Salary	\$5,404,717
<b>2. Inactives</b>	
a. Number	0
b. Average Age	NA
c. Average Service	NA
<b>3. Deferreds</b> (Includes Deferred Retirees, if any)	
a. Number	0
b. Average Age	NA
<b>4. Retirees</b>	
a. Total*	
i. Number	6
ii. Average Age	78.09
b. By Benefit	<u>Participant / Spouse</u>
i. Pre-Medicare**	1 / 0
ii. Medicare Eligible**	5 / 2
iii. Welfare Fund**	NA / NA
iv. Medicare Part B <sup>#</sup>	6 / 2

\* Retirees eligible for at least one benefit from ECF.

\*\* Retirees currently eligible for benefit from ECF.

# Retirees eligible for benefit from ECF now or in the future.

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Educational Construction Fund (ECF)**

**Development of Normal Cost**

<b>1. Total Present Value of Projected Benefits</b>	<b>Total</b>
a. Active <sup>1</sup>	\$1,032,745
b. Deferred <sup>2</sup>	0
c. Retired	<u>890,841</u>
d. TOTAL	\$1,923,586
<b>2. Actuarial Value of Assets</b>	<b>\$0</b>
<b>3. Unfunded Frozen Entry Age Actuarial Accrued Liability</b>	<b>\$1,333,593</b>
<b>4. Present Value of Future Normal Costs</b> [1d. - 2. - 3.]	<b>\$589,993</b>
<b>5. Present Value of Future Salary</b>	<b>\$5,404,717</b>
<b>6. Normal Cost Percentage</b> [4. / 5.]	<b>10.916%</b>
<b>7. Salary of Active Participants</b>	<b>\$373,579</b>
<b>8. Frozen Entry Age Normal Cost</b> [6. * 7.]	<b>\$40,780</b>

<sup>1</sup> Includes Inactives, if any.

<sup>2</sup> Includes Deferred Retirees, if any.



**New York City Health Benefits Program****June 30, 2010 OPEB Actuarial Valuation****New York City Educational Construction Fund (ECF)****Development of the Annual Required Contribution (ARC)  
For the Fiscal Year Ending June 30, 2011**

1. Normal Cost at June 30, 2010	\$40,780
2. Amortization of Unfunded Actuarial Accrued Liability - BOY	<u>1,333,593</u>
3. Subtotal	\$1,374,373
4. Interest to June 30, 2011 at 4.0%	<u>54,975</u>
5. Annual Required Contribution (ARC)	\$1,429,348

# New York City Health Benefits Program

June 30, 2010 OPEB Actuarial Valuation

New York City Educational Construction Fund (ECF)

Development of the Annual OPEB Cost (AOC)  
and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2011

## 1. Annual OPEB Cost (AOC)

a. Net OPEB Obligation at June 30, 2010	\$1,333,593
b. Annual Required Contribution (ARC)	
i. Normal Cost	\$40,780
ii. UAAL Amortization Payment	1,333,593
iii. Interest to End of Year	<u>54,975</u>
iv. Total	\$1,429,348
c. ARC Adjustment	\$1,386,937
d. Interest on Net OPEB Obligation	\$53,344
e. Fiscal Year 2011 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	\$95,755

## 2. Net OPEB Obligation (NOO)

a. Net OPEB Obligation at June 30, 2010	\$1,333,593
b. Fiscal Year 2011 Annual OPEB Cost (AOC)	\$95,755
c. Fiscal Year 2011 Employer Contributions	\$57,033 *
d. Net OPEB Obligation (NOO) at June 30, 2011 (2a.+ 2b.-2c.)	\$1,372,315

\* Employer Contributions provided by ECF.

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation

#### New York City Educational Construction Fund (ECF)

#### Required Supplementary Information (RSI) and Additional Note Disclosure For the Fiscal Year Ending June 30, 2011

#### Required Supplementary Information Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Frozen Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2010	\$0	\$1,333,593	\$1,333,593	0.0%	\$373,579	357.0%
June 30, 2009	\$0	\$1,306,382	\$1,306,382	0.0%	\$337,908	386.6%
June 30, 2008	\$0	\$1,199,232	\$1,199,232	0.0%	\$332,908	360.2%
June 30, 2007	\$0	\$1,174,692	\$1,174,692	0.0%	\$158,408	741.6%
June 30, 2006	\$0	\$1,111,366	\$1,111,366	0.0%	\$158,408	701.6%
June 30, 2005	\$0	\$954,749	\$954,749	0.0%	\$148,770	641.8%

#### Additional Note Disclosure Annual OPEB Cost and Net OPEB Obligation

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
June 30, 2011	\$95,755	59.6%	\$1,372,315
June 30, 2010	\$156,176	27.8%	\$1,333,593
June 30, 2009	\$57,166	65.9%	\$1,220,855
June 30, 2008	\$66,593	44.8%	\$1,201,354
June 30, 2007	\$147,549	0.0%	\$1,164,573
June 30, 2006*	\$1,017,024	0.0%	\$1,017,024

\* As published.

## New York City Health Benefits Program

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Educational Construction Fund (ECF)**

### Derivation of Unfunded Actuarial Accrued Liability

<b>1. Unfunded Actuarial Accrued Liability at June 30, 2009</b>	<b>\$1,306,382</b>
<b>2. Frozen Entry Age Normal Cost at June 30, 2009</b>	<b>17,686</b>
<b>3. Interest on 1. and 2. @ 4.00%</b>	<b>52,963</b>
<b>4. Adjustments, if any</b>	<b>0</b>
<b>5. Fiscal Year 2010 Employer Contributions</b>	<b>43,438 <sup>1</sup></b>
<b>6. Preliminary Unfunded Actuarial Accrued Liability at June 30, 2010 (1.+2.+3.+4.-5.)</b>	<b>1,333,593</b>
<b>7. Change in Assumptions</b>	<b>0</b>
<b>8. Unfunded Actuarial Accrued Liability at June 30, 2010 (6.+7.)</b>	<b>\$1,333,593</b>

<sup>1</sup> Per ECF Financial Statement.

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Educational Construction Fund (ECF)**

**Schedule of Unfunded Actuarial Accrued Liability Bases**

<b>Base</b>	<b>Date Established</b>	<b>Original Amount</b>	<b>Amortization Period</b>	<b>Balance</b>
1. Transition Liability	June 30, 2005	\$ 954,749	1-Year	\$ 1,132,665
2. Refinements	June 30, 2006	\$ 94,342	1-Year	\$ 105,070
3. Change in Medicare Part B Assumption	June 30, 2006	\$ 0	1-Year	\$ 0
4. Plan Amendment	June 30, 2007	\$ 10,119	1-Year	\$ 10,755
5. TRS 55/25 Refinement	June 30, 2008	\$ 0	1-Year	\$ 0
6. Change in Assumptions	June 30, 2008	\$ (2,122)	1-Year	\$ (2,205)
7. Change in Assumptions	June 30, 2009	\$ 85,527	1-Year	\$ 87,308
8. Change in Assumptions	June 30, 2010	\$ 0	1-Year	\$ 0
<b>TOTAL</b>		\$ 1,142,615		\$ 1,333,593

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Health and Hospitals Corporation (HHC)**

**Summary of Data**

	<b>NYCERS</b>	<b>TRS</b>	<b>BERS</b>	<b>TOTAL</b>
<b>1. Actives</b>				
a. Number	31,982	0	4	31,986
b. Salary	\$2,042,757,576	\$0	\$305,106	\$2,043,062,682
c. Average Age	49.13	NA	54.75	49.13
d. Average Service	10.17	NA	21.00	10.17
e. Average Salary	\$63,872	NA	\$76,277	\$63,874
f. Present Value of Future Salary	\$22,440,279,118	\$0	\$2,621,015	\$22,442,900,133
<b>2. Inactives</b>				
a. Number	4,340	0	0	4,340
b. Average Age	45.13	NA	NA	45.13
c. Average Service	5.24	NA	NA	5.24
<b>3. Deferreds (Includes Deferred Retirees, if any)</b>				
a. Number	1,733	0	0	1,733
b. Average Age	52.56	NA	NA	52.56
<b>4. Retirees</b>				
a. Total*				
i. Number	17,984	5	7	17,996
ii. Average Age	72.95	70.81	79.39	72.95
b. By Benefit				<u>Participant / Spouse</u>
i. Pre-Medicare**				3,332 / 1,875
ii. Medicare Eligible**				14,664 / 3,356
iii. Welfare Fund**				17,092 / NA
iv. Medicare Part B <sup>#</sup>				NR / NR

\* Retirees eligible for at least one benefit from HHC.  
 \*\* Retirees currently eligible for benefit from HHC.  
 # Retirees eligible for benefit from HHC now or in the future.  
 NR Benefit not the responsibility of HHC.

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Health and Hospitals Corporation (HHC)**

**Development of Normal Cost**

1. Total Present Value of Projected Benefits	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Total
a. Active <sup>1</sup>	\$1,997,766,299	\$1,729,666,535	\$1,430,793,386	\$0	<b>\$5,158,226,220</b>
b. Deferred <sup>2</sup>	103,782,820	100,630,563	83,335,870	0	<b>\$287,749,253</b>
c. Retired	<u>267,309,248</u>	<u>682,170,045</u>	<u>489,348,303</u>	<u>0</u>	<b><u>\$1,438,827,596</u></b>
d. TOTAL	<b>\$2,368,858,367</b>	<b>\$2,512,467,143</b>	<b>\$2,003,477,559</b>	<b>\$0</b>	<b>\$6,884,803,069</b>
2. Actuarial Value of Assets					<b>\$0</b>
3. Unfunded Frozen Entry Age Actuarial Accrued Liability					<b>\$3,984,256,215</b>
4. Present Value of Future Normal Costs [1.d - 2. - 3.]					<b>\$2,900,546,854</b>
5. Present Value of Future Salary					<b>\$22,442,900,133</b>
6. Normal Cost Percentage [4. / 5.]					<b>12.924%</b>
7. Salary of Active Participants					<b>\$2,043,062,682</b>
8. Frozen Entry Age Normal Cost [6. * 7.]					<b>\$264,045,421</b>

<sup>1</sup> Includes Inactives, if any.

<sup>2</sup> Includes Deferred Retirees, if any.

**New York City Health Benefits Program****June 30, 2010 OPEB Actuarial Valuation****New York City Health and Hospitals Corporation (HHC)****Development of the Annual Required Contribution (ARC)  
For the Fiscal Year Ending June 30, 2011**

1. Normal Cost at June 30, 2010	\$264,045,421
2. Amortization of Unfunded Actuarial Accrued Liability - BOY	<u>3,984,256,215</u>
3. Subtotal	\$4,248,301,636
4. Interest to June 30, 2011 at 4.0%	<u>169,932,065</u>
5. Annual Required Contribution (ARC)	\$4,418,233,701



# New York City Health Benefits Program

June 30, 2010 OPEB Actuarial Valuation

New York City Health and Hospitals Corporation (HHC)

Development of the Annual OPEB Cost (AOC)  
and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2011

## 1. Annual OPEB Cost (AOC)

a. Net OPEB Obligation at June 30, 2010	\$3,781,633,121
<b>b. Annual Required Contribution (ARC)</b>	
i. Normal Cost	\$264,045,421
ii. UAAL Amortization Payment	3,984,256,215
iii. Interest to End of Year	<u>169,932,065</u>
iv. Total	\$4,418,233,701
c. ARC Adjustment	\$3,932,898,446
d. Interest on Net OPEB Obligation	\$151,265,325
e. Fiscal Year 2011 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	\$636,600,580

## 2. Net OPEB Obligation (NOO)

a. Net OPEB Obligation at June 30, 2010	\$3,781,633,121
b. Fiscal Year 2011 Annual OPEB Cost (AOC)	\$636,600,580
c. Fiscal Year 2011 PAYG Employer Contributions	\$105,417,274 *
d. Net OPEB Obligation (NOO) at June 30, 2011 (2a.+ 2b.-2c.)	\$4,312,816,427

\* Employer Contributions include amounts provided by HHC and the FY2011 Implicit Rate Subsidy.

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation

#### New York City Health and Hospitals Corporation (HHC)

#### Required Supplementary Information (RSI) and Additional Note Disclosure For the Fiscal Year Ending June 30, 2011

#### Required Supplementary Information Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Frozen Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2010	\$0	\$3,984,256,215	\$3,984,256,215	0.0%	\$2,043,062,682	195.0%
June 30, 2009	\$0	\$3,464,071,831	\$3,464,071,831	0.0%	\$1,989,955,487	174.1%
June 30, 2008	\$0	\$3,010,302,429	\$3,010,302,429	0.0%	\$1,830,957,842	164.4%
June 30, 2007	\$0	\$2,722,879,773	\$2,722,879,773	0.0%	\$1,741,623,721	156.3%
June 30, 2006	\$0	\$2,418,075,620	\$2,418,075,620	0.0%	\$1,610,130,192	150.2%
June 30, 2005	\$0	\$2,019,525,531	\$2,019,525,531	0.0%	\$1,521,870,266	132.7%

#### Additional Note Disclosure Annual OPEB Cost and Net OPEB Obligation

Fiscal Year Ended	Annual OPEB Cost	Percentage of OPEB Cost Contributed	Net OPEB Obligation
June 30, 2011	\$636,600,580	16.6%	\$4,312,816,427
June 30, 2010	\$617,623,160	16.1%	\$3,781,633,121
June 30, 2009	\$359,891,470	28.7%*	\$3,263,573,474
June 30, 2008	\$428,212,562	17.5%	\$3,007,038,589
June 30, 2007	\$396,996,705	18.8%	\$2,653,902,496
June 30, 2006	\$2,398,590,675	2.8%	\$2,331,404,675

\* Includes cumulative adjustment for approximate Implicit Rate Subsidy amounts for Fiscal Years ending 6/30/06, 6/30/07 and 6/30/08.

## New York City Health Benefits Program

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Health and Hospitals Corporation (HHC)**

### Derivation of Unfunded Actuarial Accrued Liability

<b>1. Unfunded Actuarial Accrued Liability at June 30, 2009</b>	<b>\$3,464,071,831</b>
<b>2. Frozen Entry Age Normal Cost at June 30, 2009</b>	<b>267,848,009</b>
<b>3. Interest on 1. and 2. @ 4.00%</b>	<b>149,276,794</b>
<b>4. Adjustments, if any</b>	<b>0</b>
<b>5. Fiscal Year 2010 Employer Contributions</b>	<b>99,563,513</b>
<b>6. Preliminary Unfunded Actuarial Accrued Liability at June 30, 2010 (1.+2.+3.+4.-5.)</b>	<b>3,781,633,121</b>
<b>7. Change in Assumptions<sup>1</sup></b>	<b>202,623,094</b>
<b>8. Unfunded Actuarial Accrued Liability at June 30, 2010 (6.+7.)</b>	<b>\$3,984,256,215</b>

<sup>1</sup> Updated Probabilities of Post-Retirement Mortality.  
Assumption that only 40% of Inactives Receive OPEB Benefits.

## New York City Health Benefits Program

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Health and Hospitals Corporation (HHC)**

### Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Amortization Period	Balance
1. Transition Liability	June 30, 2005	\$ 2,019,525,531	1-Year	\$ 3,344,406,454
2. Refinements	June 30, 2006	\$ 86,670,945	1-Year	\$ 124,329,711
3. Change in Medicare Part B Assumption	June 30, 2006	\$ 0	1-Year	\$ 0
4. Change in Assumptions	June 30, 2007	\$ 68,977,277	1-Year	\$ 90,155,525
5. Plan Provisions Change	June 30, 2008	\$ 0	1-Year	\$ 0
6. Change in Assumptions	June 30, 2008	\$ 3,263,840	1-Year	\$ 3,862,821
7. Change in Assumptions	June 30, 2009	\$ 200,498,357	1-Year	\$ 218,878,610
8. Change in Assumptions	June 30, 2010	<u>\$ 202,623,094</u>	1-Year	<u>\$ 202,623,094</u>
TOTAL		\$ 2,581,559,044		\$ 3,984,256,215

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Housing Authority (NYCHA)**

**Summary of Data**

	<b>NYCERS</b>	<b>TRS</b>	<b>BERS</b>	<b>TOTAL</b>
<b>1. Actives</b>				
a. Number	10,596	1	26	10,623
b. Salary	\$614,886,362	\$109,242	\$1,992,800	\$616,988,404
c. Average Age	47.75	47.00	49.08	47.75
d. Average Service	14.39	19.00	13.77	14.39
e. Average Salary	\$58,030	\$109,242	\$76,646	\$58,080
f. Present Value of Future Salary	\$7,188,171,239	\$1,805,214	\$23,671,994	\$7,213,648,447
<b>2. Inactives</b>				
a. Number	1,166	0	0	1,166
b. Average Age	43.93	NA	NA	43.93
c. Average Service	8.69	NA	NA	8.69
<b>3. Deferreds (Includes Deferred Retirees, if any)</b>				
a. Number	696	0	0	696
b. Average Age	51.86	NA	NA	51.86
<b>4. Retirees</b>				
a. Total*				
i. Number	8,122	3	12	8,137
ii. Average Age	70.36	76.57	70.35	70.36
b. By Benefit				<u>Participant / Spouse</u>
i. Pre-Medicare**				1,945 / 1,543
ii. Medicare Eligible**				5,111 / 1,740
iii. Welfare Fund**				6,818 / NA
iv. Medicare Part B <sup>#</sup>				8,137 / 3,968

\* Retirees eligible for at least one benefit from NYCHA.

\*\* Retirees currently eligible for benefit from NYCHA.

# Retirees eligible for benefit from NYCHA now or in the future.

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Housing Authority (NYCHA)**

**Summary of Total Present Value of Projected Benefits**

**1. Total Present Value of Projected Benefits**

	<b>Pre-Medicare</b>	<b>Medicare</b>	<b>Welfare Funds</b>	<b>Part B Premium</b>	<b>Total</b>
<b>a. Active</b> <sup>1</sup>	\$1,054,829,029	\$638,415,130	\$522,006,717	\$386,086,400	<b>\$2,601,337,276</b>
<b>b. Deferred</b> <sup>2</sup>	53,992,493	41,238,676	32,213,121	25,095,415	<b>152,539,705</b>
<b>c. Retired</b>	<u>225,108,274</u>	<u>286,656,498</u>	<u>223,720,006</u>	<u>198,532,246</u>	<b><u>934,017,024</u></b>
<b>d. TOTAL</b>	<b>\$1,333,929,796</b>	<b>\$966,310,304</b>	<b>\$777,939,844</b>	<b>\$609,714,061</b>	<b>\$3,687,894,005</b>

<sup>1</sup> Includes Inactives, if any.

<sup>2</sup> Includes Deferred Retirees, if any.

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**

**New York City School Construction Authority (SCA)**

**Summary of Data**

	<b>NYCERS</b>	<b>BERS</b>	<b>TOTAL</b>
<b>1. Actives</b>			
a. Number	73	544	617
b. Salary	\$7,321,195	\$50,972,214	\$58,293,409
c. Average Age	52.21	50.44	50.65
d. Average Service	16.18	9.62	10.40
e. Average Salary	\$100,290	\$93,699	\$94,479
f. Present Value of Future Salary	\$74,510,840	\$527,823,806	\$602,334,646
<b>2. Inactives</b>			
a. Number	9	42	51
b. Average Age	52.78	49.95	50.45
c. Average Service	10.89	8.62	9.02
<b>3. Deferreds (Includes Deferred Retirees, if any)</b>			
a. Number	2	3	5
b. Average Age	51.50	49.33	50.20
<b>4. Retirees</b>			
a. Total*			
i. Number	25	126	151
ii. Average Age	68.16	70.23	69.89
b. By Benefit			<u>Participant / Spouse</u>
i. Pre-Medicare**			NR / NR
ii. Medicare Eligible**			NR / NR
iii. Welfare Fund**			151 / NA
iv. Medicare Part B <sup>#</sup>			NR / NR

\* Retirees eligible for at least one benefit from SCA.  
 \*\* Retirees currently eligible for benefit from SCA.  
 # Retirees eligible for benefit from SCA now or in the future.  
 NR Benefit not the responsibility of SCA.

## New York City Health Benefits Program

June 30, 2010 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

### Development of Normal Cost

1. Total Present Value of Projected Benefits	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Total
a. Active <sup>1</sup>	\$0	\$0	\$24,747,642	\$0	\$24,747,642
b. Deferred <sup>2</sup>	0	0	231,043	0	231,043
c. Retired	<u>0</u>	<u>0</u>	<u>4,622,194</u>	<u>0</u>	<u>4,622,194</u>
d. TOTAL	\$0	\$0	\$29,600,879	\$0	\$29,600,879
2. Actuarial Value of Assets					\$0
3. Unfunded Frozen Entry Age Actuarial Accrued Liability					\$22,158,714
4. Present Value of Future Normal Costs [1d. - 2. - 3.]					\$7,442,165
5. Present Value of Future Salary					\$602,334,646
6. Normal Cost Percentage [4. / 5.]					1.236%
7. Salary of Active Participants					\$58,293,409
8. Frozen Entry Age Normal Cost [6. * 7.]					\$720,507

<sup>1</sup> Includes Inactives, if any.

<sup>2</sup> Includes Deferred Retirees, if any.



**New York City Health Benefits Program****June 30, 2010 OPEB Actuarial Valuation****New York City School Construction Authority (SCA)****Development of the Annual Required Contribution (ARC)  
For the Fiscal Year Ending June 30, 2011**

1. Normal Cost at June 30, 2010	\$720,507
2. Amortization of Unfunded Actuarial Accrued Liability - BOY	<u>22,158,714</u>
3. Subtotal	\$22,879,221
4. Interest to June 30, 2011 at 4.0%	<u>915,169</u>
5. Annual Required Contribution (ARC)	\$23,794,390

# New York City Health Benefits Program

June 30, 2010 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

Development of the Annual OPEB Cost (AOC)  
and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2011

## 1. Annual OPEB Cost (AOC)

a. Net OPEB Obligation at June 30, 2010	\$20,774,586
b. Annual Required Contribution (ARC)	
i. Normal Cost	\$720,507
ii. UAAL Amortization Payment	22,158,714
iii. Interest to End of Year	<u>915,169</u>
iv. Total	\$23,794,390
c. ARC Adjustment	\$21,605,569
d. Interest on Net OPEB Obligation	\$830,983
e. Fiscal Year 2011 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	\$3,019,804

## 2. Net OPEB Obligation (NOO)

a. Net OPEB Obligation at June 30, 2010	\$20,774,586
b. Fiscal Year 2011 Annual OPEB Cost (AOC)	\$3,019,804
c. Fiscal Year 2011 Employer Contributions	\$301,763 *
d. Net OPEB Obligation (NOO) at June 30, 2011 (2a.+ 2b.-2c.)	\$23,492,627

\* Employer Contributions provided by SCA.

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation

#### New York City School Construction Authority (SCA)

#### Required Supplementary Information (RSI) and Additional Note Disclosure For the Fiscal Year Ending June 30, 2011

#### Required Supplementary Information Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Frozen Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2010	\$0	\$22,158,714	\$22,158,714	0.0%	\$58,293,409	38.0%
June 30, 2009	\$0	\$19,569,767	\$19,569,767	0.0%	\$56,771,493	34.5%
June 30, 2008	\$0	\$18,369,464	\$18,369,464	0.0%	\$49,129,270	37.4%
June 30, 2007	\$0	\$17,352,451	\$17,352,451	0.0%	\$40,937,457	42.4%
June 30, 2006	\$0	\$16,039,618	\$16,039,618	0.0%	\$36,506,304	43.9%
June 30, 2005 <sup>1</sup>	\$0	\$9,936,653	\$9,936,653	0.0%	\$33,827,738	29.4%

<sup>1</sup> Provided by SCA on July 24, 2007.

#### Additional Note Disclosure Annual OPEB Cost and Net OPEB Obligation

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
June 30, 2011	\$3,019,804	10.0%	\$23,492,627
June 30, 2010	\$1,523,772	20.9%	\$20,774,586
June 30, 2009	\$1,473,093	18.5%	\$19,569,767
June 30, 2008	\$1,292,276	21.3%	\$18,369,464
June 30, 2007	\$6,270,529	0.0%	\$17,352,451
June 30, 2006	\$11,081,922	0.0%	\$11,081,922

## New York City Health Benefits Program

**June 30, 2010 OPEB Actuarial Valuation**

**New York City School Construction Authority (SCA)**

### Derivation of Unfunded Actuarial Accrued Liability

<b>1. Unfunded Actuarial Accrued Liability at June 30, 2009</b>	<b>\$19,569,767</b>
<b>2. Frozen Entry Age Normal Cost at June 30, 2009</b>	<b>712,482</b>
<b>3. Interest on 1. and 2. @ 4.00%</b>	<b>811,290</b>
<b>4. Adjustments, if any</b>	<b>0</b>
<b>5. Fiscal Year 2010 Employer Contributions</b>	<b>318,953</b>
<b>6. Preliminary Unfunded Actuarial Accrued Liability at June 30, 2010 (1.+2.+3.+4.-5.)</b>	<b>20,774,586</b>
<b>7. Change in Assumptions<sup>1</sup></b>	<b>1,384,128</b>
<b>8. Unfunded Actuarial Accrued Liability at June 30, 2010 (6.+7.)</b>	<b>\$22,158,714</b>

<sup>1</sup> Updated Probabilities of Post-Retirement Mortality.  
Assumption that only 40% of Inactives Receive OPEB Benefits.

## New York City Health Benefits Program

**June 30, 2010 OPEB Actuarial Valuation**

**New York City School Construction Authority (SCA)**

### Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Amortization Period	Balance
1. Transition Liability	June 30, 2005	\$ 9,936,653	1-Year	\$ 14,353,358
2. Refinements	June 30, 2006	\$ 4,957,695	1-Year	\$ 6,421,228
3. Change in Medicare Part B Assumption	June 30, 2006	\$ 0	1-Year	\$ 0
4. Change in Assumptions	June 30, 2007	\$ 0	1-Year	\$ 0
5. TRS 55/25 Refinement	June 30, 2008	\$ 0	1-Year	\$ 0
6. Change in Assumptions	June 30, 2008	\$ 0	1-Year	\$ 0
7. Change in Assumptions	June 30, 2009	\$ 0	1-Year	\$ 0
8. Change in Assumptions	June 30, 2010	<u>\$ 1,384,128</u>	1-Year	<u>\$ 1,384,128</u>
TOTAL		\$ 16,278,476		\$ 22,158,714

## New York City Health Benefits Program

June 30, 2010 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

### Summary of Data

	NYCERS	BERS	TOTAL
<b>1. Actives</b>			
a. Number	11	0	11
b. Salary	\$1,026,437	NA	\$1,026,437
c. Average Age	45.82	NA	45.82
d. Average Service	6.73	NA	6.73
e. Average Salary	\$93,312	NA	\$93,312
f. Present Value of Future Salary	\$11,664,230	NA	\$11,664,230
<b>2. Inactives</b>			
a. Number	1	0	1
b. Average Age	31.00	NA	31.00
c. Average Service	3.00	NA	3.00
<b>3. Deferreds (Includes Deferred Retirees, if any)</b>			
a. Number	0	0	0
b. Average Age	NA	NA	NA
<b>4. Retirees</b>			
a. Total*			
i. Number	1	1	2
ii. Average Age	73.95	66.81	70.38
b. By Benefit			<u>Participant / Spouse</u>
i. Pre-Medicare**			0 / 0
ii. Medicare Eligible**			2 / 1
iii. Welfare Fund**			2 / NA
iv. Medicare Part B <sup>#</sup>			NR / NR

- \* Retirees eligible for at least one benefit from WFA.
- \*\* Retirees currently eligible for benefit from WFA.
- # Retirees eligible for benefit from WFA now or in the future.
- NR Benefit not the responsibility of WFA.

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Municipal Water Finance Authority (WFA)**

**Development of Normal Cost**

<b>1. Total Present Value of Projected Benefits</b>	<b>Pre-Medicare</b>	<b>Medicare</b>	<b>Welfare Funds</b>	<b>Part B Premium</b>	<b>Total</b>
a. Active <sup>1</sup>	\$770,947	\$554,346	\$453,693	\$0	<b>\$1,778,986</b>
b. Deferred <sup>2</sup>	0	0	0	0	<b>0</b>
c. Retired	<u>0</u>	<u>34,065</u>	<u>60,478</u>	<u>0</u>	<b><u>94,543</u></b>
d. TOTAL	<b>\$770,947</b>	<b>\$588,411</b>	<b>\$514,171</b>	<b>\$0</b>	<b>\$1,873,529</b>
<b>2. Actuarial Value of Assets</b>					<b>\$0</b>
<b>3. Unfunded Frozen Entry Age Actuarial Accrued Liability</b>					<b>\$562,510</b>
<b>4. Present Value of Future Normal Costs</b> [1d. - 2. - 3.]					<b>\$1,311,019</b>
<b>5. Present Value of Future Salary</b>					<b>\$11,664,230</b>
<b>6. Normal Cost Percentage</b> [4. / 5.]					<b>11.240%</b>
<b>7. Salary of Active Participants</b>					<b>\$1,026,437</b>
<b>8. Frozen Entry Age Normal Cost</b> [6. * 7.]					<b>\$115,372</b>

<sup>1</sup> Includes Inactives, if any.

<sup>2</sup> Includes Deferred Retirees, if any.

**New York City Health Benefits Program****June 30, 2010 OPEB Actuarial Valuation****New York City Municipal Water Finance Authority (WFA)****Development of the Annual Required Contribution (ARC)  
For the Fiscal Year Ending June 30, 2011**

1. Normal Cost at June 30, 2010	\$115,372
2. Amortization of Unfunded Actuarial Accrued Liability - BOY	<u>562,510</u>
3. Subtotal	\$677,882
4. Interest to June 30, 2011 at 4.0%	<u>27,115</u>
5. Annual Required Contribution (ARC)	\$704,997



# New York City Health Benefits Program

June 30, 2010 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Development of the Annual OPEB Cost (AOC)  
and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2011

## 1. Annual OPEB Cost (AOC)

a. Net OPEB Obligation at June 30, 2010	\$533,688
<b>b. Annual Required Contribution (ARC)</b>	
i. Normal Cost	\$115,372
ii. UAAL Amortization Payment	562,510
iii. Interest to End of Year	<u>27,115</u>
iv. Total	\$704,997
c. ARC Adjustment	\$555,036
d. Interest on Net OPEB Obligation	\$21,348
e. Fiscal Year 2011 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	\$171,309

## 2. Net OPEB Obligation (NOO)

a. Net OPEB Obligation at June 30, 2010	\$533,688
b. Fiscal Year 2011 Annual OPEB Cost (AOC)	\$171,309
c. Fiscal Year 2011 Employer Contributions	\$5,729 *
d. Net OPEB Obligation (NOO) at June 30, 2011 (2a.+ 2b.-2c.)	\$699,268

\* Employer Contributions provided by WFA.

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation

#### New York City Municipal Water Finance Authority (WFA)

#### Required Supplementary Information (RSI) and Additional Note Disclosure

For the Fiscal Year Ending June 30, 2011

#### Required Supplementary Information Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Frozen Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2010	\$0	\$562,510	\$562,510	0.0%	\$1,026,437	54.8%
June 30, 2009	\$0	\$430,799	\$430,799	0.0%	\$675,808	63.7%
June 30, 2008	\$0	\$317,005	\$317,005	0.0%	\$728,732	43.5%
June 30, 2007	\$0	\$242,193	\$242,193	0.0%	\$486,052	49.8%
June 30, 2006	\$0	\$172,974	\$172,974	0.0%	\$306,155	56.5%
June 30, 2005	\$0	\$308,348	\$308,348	0.0%	\$1,041,223	29.6%

#### Additional Note Disclosure Annual OPEB Cost and Net OPEB Obligation

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
June 30, 2011	\$171,309	3.3%	\$699,268
June 30, 2010	\$143,130	3.1%	\$533,688
June 30, 2009	\$86,374	8.6%	\$395,026
June 30, 2008	\$87,656	1.1%	\$316,060
June 30, 2007	(\$168,612)	0.0%	\$229,398
June 30, 2006*	\$398,010	0.0%	\$398,010

\* As published.

## New York City Health Benefits Program

**June 30, 2010 OPEB Actuarial Valuation**

**New York City Municipal Water Finance Authority (WFA)**

### Derivation of Unfunded Actuarial Accrued Liability

<b>1. Unfunded Actuarial Accrued Liability at June 30, 2009</b>	<b>\$430,799</b>
<b>2. Frozen Entry Age Normal Cost at June 30, 2009</b>	<b>86,659</b>
<b>3. Interest on 1. and 2. @ 4.00%</b>	<b>20,698</b>
<b>4. Adjustments, if any</b>	<b>0</b>
<b>5. Fiscal Year 2010 Employer Contributions</b>	<b>4,468</b>
<b>6. Preliminary Unfunded Actuarial Accrued Liability at June 30, 2010 (1.+2.+3.+4.-5.)</b>	<b>533,688</b>
<b>7. Change in Assumptions<sup>1</sup></b>	<b>28,822</b>
<b>8. Unfunded Actuarial Accrued Liability at June 30, 2010 (6.+7.)</b>	<b>\$562,510</b>

<sup>1</sup> Updated Probabilities of Post-Retirement Mortality.  
Assumption that only 40% of Inactives Receive OPEB Benefits.

June 30, 2010 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Amortization Period	Balance
1. Transition Liability	June 30, 2005	\$ 308,348	1-Year	\$ 1,063,369
2. Refinements	June 30, 2006	\$ (225,036)	1-Year	\$ (601,232)
3. Change in Medicare Part B Assumption	June 30, 2006	\$ 0	1-Year	\$ 0
4. Change in Assumptions	June 30, 2007	\$ 12,795	1-Year	\$ 25,775
5. TRS 55/25 Refinement	June 30, 2008	\$ 0	1-Year	\$ 0
6. Change in Assumptions	June 30, 2008	\$ 945	1-Year	\$ 1,459
7. Change in Assumptions	June 30, 2009	\$ 35,773	1-Year	\$ 44,317
8. Change in Assumptions	June 30, 2010	<u>\$ 28,822</u>	1-Year	<u>\$ 28,822</u>
TOTAL		\$ 161,647		\$ 562,510

**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**GASB45 Results for the City of New York (Excluding Component Units)**  
**Summary of Data**  
**By System Not Including Component Units <sup>1</sup>**

	NYCERS	TRS	BERS	POLICE	FIRE	NYCRS TOTAL
<b>1. Actives</b>						
a. Number	96,703	109,727	22,727	34,597	11,080	274,834
b. Salary	\$6,287,084,362	\$7,854,471,564	\$850,999,782	\$3,383,959,457	\$1,112,952,551	\$19,489,467,716
c. Average Age	46.65	44.46	51.21	37.37	39.49	44.70
d. Average Service	12.23	11.00	9.86	11.59	12.84	11.49
e. Average Salary	\$65,014	\$71,582	\$37,444	\$97,811	\$100,447	\$70,914
f. Present Value of Future Salary	\$70,712,898,126	\$125,542,796,061	\$9,815,534,763	\$33,593,859,243	\$13,740,134,736	\$253,405,222,929
<b>2. Inactives</b>						
a. Number	10,165	10,606	3,619	1,836	23	26,249
b. Average Age	43.72	37.07	48.47	34.95	35.26	41.07
c. Average Service	7.11	5.41	6.50	2.99	6.09	6.05
<b>3. Deferreds (Includes Deferred Retirees, if any)</b>						
a. Number	5,139	7,310	196	800	32	13,477
b. Average Age	52.32	49.40	55.16	40.69	41.28	50.06
<b>4. Retirees</b>						
a. Total <sup>3</sup>						
i. Number	63,612	65,868	12,965	43,692	16,300	202,437
ii. Average Age	69.49	71.69	74.07	60.77	65.68	68.31
b. By Benefit*	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>
i. Pre-Medicare**	20,325 / 14,595	17,249 / 7,852	1,982 / 1,013	25,292 / 21,311	6,804 / 6,834	71,652 / 51,605
ii. Medicare Eligible**	43,312 / 13,838	48,619 / 14,209	11,109 / 3,471	18,400 / 9,637	9,496 / 5,265	130,936 / 46,420
iii. Welfare Fund**	63,550 / NA	64,252 / NA	12,563 / NA	42,352 / NA	15,222 / NA	197,939 / NA
iv. Medicare Part B <sup>#</sup>	82,800 / 33,755	67,990 / 23,073	13,127 / 4,492	43,692 / 30,948	16,300 / 12,099	223,909 / 104,367
	<b>TIAA</b>	<b>LODW</b>				<b>GRAND TOTAL</b>
<b>1. Actives</b>						
a. Number	2,278	0				277,112
b. Salary	\$182,992,353	0				\$19,672,460,069
c. Average Age	50.90	NA				44.75
d. Average Service	16.17	NA				11.53
e. Average Salary	\$80,330	NA				\$70,991
f. Present Value of Future Salary	\$2,537,335,528	0				\$255,942,558,457
<b>2. Inactives</b>						
a. Number	82	0				26,331
b. Average Age	56.43	NA				41.12
c. Average Service	21.27	NA				6.10
<b>3. Deferreds (Includes Deferred Retirees, if any)</b>						
a. Number	72 <sup>2</sup>	0				13,549
b. Average Age	54.56	NA				50.08
<b>4. Retirees</b>						
a. Total						
i. Number	435 <sup>2</sup>	783				203,655
ii. Average Age	74.01	76.56				68.35
b. By Benefit*	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>				<u>Participant / Spouse</u>
i. Pre-Medicare**	33 / 45	69 / 0				71,754 / 51,650
ii. Medicare Eligible**	402 / 148	714 / 8				132,052 / 46,576
iii. Welfare Fund**	435 / NA	NA / NA				198,374 / NA
iv. Medicare Part B <sup>#</sup>	2,176 / 962	783 / 8				226,868 / 105,337

1 City results also include Medicare Part B coverage for 45,227 actives, 5,591 inactives, 24,294 retirees and 2,159 deferred participants in HHC, SCA, WFA and CUNY Senior Colleges and Health Insurance coverage for 617 actives, 51 inactives, 1,232 retirees and 5 deferred participants in NYCHA (Housing Police retirees only) and SCA and Welfare Fund coverage for 3,805 actives, 576 inactives, 3,194 retirees and 66 deferred participants in NYCHA (Housing Police retirees only) and non-pedagogical CUNY Senior Colleges.

2 Estimate due to lack of data.

3 Retirees eligible for receipt of Health Insurance, excluding Component Units.

\* Includes Component Unit participants with City-provided benefits.

\*\* Retirees currently eligible for benefit.

# Retirees eligible for benefit now or in the future.

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation GASB45 Results for the City of New York (Excluding Component Units) Development of Normal Cost

1. Total Present Value of Projected Benefits <sup>1</sup>	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Total
a. Active <sup>2</sup>	\$35,380,038,801	\$18,555,380,695	\$16,019,033,306	\$12,418,079,388	<b>\$82,372,532,190</b>
b. Deferred <sup>3</sup>	1,710,108,196	935,761,105	849,694,031	632,959,659	<b>4,128,522,991</b>
c. Retired	<u>12,583,099,596</u>	<u>10,195,800,229</u>	<u>7,464,012,793</u>	<u>6,279,788,197</u>	<b><u>36,522,700,815</u></b>
d. TOTAL	<b>\$49,673,246,593</b>	<b>\$29,686,942,029</b>	<b>\$24,332,740,130</b>	<b>\$19,330,827,244</b>	<b>\$123,023,755,996</b>
2. Actuarial Value of Assets					<b>\$3,022,624,061</b>
3. Unfunded Frozen Entry Age Actuarial Accrued Liability					<b>\$79,017,735,914</b>
4. Present Value of Future Normal Costs [1d. - 2. - 3.]					<b>\$40,983,396,021</b>
5. Present Value of Future Salary					<b>\$255,942,558,457</b>
6. Normal Cost Percentage [4. / 5.]					<b>16.013%</b>
7. Salary of Active Participants					<b>\$19,672,460,069</b>
8. Frozen Entry Age Normal Cost [6. * 7.]					<b>\$3,150,151,031</b>

<sup>1</sup> City results also include Medicare Part B coverage for 45,227 actives, 5,591 inactive, 24,294 retirees and 2,159 deferred participants in HHC, SCA, WFA and CUNY Senior Colleges and Health Insurance coverage for 617 actives, 51 inactive, 1,232 retirees and 5 deferred participants in NYCHA (Housing Police retirees only) and SCA and Welfare Fund coverage for 3,805 actives, 576 inactive, 3,194 retirees and 66 deferred participants in NYCHA (Housing Police retirees only) and non-pedagogical CUNY Senior Colleges.

<sup>2</sup> Includes Inactives, if any.

<sup>3</sup> Includes Deferred Retirees, if any.

**New York City Health Benefits Program****June 30, 2010 OPEB Actuarial Valuation  
GASB45 Results for the City of New York (Excluding Component Units)  
Development of the Annual Required Contribution (ARC)  
For the Fiscal Year Ending June 30, 2011**

1. Normal Cost at June 30, 2010	\$3,150,151,031
2. Amortization of Unfunded Actuarial Accrued Liability - BOY	<u>79,017,735,914</u>
3. Subtotal	\$82,167,886,945
4. Interest to June 30, 2011 at 4.0%	<u>3,286,715,478</u>
5. Annual Required Contribution (ARC)	\$85,454,602,423

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation GASB45 Results for the City of New York (Excluding Component Units) Development of the Annual OPEB Cost (AOC) and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2011

#### 1. Annual OPEB Cost (AOC)

a. Net OPEB Obligation at June 30, 2010	\$74,962,725,178
b. Annual Required Contribution (ARC)	
i. Normal Cost	\$3,150,151,031
ii. UAAL Amortization Payment	79,017,735,914
iii. Interest to End of Year	<u>3,286,715,478</u>
iv. Total	\$85,454,602,423
c. ARC Adjustment	\$77,961,234,185
d. Interest on Net OPEB Obligation	\$2,998,509,007
e. Fiscal Year 2011 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	\$10,491,877,245

#### 2. Net OPEB Obligation (NOO)

a. Net OPEB Obligation at June 30, 2010	\$74,962,725,178
b. Fiscal Year 2011 Annual OPEB Cost (AOC)	\$10,491,877,245
c. Fiscal Year 2011 Employer Contributions	\$1,572,513,215 *
d. Net OPEB Obligation (NOO) at June 30, 2011 (2a.+ 2b.-2c.)	\$83,882,089,208

\* Employer Contributions include amounts provided by OMB including the effect of non-trust activity for Fiscal Year 2011.



## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation GASB45 Results for the City of New York (Excluding Component Units)

#### Required Supplementary Information (RSI) and Additional Note Disclosure For the Fiscal Year Ending June 30, 2011

#### Required Supplementary Information Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Frozen Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2010	\$3,022,624,061	\$82,040,359,975	\$79,017,735,914	3.7%	\$19,672,460,069	401.7%
June 30, 2009	\$3,103,186,200	\$73,653,281,314	\$70,550,095,114	4.2%	\$19,412,072,236	363.4%
June 30, 2008	\$3,186,139,468	\$65,144,934,748	\$61,958,795,280	4.9%	\$18,672,219,289	331.8%
June 30, 2007	\$2,594,451,907	\$62,116,926,083	\$59,522,474,176	4.2%	\$17,314,779,336	343.8%
June 30, 2006	\$1,001,331,648	\$56,060,000,324	\$55,058,668,676	1.8%	\$16,510,165,373	333.5%
June 30, 2005	\$0	\$50,523,014,097	\$50,523,014,097	0.0%	\$15,703,554,657	321.7%

#### Additional Note Disclosure Annual OPEB Cost and Net OPEB Obligation <sup>1</sup>

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
June 30, 2011	\$10,494,992,804	15.0% <sup>2</sup>	\$83,906,954,150
June 30, 2010	\$11,021,425,000	14.3% <sup>2</sup>	\$74,984,832,000
June 30, 2009	\$3,937,583,000	42.8% <sup>3</sup>	\$65,544,361,000
June 30, 2008	\$7,419,205,000	25.5%	\$63,290,218,000 <sup>4</sup>
June 30, 2007	\$7,164,986,000	40.6%	\$57,761,938,000
June 30, 2006	\$55,690,322,000	3.9%	\$53,507,451,000

<sup>1</sup> Amounts shown for Fiscal Years prior to Fiscal Year 2011 are as published in the City CAFR. Includes amounts for ECF and SCA.

<sup>2</sup> Includes non-trust activity.

<sup>3</sup> Includes cumulative adjustment for approximate non-trust activity for Fiscal Years ending 6/30/06, 6/30/07 and 6/30/08.

<sup>4</sup> As published. Correct amount should be \$63,289,913,000.

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation GASB45 Results for the City of New York (Excluding Component Units) Derivation of Unfunded Actuarial Accrued Liability

<b>1. Unfunded Actuarial Accrued Liability at June 30, 2009</b>	<b>\$70,550,095,114</b>
<b>2. Frozen Entry Age Normal Cost at June 30, 2009</b>	<b>3,049,248,307</b>
<b>3. Interest on 1. and 2. @ 4.00%</b>	<b>2,943,973,737</b>
<b>4. Adjustments if any</b>	<b>0</b>
<b>5. Fiscal Year 2010 Employer Contributions</b>	<b>1,580,591,980</b>
<b>6. Preliminary Unfunded Actuarial Accrued Liability at June 30, 2010 (1.+2.+3.+4.-5.)</b>	<b>74,962,725,178</b>
<b>7. Changes in Assumptions<sup>1</sup></b>	<b>4,055,010,736</b>
<b>8. Unfunded Actuarial Accrued Liability at June 30, 2010 (6.+7.)</b>	<b>\$79,017,735,914</b>

<sup>1</sup> Updated Probabilities of Post-Retirement Mortality.  
Assume Approximately 40% of Inactives Receive OPEB Benefits.  
Extend Lifetime COBRA Benefits - Corrections and Sanitation.  
Value of Surviving Spouse Benefit Assumption - POLICE and FIRE.

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation GASB45 Results for the City of New York (Excluding Component Units) Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Amortization Period	Balance
1. Transition Liability	June 30, 2005	\$ 50,523,014,097	1-Year	\$ 66,996,849,870
2. Refinements	June 30, 2006	\$ 852,676,937	1-Year	\$ 1,068,126,983
3. Change in Medicare Part B Assumption	June 30, 2006	\$ 722,960,505	1-Year	\$ 905,634,466
4. Changes in Assumptions	June 30, 2007	\$ 1,598,413,784	1-Year	\$ 1,909,197,178
5. Plan Amendments	June 30, 2007	\$ 180,639,690	1-Year	\$ 215,761,894
6. TRS 55/25 Refinement	June 30, 2008	\$ 55,019,043	1-Year	\$ 61,823,757
7. Changes in Assumptions	June 30, 2008	\$ (1,366,565,819)	1-Year	\$ (1,535,581,652)
8. Changes in Assumptions	June 30, 2009	\$ 5,026,523,473	1-Year	\$ 5,340,912,682
9. Changes in Assumptions	June 30, 2010	<u>\$ 4,055,010,736</u>	1-Year	<u>\$ 4,055,010,736</u>
TOTAL		\$ 61,647,692,446		\$ 79,017,735,914

**New York City Health Benefits Program**  
**June 30, 2010 OPEB Actuarial Valuation**  
**GASB43 Results for the New York City Other Postemployment Benefits Plan**  
**Summary of Data**  
**By System Not Including Component Units <sup>1</sup>**

	NYCERS	TRS	BERS	POLICE	FIRE	NYCRS TOTAL
<b>1. Actives</b>						
a. Number	96,703	109,727	22,727	34,597	11,080	274,834
b. Salary	\$6,287,084,362	\$7,854,471,564	\$850,999,782	\$3,383,959,457	\$1,112,952,551	\$19,489,467,716
c. Average Age	46.65	44.46	51.21	37.37	39.49	44.70
d. Average Service	12.23	11.00	9.86	11.59	12.84	11.49
e. Average Salary	\$65,014	\$71,582	\$37,444	\$97,811	\$100,447	\$70,914
f. Present Value of Future Salary	\$70,712,898,126	\$125,542,796,061	\$9,815,534,763	\$33,593,859,243	\$13,740,134,736	\$253,405,222,929
<b>2. Inactives</b>						
a. Number	10,165	10,606	3,619	1,836	23	26,249
b. Average Age	43.72	37.07	48.47	34.95	35.26	41.07
c. Average Service	7.11	5.41	6.50	2.99	6.09	6.05
<b>3. Deferreds (Includes Deferred Retirees, if any)</b>						
a. Number	5,139	7,310	196	800	32	13,477
b. Average Age	52.32	49.40	55.16	40.69	41.28	50.06
<b>4. Retirees</b>						
a. Total <sup>3</sup>						
i. Number	63,612	65,868	12,965	43,692	16,300	202,437
ii. Average Age	69.49	71.69	74.07	60.77	65.68	68.31
b. By Benefit*	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>
i. Pre-Medicare**	20,325 / 14,595	17,249 / 7,852	1,982 / 1,013	25,292 / 21,311	6,804 / 6,834	71,652 / 51,605
ii. Medicare Eligible**	43,312 / 13,838	48,619 / 14,209	11,109 / 3,471	18,400 / 9,637	9,496 / 5,265	130,936 / 46,420
iii. Welfare Fund**	63,550 / NA	64,252 / NA	12,563 / NA	42,352 / NA	15,222 / NA	197,939 / NA
iv. Medicare Part B <sup>#</sup>	82,800 / 33,755	67,990 / 23,073	13,127 / 4,492	43,692 / 30,948	16,300 / 12,099	223,909 / 104,367
	TIAA	LODW				GRAND TOTAL
<b>1. Actives</b>						
a. Number	2,278	0				277,112
b. Salary	\$182,992,353	0				\$19,672,460,069
c. Average Age	50.90	NA				44.75
d. Average Service	16.17	NA				11.53
e. Average Salary	\$80,330	NA				\$70,991
f. Present Value of Future Salary	\$2,537,335,528	0				\$255,942,558,457
<b>2. Inactives</b>						
a. Number	82	0				26,331
b. Average Age	56.43	NA				41.12
c. Average Service	21.27	NA				6.10
<b>3. Deferreds (Includes Deferred Retirees, if any)</b>						
a. Number	72 <sup>2</sup>	0				13,549
b. Average Age	54.56	NA				50.08
<b>4. Retirees</b>						
a. Total						
i. Number	435 <sup>2</sup>	783				203,655
ii. Average Age	74.01	76.56				68.35
b. By Benefit*	<u>Participant / Spouse</u>	<u>Participant / Spouse</u>				<u>Participant / Spouse</u>
i. Pre-Medicare**	33 / 45	69 / 0				71,754 / 51,650
ii. Medicare Eligible**	402 / 148	714 / 8				132,052 / 46,576
iii. Welfare Fund**	435 / NA	NA / NA				198,374 / NA
iv. Medicare Part B <sup>#</sup>	2,176 / 962	783 / 8				226,868 / 105,337

1 City results also include Medicare Part B coverage for 45,227 actives, 5,591 inactives, 24,294 retirees and 2,159 deferred participants in HHC, SCA, WFA and CUNY Senior Colleges and Health Insurance coverage for 617 actives, 51 inactives, 1,232 retirees and 5 deferred participants in NYCHA (Housing Police retirees only) and SCA and Welfare Fund coverage for 3,805 actives, 576 inactives, 3,194 retirees and 66 deferred participants in NYCHA (Housing Police retirees only) and non-pedagogical CUNY Senior Colleges.

2 Estimate due to lack of data.

3 Retirees eligible for receipt of Health Insurance, excluding Component Units.

\* Includes Component Unit participants with City-provided benefits.

\*\* Retirees currently eligible for benefit.

# Retirees eligible for benefit now or in the future.

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation  
GASB43 Results for the New York City Other Postemployment Benefits Plan  
Development of Normal Cost**

<b>1. Total Present Value of Projected Benefits <sup>1</sup></b>	<b>Pre-Medicare</b>	<b>Medicare</b>	<b>Welfare Funds</b>	<b>Part B Premium</b>	<b>Total</b>
<b>a. Active <sup>2</sup></b>	\$35,380,038,801	\$18,555,380,695	\$16,019,033,306	\$12,418,079,388	<b>\$82,372,532,190</b>
<b>b. Deferred <sup>3</sup></b>	1,710,108,196	935,761,105	849,694,031	632,959,659	<b>4,128,522,991</b>
<b>c. Retired</b>	<u>12,583,099,596</u>	<u>10,195,800,229</u>	<u>7,464,012,793</u>	<u>6,279,788,197</u>	<b><u>36,522,700,815</u></b>
<b>d. TOTAL</b>	<b>\$49,673,246,593</b>	<b>\$29,686,942,029</b>	<b>\$24,332,740,130</b>	<b>\$19,330,827,244</b>	<b>\$123,023,755,996</b>
<b>2. Actuarial Value of Assets</b>					<b>\$3,022,624,061</b>
<b>3. Unfunded Frozen Entry Age Actuarial Accrued Liability</b>					<b>\$79,017,735,914</b>
<b>4. Present Value of Future Normal Costs</b> [1d. - 2. - 3.]					<b>\$40,983,396,021</b>
<b>5. Present Value of Future Salary</b>					<b>\$255,942,558,457</b>
<b>6. Normal Cost Percentage</b> [4. / 5.]					<b>16.013%</b>
<b>7. Salary of Active Participants</b>					<b>\$19,672,460,069</b>
<b>8. Frozen Entry Age Normal Cost</b> [6. * 7.]					<b>\$3,150,151,031</b>

<sup>1</sup> City results also include Medicare Part B coverage for 45,227 actives, 5,591 inactives, 24,294 retirees and 2,159 deferred participants in HHC, SCA, WFA and CUNY Senior Colleges and Health Insurance coverage for 617 actives, 51 inactives, 1,232 retirees and 5 deferred participants in NYCHA (Housing Police retirees only) and SCA and Welfare Fund coverage for 3,805 actives, 576 inactives, 3,194 retirees and 66 deferred participants in NYCHA (Housing Police retirees only) and non-pedagogical CUNY Senior Colleges.

<sup>2</sup> Includes Inactives, if any.

<sup>3</sup> Includes Deferred Retirees, if any.

**New York City Health Benefits Program**

**June 30, 2010 OPEB Actuarial Valuation**  
**GASB43 Results for the New York City Other Postemployment Benefits Plan**  
**Development of the Annual Required Contribution (ARC)**  
**For the Fiscal Year Ending June 30, 2011**

1. Normal Cost at June 30, 2010	\$3,150,151,031
2. Amortization of Unfunded Actuarial Accrued Liability - BOY	<u>79,017,735,914</u>
3. Subtotal	\$82,167,886,945
4. Interest to June 30, 2011 at 4.0%	<u>3,286,715,478</u>
5. Annual Required Contribution (ARC)	\$85,454,602,423

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation GASB43 Results for the New York City Other Postemployment Benefits Plan

#### Required Supplementary Information (RSI) and Additional Note Disclosure For the Fiscal Year Ending June 30, 2011

#### Required Supplementary Information Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Frozen Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2010	\$3,022,624,061	\$82,040,359,975	\$79,017,735,914	3.7%	\$19,672,460,069	401.7%
June 30, 2009	\$3,103,186,200	\$73,653,281,314	\$70,550,095,114	4.2%	\$19,412,072,236	363.4%
June 30, 2008	\$3,186,139,468	\$65,144,934,748	\$61,958,795,280	4.9%	\$18,672,219,289	331.8%
June 30, 2007	\$2,594,451,907	\$62,116,926,083	\$59,522,474,176	4.2%	\$17,314,779,336	343.8%
June 30, 2006	\$1,001,331,648	\$56,060,000,324	\$55,058,668,676	1.8%	\$16,510,165,373	333.5%
June 30, 2005	\$0	\$50,523,014,097	\$50,523,014,097	0.0%	\$15,703,554,657	321.7%

#### Schedule of Employer Contributions

Fiscal Year Ended	Annual Required Contribution	Percentage Contributed
June 30, 2011	\$85,454,602,423	1.8% <sup>1</sup>
June 30, 2010	\$76,543,317,158	2.1% <sup>1</sup>
June 30, 2009	\$67,206,700,283	2.5% <sup>2</sup>
June 30, 2008	\$65,161,266,615	2.9%
June 30, 2007	\$60,653,920,448	4.8%
June 30, 2006	\$55,665,901,829	3.9%

<sup>1</sup> Includes non-trust activity.

<sup>2</sup> Includes cumulative adjustment for approximate non-trust activity for Fiscal Years ending 6/30/06, 6/30/07, 6/30/08 and 6/30/09.

## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation GASB43 Results for the New York City Other Postemployment Benefits Plan Derivation of Unfunded Actuarial Accrued Liability

<b>1. Unfunded Actuarial Accrued Liability at June 30, 2009</b>	<b>\$70,550,095,114</b>
<b>2. Frozen Entry Age Normal Cost at June 30, 2009</b>	<b>3,049,248,307</b>
<b>3. Interest on 1. and 2. @ 4.00%</b>	<b>2,943,973,737</b>
<b>4. Adjustments if any</b>	<b>0</b>
<b>5. Fiscal Year 2010 Employer Contributions</b>	<b>1,580,591,980</b>
<b>6. Preliminary Unfunded Actuarial Accrued Liability at June 30, 2010 (1.+2.+3.+4.-5.)</b>	<b>74,962,725,178</b>
<b>7. Changes in Assumptions<sup>1</sup></b>	<b>4,055,010,736</b>
<b>8. Unfunded Actuarial Accrued Liability at June 30, 2010 (6.+7.)</b>	<b>\$79,017,735,914</b>

<sup>1</sup> Updated Probabilities of Post-Retirement Mortality.  
Assume Approximately 40% of Inactives Receive OPEB Benefits.  
Extend Lifetime COBRA Benefits - Corrections and Sanitation.  
Value of Surviving Spouse Benefit Assumption - POLICE and FIRE.



## New York City Health Benefits Program

### June 30, 2010 OPEB Actuarial Valuation GASB43 Results for the New York City Other Postemployment Benefits Plan Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Amortization Period	Balance
1. Transition Liability	June 30, 2005	\$ 50,523,014,097	1-Year	\$ 66,996,849,870
2. Refinements	June 30, 2006	\$ 852,676,937	1-Year	\$ 1,068,126,983
3. Change in Medicare Part B Assumption	June 30, 2006	\$ 722,960,505	1-Year	\$ 905,634,466
4. Changes in Assumptions	June 30, 2007	\$ 1,598,413,784	1-Year	\$ 1,909,197,178
5. Plan Amendments	June 30, 2007	\$ 180,639,690	1-Year	\$ 215,761,894
6. TRS 55/25 Refinement	June 30, 2008	\$ 55,019,043	1-Year	\$ 61,823,757
7. Changes in Assumptions	June 30, 2008	\$ (1,366,565,819)	1-Year	\$ (1,535,581,652)
8. Changes in Assumptions	June 30, 2009	\$ 5,026,523,473	1-Year	\$ 5,340,912,682
9. Changes in Assumptions	June 30, 2010	<u>\$ 4,055,010,736</u>	1-Year	<u>\$ 4,055,010,736</u>
TOTAL		\$ 61,647,692,446		\$ 79,017,735,914

**APPENDIX D**

**APPENDIX D - NEW YORK CITY HEALTH BENEFITS PROGRAM**  
**DETAILS OF ACTUARIAL ASSUMPTIONS AND CERTAIN METHODS**

**Actuarial Assumptions**

The actuarial assumptions used in the June 30, 2010 and the June 30, 2009 OPEB actuarial valuations are classified as those used in the NYCRS valuations and those specific to the OPEB actuarial valuations.

**NYCRS Valuations**

The actuarial assumptions used to value the NYCRS are provided in the following five reports (the "GOLD BOOKS"):

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2005 for the New York City Employees' Retirement System dated August 29, 2005.

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2005 for the New York City Teachers' Retirement System dated August 31, 2005.
- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2005 for the New York City Board of Education Retirement System dated August 31, 2005.
- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2005 for the New York City Police Pension Fund dated August 24, 2005.
- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2005 for the New York City Fire Pension Fund dated August 31, 2005.

The demographic assumptions requiring Board approval were adopted by each NYCERS Board of Trustees during Fiscal Year 2006. Those actuarial assumptions and methods that required New York State legislation were enacted, effective for Fiscal Year 2006 and later, as Chapter 152 of the Laws of 2006 ("Chapter 152/06").

These demographic assumptions are unchanged from the June 30, 2009 OPEB actuarial valuation except as noted hereafter.

Note: The OPEB actuarial valuation herein incorporates only the use of the demographic and salary increase assumptions set forth in the GOLD BOOKS.

In the case of TRS members, the demographic assumptions include supplemental probabilities of retirement specific to the optional 55/25 Plan (Appendix G-1).

In the case of POLICE members, the demographic assumptions include supplemental assumptions used to value Tier III benefits (Appendix G-2). These Tier III assumptions were adopted by the POLICE Board of Trustees on May 11, 2011.

For the June 30, 2010 OPEB actuarial valuation mortality after service retirement and mortality after disability retirement reflect the assumptions shown in Appendix G-3 (instead of the assumptions shown in the GOLD BOOKS).

The other actuarial assumptions and methods used in the OPEB actuarial valuation are set forth in this Report.

Also Note: The actuarial assumptions used in the actuarial valuation of ECF and CUNY TIAA members are set forth in Appendices E and F, respectively.

## **Changes in Actuarial Assumptions and Methods**

The Actuary is likely to propose new packages of actuarial assumptions and methods to be effective for use in determining NYCERS employer contributions beginning Fiscal Year 2012 (i.e., effective June 30, 2010). As such, not all demographic assumptions employed in determining the OPEB liabilities contained in this Report represent the Actuary's current best estimate of future experience. However, in general, for other than post-retirement mortality assumptions, the demographic assumptions used to determine the OPEB liabilities contained in this Report are those adopted by Board of Trustees of each NYCERS and are sufficient for the purpose of this Report.

**OPEB Assumptions**

The OPEB-specific actuarial assumptions used in the June 30, 2010 OPEB actuarial valuation of the Program are as follows:

Valuation Date..... June 30, 2010.  
Discount Rate..... 4.0% per annum.<sup>1</sup>  
Per-Capita Claims Costs..... HIP HMO and GHI/EBCBS benefit costs reflect age adjusted premiums. Age adjustments from assumed average age of covered population for non-Medicare retirees and HIP HMO Medicare retirees.

Age adjustment based on actual age distribution of the GHI/EBCBS Medicare covered population.

Insured premiums without age adjustment for other coverage. Premiums assumed to include administrative costs.

Employer premium contribution schedules for the month of July 2010 and January 2011 were reported by OLR. In most cases the premium contributions remained the same throughout the year. HIP HMO Medicare rates varied by date and by specific Plan option. These variations are the result of differing Medicare Advantage reimbursements. The various monthly rates were blended by proportion of enrollment. For other rates, where the January 2011 premium rate was different than the July 2010 premium rate, the valuation assumed that the January 2011 rate was more representative of long-range cost of the arrangement.

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<sup>1</sup> 2.5% CPI, 1.5% real rate of return on short-term investments.



Initial monthly premium rates used in valuations are shown in the following tables:

Plan	MONTHLY RATES	
	FY11 <sup>1</sup>	FY10 <sup>2</sup>
HIP HMO		
Non-Medicare Single	\$ 462.43	\$ 415.62
Non-Medicare Family	\$1,132.93	\$1,018.26
Medicare	\$ 132.40	\$ 88.78
GHI/EBCBS		
Non-Medicare Single	\$ 418.94	\$ 380.95
Non-Medicare Family	\$1,087.56	\$ 987.91
Medicare	\$ 166.00	\$ 153.69
Others		
Non-Medicare Single	\$ 462.43	\$ 415.32
Non-Medicare Family	\$1,132.93	\$1,017.52
Medicare	\$ 166.00	\$ 153.69

<sup>1</sup> Used in June 30, 2010 actuarial valuation.

<sup>2</sup> Used in June 30, 2009 actuarial valuation.

Welfare Funds..... Welfare Fund contributions reflect a three-year trended average of reported annual contribution amounts for current retirees. A trended average is used instead of a single reported Welfare Fund amount to smooth out negotiated variations. The Welfare Fund rates reported for the previous two valuations were trended to current levels based on a historic increase rate of 2.4% for Fiscal Year 2010 and 3.9% for Fiscal Year 2009 and earlier, approximating overall recent growth of Welfare Fund contributions.

For the June 30, 2009 and the June 30, 2010 OPEB actuarial valuations, certain lump-sum amounts have been included in calculating the three-year trended average. Furthermore, for the June 30, 2010 OPEB actuarial valuation, retroactive adjustments to Welfare Fund contribution rates were used in the trended average as of the dates they were effective (i.e., using the retroactive date).

Reported annual contribution amounts for the last three years shown in Appendix B, Tables 2a to 2e, for Fiscal Year 2011 used for current retirees.

Weighted average annual contribution rates used for future retirees:

	Annual Rate	
	FY11	FY10
NYCERS	\$1,789	\$1,790
TRS	1,871	1,835
BERS	1,782	1,792
POLICE	1,734	1,677
FIRE	1,764	1,744

Contributions were assumed to increase by Medicare Plans trend rates.

For Welfare Fund contribution amounts reflected in the June 30, 2009 OPEB actuarial valuation for current retirees, see "Report on the Fifth Annual Actuarial Valuation of Other Postemployment Benefits Provided under the New York City Health Benefits Program" dated September 23, 2010.

Medicare Part B Premiums.....	<u>Calendar Year</u>	<u>Monthly Premium</u>
	2008	\$96.40
	2009	\$96.40
	2010 (announced)	\$110.50
	2010 (used)	\$100.21
	2011 (announced)	\$115.40*
	2011 (used)	\$101.53*

\* Reflected only in June 30, 2010 OPEB actuarial valuation.

2011 Medicare Part B Premium assumed to increase by Medicare Part B trend rates.

Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2011. The actual 2012 Medicare Part B Premium was not announced at the time these calculations were prepared and, thus, was not reflected in the valuation.

Due to the fact that there were no cost-of-living increases in Social Security benefits for Calendar Years 2010 and 2011, most Medicare Part B participants will not actually be charged the Medicare Part B Premium announced for 2011.

For anyone having their standard Medicare Part B Premium paid out of their Social Security check in 2009, the Medicare Part B Premium is frozen at the 2009 level. Individuals first collecting Social Security in 2010, or who first pay Medicare Part B Premiums in 2010 (e.g., turning age 65) would pay the full base 2010 premium of \$110.50. This will continue for 2011.

Individuals first collecting Social Security in 2011, or who first pay Medicare Part B Premiums in 2011 would pay the full base premium of \$115.40, while those who first were covered in 2010 would pay \$110.50 throughout 2011 as well. Individuals whose Medicare Part B Premiums are paid directly by other entities (e.g., Medicaid for individuals in a nursing home) would have \$110.50 paid on their behalf during 2010, and \$115.40 paid on their behalf during 2011.

Individuals who pay the Medicare Part B Income Related Monthly Adjustment Amount ("IRMAA") are not subject to the freeze, and paid higher amounts during 2010 that are predicted on the \$110.50. For 2011 they will pay higher amounts predicated on the \$115.40. The Federal government estimates that about 3/4 of Medicare retirees will owe only \$96.40 or \$110.50 per month during 2011.

For the June 30, 2009 OPEB actuarial valuation (i.e., Fiscal Year 2010), the annual premium used (i.e., \$1,179.64) equaled 6 months of the Calendar Year 2009 premium plus 6 months of:

- 73% of the Calendar Year 2009 monthly premium (i.e., \$96.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and
- 27% of the Calendar Year 2010 monthly premium (i.e., \$110.50), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2010 amount.

For the June 30, 2010 OPEB actuarial valuation (i.e., Fiscal Year 2011), the annual premium used (i.e., \$1,210.44) equals 6 months of the Calendar Year 2010 premium (i.e., 73% of \$96.40 + 27% of \$110.50) plus 6 months of:

- 73% of the Calendar Year 2009 monthly premium (i.e., \$96.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and
- 27% of the announced Calendar Year 2011 monthly premium (i.e., \$115.40), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2011 amount.

These blended premiums reflect an approximation of the overall amount collected for Medicare Part B and are a better measure upon which to base future projections.

Overall Medicare Part B Premium amounts assumed to increase by the following percentages to reflect the income-related increases in Medicare Part B Premiums for high income individuals.

Fiscal Year	Income-related Medicare Part B Increase	
	June 30, 2010 Valuation	June 30, 2009 Valuation
2010	NA	3.3%
2011	3.4%	3.4%
2012	3.5%	3.5%
2013	3.6%	3.6%
2014 and later	Increasing by .1% per year to a maximum of 5.0%	Increasing by .1% per year to a maximum of 5.0%

Medicare Part B Premium Reimbursement Assumption..... For the June 30, 2010 OPEB actuarial valuation, 90% of Medicare participants are assumed to claim reimbursement (unchanged from last year).

Health Care Cost Trend Rate ("HCCTR")..... Covered medical expenses are assumed to increase by the following percentages (unchanged from last valuation):

<b>HCCTR ASSUMPTIONS</b>			
Year Ending*	Pre-Medicare Plans	Medicare Plans	Medicare Part B Premiums
2011**	9.5%	5.0%	8.0%
2012	9.5%	5.0%	7.5%
2013	9.5%	5.0%	7.0%
2014	9.5%	5.0%	6.5%
2015	9.0%	5.0%	6.0%
2016	8.5%	5.0%	5.5%
2017	8.0%	5.0%	5.0%
2018	7.5%	5.0%	5.0%
2019	7.0%	5.0%	5.0%
2020	6.5%	5.0%	5.0%
2021	6.0%	5.0%	5.0%
2022	5.5%	5.0%	5.0%
2023 and later	5.0%	5.0%	5.0%
<p>* Fiscal Year for Pre-Medicare Plans and Medicare Plans and Calendar Year for Medicare Part B Premiums.</p> <p>** For the June 30, 2010 OPEB actuarial valuation, rates shown for 2011 were not reflected since actual values for the Fiscal Year 2011 per capita costs, Fiscal Year 2011 Welfare Fund contributions and Calendar Year 2011 Medicare Part B Premium amounts were used.</p>			

Age-Related Morbidity.....

Assumed increases in premiums per year of age for HIP HMO and GHI/EBCBS consistent with those set forth in a July 2005 article in North American Actuarial Journal by Jeffrey R. Petertil.

<u>Age</u>	<u>Annual Increase</u>
Under 40	0.0%
40 - 49	3.0%
50 - 54	3.3%
55 - 59	3.6%
60 - 64	4.2%
65 - 69	3.0%
70 - 74	2.5%
75 - 79	2.0%
80 - 84	1.0%
85 - 89	0.5%
90 and over	0.0%

The premiums are age adjusted for HIP HMO and GHI/EBCBS participants. The age adjustments were based on assumed age 40 for non-Medicare-eligible retirees and assumed age 73 for HIP HMO Medicare-eligible retirees. An actual age distribution based on reported census information was used for Medicare-eligible GHI/EBCBS retirees and dependents.

The age adjustment for the non-Medicare GHI/EBCBS premium reflects a 5% (unchanged) reduction in the GHI portion of the premium for the estimated margin anticipated to be returned. GHI represents \$200.57 of the \$418.94 single non-Medicare GHI/EBCBS monthly rate for the June 30, 2010 OPEB actuarial valuation and \$183.55 of the \$380.95 single non-Medicare GHI/EBCBS monthly rate for the June 30, 2009 OPEB actuarial valuation.

In addition to age adjustment, the premiums for HIP HMO Medicare-eligible retirees were multiplied by the following factors to reflect actual Calendar Year 2011 premiums and future anticipated changes in Medicare Advantage reimbursement rates. As of June 30, 2009 the factors had been updated to reflect that Medicare Advantage reimbursement rates are expected to be significantly reduced over the next several years. The reductions in the reimbursement rates were part of the NHCR legislation and are likely to be most significant in areas where medical costs are greater, such as New York City. In developing the adjustment factors for the June 30, 2009 and the June 30, 2010 OPEB actuarial valuations, it was assumed that the cost of HIP coverage would not be allowed to exceed the cost of GHI/EBCBS coverage for Medicare retirees. The adjustment factors used as of June 30, 2009 are shown for comparative purposes:

Fiscal Year	Factor*	
	6/30/10 Valuation	6/30/09 Valuation
2010	NA	1.0000
2011	1.0000	1.5000
2012	1.0250	1.5800
2013	1.0850	1.6700
2014	1.1500	1.7200
2015	1.2000	1.7200
2016	1.2300	1.7200
Thereafter	1.2300	1.7200

\* Includes anticipated impact of National Health Care Reform.



Medicare.....

Medicare is assumed to be the primary payer over age 65 and for retirees currently on Medicare. For future disability retirements, Medicare is assumed to start 2.5 years after retirement in the June 30 actuarial valuations for the following portion of retirees:

Valuation as of June 30

	<u>2010</u>	<u>2009</u>
NYCERS	35%	35%
TRS	45%	45%
BERS	45%	45%
POLICE	15%	15%
FIRE	20%	20%

Participation.....

Active participation assumptions based on current retiree elections. Actual elections for current retirees. Portions of current retirees not eligible for Medicare are assumed to change elections upon attaining age 65 based on patterns of elections of Medicare-eligible retirees. Detailed assumptions appear in the following tables (while two tables are shown, the participation assumptions were the same in both years):

<b>PLAN PARTICIPATION ASSUMPTIONS</b>					
Benefits	June 30, 2010 Valuation				
	NYCERS	TRS	BERS	POLICE	FIRE
Pre-Medicare					
-GHI/EBCBS	65%	83%	73%	76%	71%
-HIP HMO	22%	6%	16%	13%	16%
-Other HMO	8%	4%	3%	9%	12%
-Waiver	5%	7%	8%	2%	1%
Medicare					
-GHI	72%	87%	78%	82%	77%
-HIP HMO	21%	9%	16%	12%	16%
-Other HMO	4%	2%	2%	4%	6%
-Waiver	3%	2%	4%	2%	1%
Post-Medicare Migration					
-Other HMO to GHI	50%	0%	33%	50%	50%
-HIP HMO to GHI	0%	0%	0%	0%	0%
-Pre-Med. Waiver					
** to GHI @ 65	13%	35%	50%	0%	0%
** to HIP @ 65	13%	35%	0%	0%	0%

PLAN PARTICIPATION ASSUMPTIONS					
Benefits	June 30, 2009 Valuation				
	NYCERS	TRS	BERS	POLICE	FIRE
Pre-Medicare					
-GHI/EBCBS	65%	83%	73%	76%	71%
-HIP HMO	22%	6%	16%	13%	16%
-Other HMO	8%	4%	3%	9%	12%
-Waiver	5%	7%	8%	2%	1%
Medicare					
-GHI	72%	87%	78%	82%	77%
-HIP HMO	21%	9%	16%	12%	16%
-Other HMO	4%	2%	2%	4%	6%
-Waiver	3%	2%	4%	2%	1%
Post-Medicare Migration					
-Other HMO to GHI	50%	0%	33%	50%	50%
-HIP HMO to GHI	0%	0%	0%	0%	0%
-Pre-Med. Waiver					
** to GHI @ 65	13%	35%	50%	0%	0%
** to HIP @ 65	13%	35%	0%	0%	0%

Waivers are assumed to include participants who do not qualify for coverage because they were working less than 20 hours a week at termination.

Dependent Coverage.....

Dependent coverage is assumed to terminate when a retiree dies, except as noted in Section IV.

For survivors of POLICE and FIRE who die other than in the Line of Duty (assumed to be all who terminate with Accidental Death Benefits), and for all survivors of uniformed members of the Departments of Correction and Sanitation, the valuation assumes that 30% of spouses eligible for survivor continuation will elect the benefit, with costs equal to 30% greater than the age-adjusted premiums for surviving spouses for HIP HMO and GHI/EBCBS participants. This assumption was applied only to the survivors of POLICE and FIRE who died other than in the Line of Duty in last year's valuation. Effective for the June 30, 2010 OPEB actuarial valuation, the valuation includes an estimate of the value of benefits provided to existing survivors of POLICE and FIRE retirees who died other than in the Line of Duty, who qualified for lifetime continuation coverage prior to the valuation date, based on the assumptions outlined above. The valuation includes the entire cost of additional surviving spouse benefits for basic coverage and Medicare Part B Premium reimbursement for line of duty survivors, although the OA understands that some of this amount may be reimbursed through Welfare Funds.

Dependents.....

Dependent assumptions based on distribution of coverage of recent retirees which are shown in the following tables. (While two tables are shown, the dependent assumptions were the same in both years.) Wives assumed to be three years younger than husbands. Actual spouse data for current retirees. Child dependents of current retirees assumed to receive coverage until age 26. Child dependents of future retirees assumed to receive coverage for eight years after retirement.

<b>DEPENDENT COVERAGE ASSUMPTIONS</b>					
Group	June 30, 2010 Valuation				
	NYCERS	TRS	BERS	POLICE	FIRE
Male					
-Single Coverage	30%	45%	35%	15%	10%
-Spouse	40%	35%	55%	15%	20%
-Child/No Spouse	5%	5%	2%	5%	5%
-Spouse and Child	25%	15%	8%	65%	65%
Total	100%	100%	100%	100%	100%
Female					
-Single Coverage	70%	60%	60%	45%	10%
-Spouse	20%	32%	35%	10%	20%
-Child/No Spouse	5%	3%	2%	25%	5%
-Spouse and Child	5%	5%	3%	20%	65%
Total	100%	100%	100%	100%	100%

For accidental death, 80% of POLICE and FIRE members are assumed to have family coverage.

<b>DEPENDENT COVERAGE ASSUMPTIONS</b>					
Group	June 30, 2009 Valuation				
	NYCERS	TRS	BERS	POLICE	FIRE
Male					
-Single Coverage	30%	45%	35%	15%	10%
-Spouse	40%	35%	55%	15%	20%
-Child/No Spouse	5%	5%	2%	5%	5%
-Spouse and Child	25%	15%	8%	65%	65%
Total	100%	100%	100%	100%	100%
Female					
-Single Coverage	70%	60%	60%	45%	10%
-Spouse	20%	32%	35%	10%	20%
-Child/No Spouse	5%	3%	2%	25%	5%
-Spouse and Child	5%	5%	3%	20%	65%
Total	100%	100%	100%	100%	100%

For accidental death, 80% of POLICE and FIRE members are assumed to have family coverage.

Demographic Assumptions..... The same assumptions that were used to value the pension benefits of the NYCERS for determining employer contributions for fiscal years beginning 2006 adopted by the Boards of Trustees (see the GOLD BOOKS), with the addition of supplemental assumptions adopted by TRS to value the optional TRS 55/25 Plan and supplemental assumptions adopted by POLICE to value Tier III benefits. For the June 30, 2010 OPEB actuarial valuation, the probabilities of death after service retirement and the probabilities of death after disability retirement have been revised to reflect the Actuary's updated estimates of future experience.

COBRA Benefits..... Although COBRA beneficiaries pay 102% of "premiums," typical claim costs for COBRA participants run about 50% greater than other participants.

There is no cost to the City for COBRA beneficiaries who enroll in community-rated HMO's, including HIP, since these individuals pay their full community rate. However, the City's costs under the experience-rated GHI/EBCBS coverage are affected by the claims for COBRA-covered individuals.

In order to reflect the cost of COBRA coverage, the cost of excess claims for GHI covered individuals and families is estimated assuming 15% of employees not eligible for other benefits included in the valuation elect COBRA coverage for 15 months. These assumptions are based on experience of other large employers. This percentage is applied to the overall enrollment in the active plan and reflects a load for individuals not yet members of the retirement systems who are still eligible for COBRA benefits. This results in an assumption in the June 30, 2010 OPEB actuarial valuation of a lump-sum COBRA cost of \$675 for terminations during Fiscal Year 2011 (\$625 lump-sum cost during Fiscal Year 2010 was assumed in the June 30, 2009 actuarial valuation). The \$675 (\$625) lump-sum amount is increased by the Pre-Medicare HCCTR for future years but is not adjusted for age-related morbidity.

Cadillac Tax..... Effective with the June 30, 2009 OPEB actuarial valuation, a load is applied to all Pre-Medicare, Medicare and Medicare Part B Premium liabilities to estimate the impact of the high cost plan excise tax ("Cadillac Tax") that will be imposed beginning in 2018 under NHCR. The additional Cadillac Tax due to the riders is assumed to be reflected in the contribution required for the rider. The additional Cadillac Tax due to amounts provided by Welfare Funds benefits is assumed to be absorbed by the Welfare Fund or by lower net Welfare Fund contribution amounts. For both the June 30, 2009 and the June 30, 2010 OPEB actuarial valuations the load was 1/2%.

Active/Inactives Liabilities..... For the June 30, 2010 OPEB actuarial valuation it was assumed that the liability for the Active/Inactive members should be 40% of the measured liability of the Active/Inactive population. This is roughly equivalent to assuming 60% of the Active/Inactive members will terminate membership prior to vesting and not receive OPEB.

Stabilization Fund..... A .6% load is applied on all City GASB45 obligations (3/4% in last valuation). The same loads apply to the GASB43 obligations in the current and preceding valuation. The load is not applicable to Component Units.

Educational Construction Fund..... The actuarial assumptions used for determining GASB45 obligations for ECF are shown in Appendix E.

CUNY TIAA..... The actuarial assumptions used for determining obligations for CUNY TIAA are shown in Appendix F.

**APPENDIX E**



**APPENDIX E - EDUCATIONAL CONSTRUCTION FUND**

**ACTUARIAL ASSUMPTIONS AND METHODS AND PLAN PROVISIONS**

The assumptions used for the Educational Construction Fund ("ECF") OPEB actuarial valuation presented in this Report are based on a report on the "Development of Recommended Actuarial Assumptions for New York State/SUNY GASB45 Valuation - Participating Agency Version," dated August 7, 2006, prepared by Buck Consultants, LLC ("State Report"). The OA understands that two more recent versions of that report have been prepared, but that there have been no recommended changes in the demographic assumptions adopted for ECF.

Since ECF employees and retirees participate in the New York State and Local Employees' Retirement System ("NYSLERS") and the New York State Health Insurance Program ("NYSHIP"), the Actuary adopted assumptions based on the recommendations of the State Report.

Following is an overview of the key elements of the plan provisions and actuarial assumptions and methods used for the ECF OPEB actuarial valuation:

- **Eligibility for Benefits:** ECF employees are eligible for retirement and OPEB at age 55 with 10 years of service. Termination after 10 years of service entitles employees to deferred pension benefits and OPEB. Disability retirement with OPEB is available after 10 years of service. Unlike the New York City Health Benefits Program, ECF is assumed to offer retiree health coverage that continues for dependents after the death of the retiree. ECF employees who retire after 1995 are also eligible for dental insurance.
- NYSHIP health benefits consist of a first dollar hospital program, a medical program covering 100% after copayment at participating providers, a managed mental health and substance abuse program, and a card-based prescription drug program. NYSHIP requires retirees to enroll in Medicare Part A and Medicare Part B and mandates that participants be reimbursed for Medicare Part B Premiums.

- Per Capita Plan Costs: As suggested as an alternative in the State Report, the ECF OPEB actuarial valuation uses premium amounts unadjusted for age. The premiums reported to the OA by ECF for health coverage are consistent with the 2011 and 2010 Participating Agency rates for the Empire Plan "Core Plus Enhancements" offering, as follows:

- o Plan Prime (Pre-Medicare)

- Individual - \$693.92 monthly (\$613.34 last year).
- Family - \$1,513.92 monthly (\$1,330.93 last year).

- o Med Prime (Medicare)

- Individual - \$405.64 monthly (\$367.37 last year).
- Family - Two Medicares - \$937.31 monthly (\$840.98 last year).
- 65% of the Med Prime premiums are assumed to reflect the cost for prescription drug benefits (unchanged from last valuation).

- ECF also provided information for dental premiums of \$33.00 per month (\$33.50 last year) for single coverage, \$65.00 per month for two-persons coverage (unchanged) and \$87.00 per month for family coverage (unchanged).
- Calculations reflect actual coverage for current retirees, except that individuals now under age 65 are assumed to qualify for Medicare and receive Medicare Part B Premium reimbursement when they reach age 65.
- Dependents: 80% of employees are assumed to cover a spouse at retirement with husbands 3 years older than their wives.
- Elections: Future retirees are assumed to continue in the health and dental insurance programs.
- Cost Sharing: No retiree contributions are assumed.
- Interest Rate: For the June 30, 2010 and the June 30, 2009 actuarial valuations, 4.0% per annum.

- Trend: Covered medical, dental and Medicare Part B Premiums are assumed to increase by the following percentages:

<b>ECF HCCTR Assumptions*</b>			
Fiscal Year Ending June 30**	Pre-Medicare, Dental and Drug Benefits	Medicare Medical Benefits	Medicare Part B Premiums
2011#	9.50%	5.00%	8.00%
2012	9.50%	5.00%	7.50%
2013	9.50%	5.00%	7.00%
2014	9.50%	5.00%	6.50%
2015	9.00%	5.00%	6.00%
2016	8.50%	5.00%	5.50%
2017	8.00%	5.00%	5.00%
2018	7.50%	5.00%	5.00%
2019	7.00%	5.00%	5.00%
2020	6.50%	5.00%	5.00%
2021	6.00%	5.00%	5.00%
2022	5.50%	5.00%	5.00%
2023+	5.00%	5.00%	5.00%

\* Includes anticipated impact of National Health Care Reform.

\*\*Fiscal Year for medical and dental premiums and Calendar Year for Medicare Part B Premiums.

# For the June 30, 2010 OPEB actuarial valuation, rates shown for 2011 were not reflected since actual values for the Fiscal Year 2011 per capita costs, Fiscal Year 2011 Welfare Fund contributions and Calendar Year 2011 Medicare Part B Premium amounts were used.

- Medicare Part B Premiums: Overall Medicare Part B Premium amounts assumed to increase as outlined in Appendix D. 100% of ECF participants are assumed to receive reimbursements of Medicare Part B Premiums, since there is no obligation on the part of eligible participants to claim such reimbursement.
- Demographic Assumptions: The NYSLERS actuarial valuation assumptions, as modified in the State Report, are used.
- Salary Scale: The NYSLERS salary scale, as described in the State Report, is used.
- Medicare Part D Subsidy: As described in the State Report, the value of the Retiree Drug Subsidy is not reflected in the actuarial valuation, in accordance with GASB Technical Bulletin No. 2006-1 on this issue. It is the understanding of the OA that NYSHIP has applied for the subsidy for participating agencies such as ECF.

- Cadillac Tax: Beginning in 2018, National Health Care Reform will impose an excise tax on providers of certain "high cost plans" with total health care benefit values above certain thresholds (commonly referred to as "Cadillac Tax"). The June 30, 2009 and the June 30, 2010 OPEB actuarial valuations include an estimate of the cost of the tax. The tax, which starts in Calendar Year 2018, is 40% of the excess of (a) over (b) where (a) is the sum of the medical, drug and Medicare Part B Premiums, and (b) is the statutory limits (\$10,200 for single coverage and \$27,500 for family coverage), adjusted for the following:

- The limit will first be increased by the excess of the accumulated Pre-Medicare trend for the period from 2010 through 2018 over 55% (reflecting the adjustment for excess trend on the standard Federal Blue Cross/Blue Shield option);

- For Pre-Medicare retirees, the limit will be further increased by \$1,650 for single coverage; \$3,450 for family coverage;
  
- Limits will increase from 2018 to 2019 by CPI plus 1%; and
  
- Limits will increase thereafter by CPI.



**APPENDIX F**

## APPENDIX F - CUNY TIAA

### ACTUARIAL ASSUMPTIONS AND METHODS AND PLAN PROVISIONS

Employees and retirees of The City University of New York ("CUNY") are eligible for the same health benefits (both in active service and in retirement, if eligible) as employees and retirees of the City. The health benefits are administered by OLR. The City is responsible for the cost of all OPEB for Community College retirees who retired under one of the NYCERS, for Medicare Part B Premiums for Senior College retirees who retired under one of the NYCERS and for all CUNY TIAA retirees. Effective with the June 30, 2007 OPEB actuarial valuation, it is understood that the City is also responsible for all OPEB for Community College retirees who retired under TIAA and for Welfare Fund contributions for non-pedagogical Senior College retirees.

The actuarial assumptions used for CUNY members of the NYCERS are the same as those used for City members of the applicable retirement system, except that the assumption for members of TRS electing the optional 55/25 Plan does not apply to CUNY because its employees were not eligible to opt into that plan. According to the data used in the OPEB actuarial valuation, there are CUNY employees covered by NYCERS, TRS and BERS.

For the June 30, 2006 OPEB actuarial valuation, CUNY provided Buck with snapshot data of active City (Community College) and State (Senior College) employees as of June 30, 2002, 2003, 2004, 2005 and 2006 and provided a file of all terminations during the period July 1, 2001 through June 30, 2006. Based on the data provided, assumptions were developed for probabilities of termination (withdrawal) and retirement for TIAA members of CUNY. These probabilities of termination and retirement continued to be used for the June 30, 2007, the June 30, 2008, the June 30, 2009 and the June 30, 2010 OPEB actuarial valuations. The assumptions used for mortality, disability and salary increase are the same as those used for TRS and thus reflect the revised post-retirement mortality assumptions used in this valuation. The table on the following page outlines these demographic assumptions.

Except as noted below, all other assumptions (e.g., discount rate, per capita claims costs, health care cost trend rates, Medicare Part B Premiums, age-related morbidity) are the same as those used for members of TRS.

Dependent Coverage . . . . . For the June 30, 2010 and June 30, 2009 OPEB actuarial valuations, 50% of future retirees assumed to be married with spousal coverage. Dependent coverage is assumed to terminate when a retiree dies.

Demographic Assumptions . . . . Same as those used for TRS, except:

Withdrawal		Retirement	
Years of Service	Probability	Age	Probability
0	15.0%	55	2.0%
1	12.0%	56	2.0%
2	11.0%	57	2.0%
3	10.0%	58	2.0%
4	9.0%	59	2.0%
5	7.0%	60	3.0%
6	6.0%	61	3.0%
7	6.0%	62	4.0%
8	6.0%	63	5.0%
9	4.0%	64	6.0%
10	4.0%	65	10.0%
11	3.0%	66	5.0%
12	3.0%	67	5.0%
13	2.0%	68	5.0%
14-19	2.0%	69	10.0%
20+	1.0%	70	100.0%

The following is an outline of the eligibility provisions for OPEB for CUNY TIAA participants:

Retirement with Immediate OPEB Eligibility:

- Hired before July 1, 1976: Age 55 with 10 years of service.
- Hired between July 1, 1976 and August 31, 1985: Age 62 with 15 years of service.
- Hired on or after September 1, 1985: Age 62 with 15 years of service.

Exception for Executive Compensation Plan ("ECP") employees: Age 55 with 10 years of service.

Termination with Deferred OPEB Eligibility:

- Hired before July 1, 1976: Terminate with 15 years of service, payable at age 55.
- Hired between July 1, 1976 and August 31, 1985: Terminate with 10 years of service, payable at 62 with no subsequent full-time employment at another college, university or institution of post-secondary education.
- Hired on or after September 1, 1985: Terminate with 15 years of service, payable at 62 with no subsequent full-time employment at another college, university or institution of post-secondary education.

Exception for ECP Employees: Terminate with 10 years of service, payable at 55 with no subsequent full-time employment at another institution of post-secondary education.

Disability Retirement: A CUNY TIAA member who is disabled with at least 10 years of service and receiving a benefit from the Optional Retirement Program (TIAA) is entitled to retiree health benefits.

Note: The OPEB actuarial valuation also assumes:

- Terminated employees with the required number of years of service have no subsequent full-time employment at another college, university or institution of post-secondary education.
- CUNY TIAA participants maintain any required TIAA account balances and/or annuity benefits.

Data Used and Assumptions Made:

- Data for CUNY TIAA retirees were provided by OLR. Gender was not provided on the data. Retirees were assumed to be female.

- Data for active CUNY TIAA members as of June 30, 2010 were provided by CUNY. The 29 active employees and 4 inactive employees who were identified as covered by the Cultural Institutions Retirement System ("CIRS") were valued using the CUNY TIAA provisions.
- The weighted average annual Welfare Fund contribution rate assumed for TIAA future retirees is \$1,970 (\$1,948 for previous valuation.)
- CUNY does not maintain a database of terminated employees who will be entitled to OPEB in the future. Based on the data provided for the experience study to develop assumptions and updated with data reported for the June 30, 2007, the June 30, 2008, the June 30, 2009 and the June 30, 2010 OPEB actuarial valuations, Buck identified 249 employees who terminated in the last eight years and could be eligible for OPEB. Based on this information, Buck estimated the number, demographic distribution and liability of possible terminated members entitled to future OPEB.

CUNY TIAA Community College Retirees - Payment Responsibility:

- Beginning with the June 30, 2007 OPEB actuarial valuation for CUNY, a change has been reflected in the payment responsibility for basic medical and Welfare Fund contribution costs for CUNY TIAA Community College retirees. The June 30, 2006 OPEB actuarial valuation was based on the understanding that all medical costs for TIAA retirees were being billed to CUNY along with the Senior College retirees rather than being paid by the City, with no distinction being made between Senior and Community Colleges. However, administrative staff at CUNY expressed their belief that basic medical and Welfare Fund contribution costs for CUNY Community College TIAA retirees should be paid by the City rather than charged to the Senior Colleges, and were unaware that this distinction had not previously been made. After further discussions, the City is now in agreement with the administrative staff at CUNY. Thus, the June 30, 2010, the June 30, 2009, the June 30, 2008 and the June 30, 2007 OPEB actuarial valuations for the City include the cost of basic medical and Welfare Fund benefits for CUNY Community College TIAA retirees.



- It should be noted that the current data that OLR uses to bill CUNY for its responsibilities for OPEB does not contain information identifying TIAA retirees as either Senior or Community College, thus this reallocation of responsibilities may not have been immediately implemented.

**APPENDIX G**

## **APPENDIX G - SUPPLEMENTAL TABULAR ACTUARIAL ASSUMPTIONS**

As noted in Appendix D, the GOLD BOOKS assumptions have been supplemented by:

- Probabilities of retirement adopted by the Retirement Board of TRS and applicable to active participants in the optional 55/25 Plan established under Chapter 19 of the Laws of 2008. The tabular values are shown in Appendix G-1.
- Additional actuarial assumptions adopted by the Board of Trustees of POLICE for valuing the Benefits payable to Tier III active members of POLICE. The tabular values are shown in Appendix G-2.
- Revised post-retirement mortality assumptions to reflect more recent experience and the Actuary's updated estimates of future experience. The tabular values are shown in Appendix G-3.

The values were developed by the Actuary based, in part, on the recommendations of the Hay Group ("Hay") and the Segal Company ("Segal"). The Office of the Comptroller, on behalf of the City of New York as mandated by the New York City Charter, engages an independent actuary to perform a range of actuarial audit and related services, including an Experience Study, for the NYCERS. Hay provided their results in draft form to the OA during June 2011. The Segal study was published during November 2006.

The probabilities shown in Appendix G-3 are based primarily on a 10-year experience period with a June 30, 2004 mid-point. These starting probabilities were refined by the Actuary and then projected to June 30, 2010 using Projection Scale AA (the "Base Probabilities"). The Base Probabilities were then projected to June 30, 2025 using Projection Scale AA (the "Valuation Probabilities").

The probabilities shown in Appendix G-3 were used to develop the final GASB43/45 results. The probabilities of post-retirement mortality in the GOLD BOOKS were used to develop GASB43/45 results for experience purposes and to determine the UAAL due to the change in post-retirement mortality tables.

Note: The probabilities shown for NYCERS General retirees for mortality after service retirement and disability retirement were also used for BERS retirees after service retirement and disability retirement, respectively. NYCERS General probabilities for mortality after service retirement were also used for dependents in NYCERS, BERS, POLICE and FIRE. For TRS dependents, TRS retiree probabilities for mortality after service retirement were used.

**APPENDIX G-1**

**NEW YORK CITY TEACHERS' RETIREMENT SYSTEM**

**AGE-RELATED PROBABILITIES OF DECREMENT FROM ACTIVE SERVICE  
RECOMMENDED BY THE ACTUARY  
MEMBERS WHO ELECTED AN IMPROVED RETIREMENT PROGRAM\***

**MALES**

Age	Ordinary Death	Accidental Death	Ordinary Disability	Accidental Disability	Reduced Svc Ret	***** Year 1	Service Retirement Year 2	***** Ultimate
19	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
20	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
21	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
22	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
23	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
24	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
25	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
26	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
27	0.040%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
28	0.040%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
29	0.040%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
30	0.040%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
31	0.042%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
32	0.044%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
33	0.046%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
34	0.048%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
35	0.050%	0.00%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%
36	0.052%	0.00%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%
37	0.054%	0.00%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%
38	0.056%	0.00%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%
39	0.058%	0.00%	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%
40	0.060%	0.00%	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%
41	0.070%	0.00%	0.04%	0.02%	0.00%	0.00%	0.00%	0.00%
42	0.080%	0.00%	0.04%	0.02%	0.00%	0.00%	0.00%	0.00%
43	0.090%	0.00%	0.05%	0.02%	0.00%	0.00%	0.00%	0.00%
44	0.100%	0.00%	0.05%	0.02%	0.00%	0.00%	0.00%	0.00%
45	0.110%	0.00%	0.05%	0.02%	0.00%	0.00%	0.00%	0.00%
46	0.120%	0.00%	0.05%	0.02%	0.00%	0.00%	0.00%	0.00%
47	0.130%	0.00%	0.06%	0.03%	0.00%	0.00%	0.00%	0.00%
48	0.140%	0.00%	0.06%	0.03%	0.00%	0.00%	0.00%	0.00%
49	0.150%	0.00%	0.06%	0.03%	0.00%	0.00%	0.00%	0.00%
50	0.160%	0.00%	0.07%	0.03%	0.00%	0.00%	0.00%	0.00%
51	0.170%	0.00%	0.08%	0.03%	0.00%	0.00%	0.00%	0.00%
52	0.180%	0.00%	0.09%	0.03%	0.00%	0.00%	0.00%	0.00%
53	0.190%	0.00%	0.10%	0.03%	0.00%	0.00%	0.00%	0.00%
54	0.200%	0.00%	0.11%	0.04%	0.00%	0.00%	0.00%	0.00%
55	0.210%	0.00%	0.12%	0.04%	2.00%	40.00%	0.00%	0.00%
56	0.220%	0.00%	0.13%	0.04%	2.00%	40.00%	30.00%	0.00%
57	0.230%	0.00%	0.14%	0.04%	2.00%	40.00%	30.00%	20.00%
58	0.240%	0.00%	0.15%	0.04%	3.00%	40.00%	30.00%	20.00%
59	0.250%	0.00%	0.16%	0.04%	4.00%	40.00%	30.00%	20.00%
60	0.260%	0.00%	0.17%	0.05%	5.00%	40.00%	30.00%	20.00%
61	0.270%	0.00%	0.18%	0.05%	6.00%	40.00%	30.00%	20.00%
62	0.280%	0.00%	0.20%	0.05%	0.00%	25.00%	25.00%	25.00%
63	0.290%	0.00%	0.21%	0.05%	0.00%	20.00%	20.00%	20.00%
64	0.300%	0.00%	0.23%	0.06%	0.00%	20.00%	20.00%	20.00%
65	0.320%	0.00%	0.24%	0.06%	0.00%	30.00%	30.00%	30.00%
66	0.350%	0.00%	0.26%	0.06%	0.00%	25.00%	25.00%	25.00%
67	0.390%	0.00%	0.28%	0.06%	0.00%	25.00%	25.00%	25.00%
68	0.440%	0.00%	0.29%	0.06%	0.00%	25.00%	25.00%	25.00%
69	0.500%	0.00%	0.31%	0.07%	0.00%	25.00%	25.00%	25.00%
70	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%

\* Applies to members who voluntarily elected to participate in the 55/25 plan enacted under Chapter 19 of the Laws of 2008.

Note: All probabilities are rounded as shown and apply to males only at age/service when member is eligible. Assumptions are for use in actuarial valuations on and after June 30, 2004 in conjunction with One-Year Lag methodology to determine Fiscal Year 2006 and later employer contributions.

NA: Not Applicable as members age 70 and greater are assumed to leave active employment immediately.

**NEW YORK CITY TEACHERS' RETIREMENT SYSTEM**

**AGE-RELATED PROBABILITIES OF DECREMENT FROM ACTIVE SERVICE  
RECOMMENDED BY THE ACTUARY  
MEMBERS WHO ELECTED AN IMPROVED RETIREMENT PROGRAM\***

**FEMALES**

Age	Ordinary	Accidental	Ordinary	Accidental	Reduced	***** Service Retirement *****		
	Death	Death	Disability	Disability	Svc Ret	Year 1	Year 2	Ultimate
19	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
20	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
21	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
22	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
23	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
24	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
25	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
26	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
27	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
28	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
29	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
30	0.020%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
31	0.021%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
32	0.022%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
33	0.023%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
34	0.024%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
35	0.025%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%
36	0.026%	0.00%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%
37	0.027%	0.00%	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%
38	0.028%	0.00%	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%
39	0.029%	0.00%	0.05%	0.01%	0.00%	0.00%	0.00%	0.00%
40	0.030%	0.00%	0.06%	0.01%	0.00%	0.00%	0.00%	0.00%
41	0.035%	0.00%	0.07%	0.01%	0.00%	0.00%	0.00%	0.00%
42	0.040%	0.00%	0.07%	0.01%	0.00%	0.00%	0.00%	0.00%
43	0.045%	0.00%	0.08%	0.01%	0.00%	0.00%	0.00%	0.00%
44	0.050%	0.00%	0.08%	0.01%	0.00%	0.00%	0.00%	0.00%
45	0.055%	0.00%	0.09%	0.01%	0.00%	0.00%	0.00%	0.00%
46	0.060%	0.00%	0.09%	0.02%	0.00%	0.00%	0.00%	0.00%
47	0.065%	0.00%	0.09%	0.02%	0.00%	0.00%	0.00%	0.00%
48	0.070%	0.00%	0.09%	0.02%	0.00%	0.00%	0.00%	0.00%
49	0.075%	0.00%	0.09%	0.02%	0.00%	0.00%	0.00%	0.00%
50	0.080%	0.00%	0.10%	0.02%	0.00%	0.00%	0.00%	0.00%
51	0.085%	0.00%	0.11%	0.02%	0.00%	0.00%	0.00%	0.00%
52	0.090%	0.00%	0.11%	0.02%	0.00%	0.00%	0.00%	0.00%
53	0.095%	0.00%	0.12%	0.02%	0.00%	0.00%	0.00%	0.00%
54	0.100%	0.00%	0.12%	0.02%	0.00%	0.00%	0.00%	0.00%
55	0.105%	0.00%	0.13%	0.02%	2.00%	40.00%	0.00%	0.00%
56	0.110%	0.00%	0.13%	0.03%	2.00%	40.00%	30.00%	0.00%
57	0.115%	0.00%	0.14%	0.03%	2.00%	40.00%	30.00%	20.00%
58	0.120%	0.00%	0.14%	0.03%	3.00%	40.00%	30.00%	20.00%
59	0.125%	0.00%	0.15%	0.03%	4.00%	40.00%	30.00%	20.00%
60	0.130%	0.00%	0.15%	0.03%	5.00%	40.00%	30.00%	20.00%
61	0.135%	0.00%	0.15%	0.03%	6.00%	40.00%	30.00%	20.00%
62	0.140%	0.00%	0.16%	0.03%	0.00%	25.00%	25.00%	25.00%
63	0.145%	0.00%	0.16%	0.04%	0.00%	20.00%	20.00%	20.00%
64	0.150%	0.00%	0.17%	0.04%	0.00%	20.00%	20.00%	20.00%
65	0.160%	0.00%	0.17%	0.04%	0.00%	30.00%	30.00%	30.00%
66	0.175%	0.00%	0.18%	0.04%	0.00%	25.00%	25.00%	25.00%
67	0.195%	0.00%	0.19%	0.04%	0.00%	25.00%	25.00%	25.00%
68	0.220%	0.00%	0.20%	0.04%	0.00%	25.00%	25.00%	25.00%
69	0.250%	0.00%	0.21%	0.04%	0.00%	25.00%	25.00%	25.00%
70	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%

\* Applies to members who voluntarily elected to participate in the 55/25 plan enacted under Chapter 19 of the Laws of 2008.

Note: All probabilities are rounded as shown and apply to females only at age/service when member is eligible. Assumptions are for use in actuarial valuations on and after June 30, 2004 in conjunction with One-Year Lag methodology to determine Fiscal Year 2006 and later employer contributions.

NA: Not Applicable as members age 70 and greater are assumed to leave active employment immediately.



**APPENDIX G-2**

## NEW YORK CITY POLICE PENSION FUND

### AGE-RELATED PROBABILITIES OF DECREMENT FROM ACTIVE SERVICE RECOMMENDED BY THE ACTUARY FOR TIER III MEMBERS

Age	*** Ordinary Death ***		Accidental Death	Ordinary Disability	Accidental Disability	** Service Retirement with Full COLA **		
	Males	Females				Year 1	Year 2	Ultimate
19	0.028%	0.014%	0.01%	0.01%	0.20%	0.00%	0.00%	0.00%
20	0.030%	0.015%	0.01%	0.01%	0.20%	0.00%	0.00%	0.00%
21	0.032%	0.016%	0.01%	0.01%	0.22%	0.00%	0.00%	0.00%
22	0.034%	0.017%	0.01%	0.02%	0.24%	0.00%	0.00%	0.00%
23	0.036%	0.018%	0.01%	0.03%	0.26%	0.00%	0.00%	0.00%
24	0.038%	0.019%	0.01%	0.04%	0.28%	0.00%	0.00%	0.00%
25	0.040%	0.020%	0.01%	0.05%	0.30%	0.00%	0.00%	0.00%
26	0.042%	0.021%	0.01%	0.06%	0.32%	0.00%	0.00%	0.00%
27	0.044%	0.022%	0.01%	0.07%	0.34%	0.00%	0.00%	0.00%
28	0.046%	0.023%	0.01%	0.08%	0.36%	0.00%	0.00%	0.00%
29	0.048%	0.024%	0.01%	0.09%	0.38%	0.00%	0.00%	0.00%
30	0.050%	0.025%	0.01%	0.10%	0.40%	0.00%	0.00%	0.00%
31	0.052%	0.026%	0.01%	0.12%	0.42%	0.00%	0.00%	0.00%
32	0.054%	0.027%	0.01%	0.14%	0.44%	0.00%	0.00%	0.00%
33	0.056%	0.028%	0.01%	0.16%	0.46%	0.00%	0.00%	0.00%
34	0.058%	0.029%	0.01%	0.18%	0.48%	0.00%	0.00%	0.00%
35	0.060%	0.030%	0.01%	0.20%	0.50%	0.00%	0.00%	0.00%
36	0.064%	0.032%	0.01%	0.22%	0.52%	0.00%	0.00%	0.00%
37	0.068%	0.034%	0.01%	0.24%	0.54%	0.00%	0.00%	0.00%
38	0.072%	0.036%	0.01%	0.26%	0.56%	0.00%	0.00%	0.00%
39	0.076%	0.038%	0.01%	0.28%	0.58%	0.00%	0.00%	0.00%
40	0.080%	0.040%	0.01%	0.30%	0.60%	0.00%	0.00%	0.00%
41	0.094%	0.047%	0.01%	0.32%	0.64%	0.00%	0.00%	0.00%
42	0.108%	0.054%	0.01%	0.34%	0.68%	0.00%	0.00%	0.00%
43	0.122%	0.061%	0.01%	0.36%	0.72%	60.00%	0.00%	0.00%
44	0.136%	0.068%	0.01%	0.38%	0.76%	60.00%	40.00%	0.00%
45	0.150%	0.075%	0.01%	0.40%	0.80%	60.00%	40.00%	20.00%
46	0.170%	0.085%	0.01%	0.42%	0.84%	60.00%	40.00%	20.00%
47	0.190%	0.095%	0.01%	0.44%	0.88%	60.00%	40.00%	20.00%
48	0.210%	0.105%	0.01%	0.46%	0.92%	60.00%	40.00%	20.00%
49	0.230%	0.115%	0.01%	0.48%	0.96%	60.00%	40.00%	20.00%
50	0.250%	0.125%	0.01%	0.50%	1.00%	60.00%	40.00%	20.00%
51	0.280%	0.140%	0.01%	0.60%	1.10%	60.00%	40.00%	20.00%
52	0.310%	0.155%	0.01%	0.70%	1.20%	60.00%	40.00%	20.00%
53	0.340%	0.170%	0.01%	0.80%	1.30%	60.00%	40.00%	20.00%
54	0.370%	0.185%	0.01%	0.90%	1.40%	60.00%	40.00%	20.00%
55	0.400%	0.200%	0.01%	1.00%	1.50%	60.00%	40.00%	20.00%
56	0.440%	0.220%	0.01%	1.20%	1.60%	60.00%	40.00%	20.00%
57	0.480%	0.240%	0.01%	1.40%	1.70%	60.00%	40.00%	20.00%
58	0.520%	0.260%	0.01%	1.60%	1.80%	60.00%	40.00%	20.00%
59	0.560%	0.280%	0.01%	1.80%	1.90%	60.00%	40.00%	20.00%
60	0.600%	0.300%	0.01%	2.00%	2.00%	60.00%	40.00%	20.00%
61	0.640%	0.320%	0.01%	3.00%	3.00%	60.00%	40.00%	20.00%
62	0.680%	0.340%	0.01%	4.00%	4.00%	60.00%	50.00%	50.00%
63	NA	NA	NA	NA	NA	100.00%	100.00%	100.00%

NA: Not Applicable as members age 63 and greater are assumed to leave active employment immediately.

Note: All probabilities are rounded as shown and (except for Ordinary Death) apply to both males and females. Disability probabilities applied at all ages but members are assumed to elect Service Retirement benefit plus Variable Supplements Fund benefit if member has 22 or more years of service. Tier III assumptions are for use in actuarial valuations on and after June 30, 2010 in conjunction with One-Year Lag methodology to determine Fiscal Year 2012 and later employer contributions.

**NEW YORK CITY POLICE PENSION FUND**

**AGE-RELATED PROBABILITIES OF DECREMENT FROM ACTIVE SERVICE  
RECOMMENDED BY THE ACTUARY  
FOR TIER III MEMBERS**

Years of Service	Withdrawal	Early Service Retirement	Ret before Full COLA
0	10.00%	NA	NA
1	8.00%	NA	NA
2	6.00%	NA	NA
3	4.00%	NA	NA
4	3.00%	NA	NA
5	2.00%	NA	NA
6	1.80%	NA	NA
7	1.60%	NA	NA
8	1.40%	NA	NA
9	1.20%	NA	NA
10	1.00%	NA	NA
11	0.90%	NA	NA
12	0.80%	NA	NA
13	0.70%	NA	NA
14	0.60%	NA	NA
15	0.50%	NA	NA
16	0.50%	NA	NA
17	0.50%	NA	NA
18	0.50%	NA	NA
19	0.50%	NA	NA
20	NA	5.00%	NA
21	NA	2.00%	NA
22	NA	NA	5.00%
23	NA	NA	2.00%
24	NA	NA	2.00%

NA: Not Applicable to members with these years of service.

Note: All probabilities apply to both males and females, and are rounded as shown. Tier III assumptions are for use in actuarial valuations on and after June 30, 2010 in conjunction with One-Year Lag methodology to determine Fiscal Year 2012 and later employer contributions.

APPENDIX G-3

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM  
GENERAL EMPLOYEES**

**PROBABILITIES OF MORTALITY AFTER SERVICE RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.0205%	0.0123%	65	1.3072%	1.1533%
20	0.0214%	0.0124%	66	1.4458%	1.2383%
21	0.0227%	0.0125%	67	1.5561%	1.3337%
22	0.0238%	0.0126%	68	1.6315%	1.4338%
23	0.0256%	0.0132%	69	1.7395%	1.5038%
24	0.0271%	0.0138%	70	1.8086%	1.5676%
25	0.0292%	0.0146%	71	1.9706%	1.7044%
26	0.0325%	0.0158%	72	2.1361%	1.8700%
27	0.0337%	0.0165%	73	2.3049%	1.9896%
28	0.0347%	0.0174%	74	2.4771%	2.1445%
29	0.0363%	0.0183%	75	2.7100%	2.2479%
30	0.0392%	0.0205%	76	3.1242%	2.5388%
31	0.0453%	0.0264%	77	3.6235%	2.8903%
32	0.0518%	0.0309%	78	4.1520%	3.1875%
33	0.0584%	0.0345%	79	4.7110%	3.4847%
34	0.0647%	0.0378%	80	5.3016%	3.7819%
35	0.0719%	0.0411%	81	5.9547%	4.2520%
36	0.0775%	0.0438%	82	6.6330%	4.7311%
37	0.0834%	0.0468%	83	7.1838%	5.2191%
38	0.0881%	0.0501%	84	7.9001%	5.7160%
39	0.0941%	0.0539%	85	8.4627%	6.3549%
40	0.1021%	0.0591%	86	9.5515%	7.4018%
41	0.1420%	0.0643%	87	10.9077%	8.4902%
42	0.1784%	0.0713%	88	12.3579%	9.4208%
43	0.2115%	0.0801%	89	13.6163%	10.5719%
44	0.2415%	0.0908%	90	15.2335%	11.5224%
45	0.2684%	0.1014%	91	16.9195%	13.1562%
46	0.2891%	0.1134%	92	18.9699%	14.7364%
47	0.3064%	0.1266%	93	20.6300%	16.6272%
48	0.3206%	0.1435%	94	22.3039%	18.0995%
49	0.3318%	0.1617%	95	24.6664%	19.5152%
50	0.3401%	0.1846%	96	26.4731%	20.6382%
51	0.3799%	0.2126%	97	28.2117%	22.0721%
52	0.4199%	0.2489%	98	30.5959%	22.7737%
53	0.4699%	0.2899%	99	32.1805%	23.1685%
54	0.5218%	0.3365%	100	33.6045%	23.1881%
55	0.5880%	0.3893%	101	35.8628%	24.4834%
56	0.6416%	0.4671%	102	37.1685%	25.4498%
57	0.6971%	0.5444%	103	38.3040%	26.6044%
58	0.7548%	0.6162%	104	39.2003%	27.9055%
59	0.7974%	0.6920%	105	39.7886%	29.3116%
60	0.8400%	0.7716%	106	40.0000%	30.7811%
61	0.9471%	0.8568%	107	40.0000%	32.2725%
62	1.0338%	0.9287%	108	40.0000%	33.7441%
63	1.1422%	0.9991%	109	40.0000%	35.1544%
64	1.2260%	1.0739%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.  
Also used for BERS retirees and dependents in NYCERS, BERS, POLICE and FIRE.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM  
GENERAL EMPLOYEES**

**PROBABILITIES OF MORTALITY AFTER DISABILITY RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.4067%	0.3400%	65	3.1345%	2.6895%
20	0.4244%	0.3600%	66	3.2471%	2.8693%
21	0.4543%	0.3800%	67	3.2966%	2.9978%
22	0.4860%	0.4067%	68	3.3100%	3.1345%
23	0.5310%	0.4244%	69	3.3375%	3.2104%
24	0.5799%	0.4543%	70	3.3513%	3.2886%
25	0.6463%	0.4860%	71	3.5185%	3.3028%
26	0.7353%	0.5310%	72	3.7259%	3.3375%
27	0.7849%	0.5799%	73	3.9522%	3.3521%
28	0.8199%	0.6463%	74	4.1984%	3.5185%
29	0.8561%	0.7353%	75	4.5617%	3.7259%
30	0.8937%	0.7849%	76	4.9328%	3.9522%
31	0.9326%	0.8199%	77	5.4514%	4.1984%
32	0.9727%	0.8561%	78	6.0258%	4.5617%
33	1.0143%	0.8937%	79	6.6611%	4.9328%
34	1.0574%	0.9326%	80	7.3624%	5.4514%
35	1.1020%	0.9727%	81	8.1354%	6.0258%
36	1.1481%	1.0143%	82	8.9850%	6.6611%
37	1.1957%	1.0574%	83	9.7140%	7.3624%
38	1.2190%	1.1020%	84	10.7252%	8.1354%
39	1.2424%	1.1481%	85	11.5925%	8.9850%
40	1.2660%	1.1957%	86	12.2458%	9.7140%
41	1.2842%	1.2190%	87	12.9687%	10.7252%
42	1.3023%	1.2424%	88	13.8583%	11.5925%
43	1.3204%	1.2660%	89	14.4969%	13.1562%
44	1.3385%	1.2842%	90	15.4847%	14.7364%
45	1.3564%	1.3023%	91	17.2217%	16.6272%
46	1.3763%	1.3204%	92	19.5678%	18.0995%
47	1.3950%	1.3385%	93	21.4777%	19.5152%
48	1.4341%	1.3564%	94	23.3441%	20.6382%
49	1.4724%	1.3763%	95	25.7308%	22.0721%
50	1.5099%	1.3950%	96	27.4799%	22.7737%
51	1.5793%	1.4341%	97	29.0925%	23.1685%
52	1.6493%	1.4724%	98	31.2876%	23.1881%
53	1.7585%	1.5099%	99	32.5761%	24.4834%
54	1.8720%	1.5793%	100	33.6045%	24.5034%
55	2.0328%	1.6493%	101	35.8628%	24.5236%
56	2.1238%	1.7585%	102	37.1685%	25.4498%
57	2.2177%	1.8720%	103	38.3040%	26.6044%
58	2.3150%	2.0328%	104	39.2003%	27.9055%
59	2.3647%	2.1238%	105	39.7886%	29.3116%
60	2.4149%	2.2177%	106	40.0000%	30.7811%
61	2.5758%	2.3150%	107	40.0000%	32.2725%
62	2.6895%	2.3647%	108	40.0000%	33.7441%
63	2.8693%	2.4149%	109	40.0000%	35.1544%
64	2.9978%	2.5758%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.  
Also used for BERS retirees.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM  
CORRECTIONS**

**PROBABILITIES OF MORTALITY AFTER SERVICE RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.0205%	0.0123%	65	1.3072%	1.1533%
20	0.0214%	0.0124%	66	1.4458%	1.2383%
21	0.0227%	0.0125%	67	1.5561%	1.3337%
22	0.0238%	0.0126%	68	1.6315%	1.4338%
23	0.0256%	0.0132%	69	1.7395%	1.5038%
24	0.0271%	0.0138%	70	1.8086%	1.5676%
25	0.0292%	0.0146%	71	1.9706%	1.7044%
26	0.0325%	0.0158%	72	2.1361%	1.8700%
27	0.0337%	0.0165%	73	2.3049%	1.9896%
28	0.0347%	0.0174%	74	2.4771%	2.1445%
29	0.0363%	0.0183%	75	2.7100%	2.2479%
30	0.0392%	0.0205%	76	3.1242%	2.5388%
31	0.0453%	0.0264%	77	3.6235%	2.8903%
32	0.0518%	0.0309%	78	4.1520%	3.1875%
33	0.0584%	0.0345%	79	4.7110%	3.4847%
34	0.0647%	0.0378%	80	5.3016%	3.7819%
35	0.0719%	0.0411%	81	5.9547%	4.2520%
36	0.0775%	0.0438%	82	6.6330%	4.7311%
37	0.0834%	0.0468%	83	7.1838%	5.2191%
38	0.0881%	0.0501%	84	7.9001%	5.7160%
39	0.0941%	0.0539%	85	8.4627%	6.3549%
40	0.1021%	0.0591%	86	9.5515%	7.4018%
41	0.1420%	0.0643%	87	10.9077%	8.4902%
42	0.1784%	0.0713%	88	12.3579%	9.4208%
43	0.2115%	0.0801%	89	13.6163%	10.5719%
44	0.2415%	0.0908%	90	15.2335%	11.5224%
45	0.2684%	0.1014%	91	16.9195%	13.1562%
46	0.2891%	0.1134%	92	18.9699%	14.7364%
47	0.3064%	0.1266%	93	20.6300%	16.6272%
48	0.3206%	0.1435%	94	22.3039%	18.0995%
49	0.3318%	0.1617%	95	24.6664%	19.5152%
50	0.3401%	0.1846%	96	26.4731%	20.6382%
51	0.3799%	0.2126%	97	28.2117%	22.0721%
52	0.4199%	0.2489%	98	30.5959%	22.7737%
53	0.4699%	0.2899%	99	32.1805%	23.1685%
54	0.5218%	0.3365%	100	33.6045%	23.1881%
55	0.5880%	0.3893%	101	35.8628%	24.4834%
56	0.6416%	0.4671%	102	37.1685%	25.4498%
57	0.6971%	0.5444%	103	38.3040%	26.6044%
58	0.7548%	0.6162%	104	39.2003%	27.9055%
59	0.7974%	0.6920%	105	39.7886%	29.3116%
60	0.8400%	0.7716%	106	40.0000%	30.7811%
61	0.9471%	0.8568%	107	40.0000%	32.2725%
62	1.0338%	0.9287%	108	40.0000%	33.7441%
63	1.1422%	0.9991%	109	40.0000%	35.1544%
64	1.2260%	1.0739%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM  
CORRECTIONS**

**PROBABILITIES OF MORTALITY AFTER DISABILITY RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.3697%	0.3400%	65	1.8230%	1.4862%
20	0.3772%	0.3500%	66	1.9818%	1.6133%
21	0.3951%	0.3600%	67	2.1116%	1.7144%
22	0.4137%	0.3697%	68	2.2053%	1.8230%
23	0.4425%	0.3772%	69	2.3558%	1.9818%
24	0.4733%	0.3951%	70	2.4670%	2.1116%
25	0.5171%	0.4137%	71	2.6725%	2.2053%
26	0.5768%	0.4425%	72	2.8985%	2.3558%
27	0.6038%	0.4733%	73	3.1474%	2.4670%
28	0.6188%	0.5171%	74	3.4210%	2.6725%
29	0.6342%	0.5768%	75	3.8014%	2.8985%
30	0.6500%	0.6038%	76	4.1564%	3.1474%
31	0.6662%	0.6188%	77	4.6441%	3.4210%
32	0.6826%	0.6342%	78	5.1896%	3.8014%
33	0.6997%	0.6500%	79	5.7993%	4.1564%
34	0.7170%	0.6662%	80	6.4798%	4.6441%
35	0.7346%	0.6826%	81	7.2779%	5.1896%
36	0.7529%	0.6997%	82	8.1070%	5.7993%
37	0.7716%	0.7170%	83	8.7803%	6.4798%
38	0.7792%	0.7346%	84	9.6557%	7.2779%
39	0.7870%	0.7529%	85	10.3434%	8.1070%
40	0.7950%	0.7716%	86	11.4203%	8.7803%
41	0.8032%	0.7792%	87	12.7642%	9.6557%
42	0.8116%	0.7870%	88	14.1602%	10.3434%
43	0.8202%	0.7950%	89	15.2836%	11.4203%
44	0.8290%	0.8032%	90	16.7569%	12.7642%
45	0.8380%	0.8116%	91	18.7330%	14.1602%
46	0.8472%	0.8202%	92	21.0630%	15.2836%
47	0.8566%	0.8290%	93	22.8904%	16.7569%
48	0.8662%	0.8380%	94	24.6442%	18.7330%
49	0.8760%	0.8472%	95	26.9134%	21.0630%
50	0.8860%	0.8566%	96	28.2854%	22.7737%
51	0.8962%	0.8662%	97	29.5729%	23.1685%
52	0.9066%	0.8760%	98	31.5182%	23.1881%
53	0.9172%	0.8860%	99	32.6370%	24.4834%
54	0.9280%	0.8962%	100	33.6045%	24.5034%
55	0.9416%	0.9066%	101	35.8628%	24.5236%
56	1.0122%	0.9172%	102	37.1685%	25.4498%
57	1.0874%	0.9280%	103	38.3040%	26.6044%
58	1.1675%	0.9416%	104	39.2003%	27.9055%
59	1.2266%	1.0122%	105	39.7886%	29.3116%
60	1.2880%	1.0874%	106	40.0000%	30.7811%
61	1.3985%	1.1675%	107	40.0000%	32.2725%
62	1.4862%	1.2266%	108	40.0000%	33.7441%
63	1.6133%	1.2880%	109	40.0000%	35.1544%
64	1.7144%	1.3985%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.



**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM  
SANITATION**

**PROBABILITIES OF MORTALITY AFTER SERVICE RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.0205%	0.0123%	65	1.3072%	1.1533%
20	0.0214%	0.0124%	66	1.4458%	1.2383%
21	0.0227%	0.0125%	67	1.5561%	1.3337%
22	0.0238%	0.0126%	68	1.6315%	1.4338%
23	0.0256%	0.0132%	69	1.7395%	1.5038%
24	0.0271%	0.0138%	70	1.8086%	1.5676%
25	0.0292%	0.0146%	71	1.9706%	1.7044%
26	0.0325%	0.0158%	72	2.1361%	1.8700%
27	0.0337%	0.0165%	73	2.3049%	1.9896%
28	0.0347%	0.0174%	74	2.4771%	2.1445%
29	0.0363%	0.0183%	75	2.7100%	2.2479%
30	0.0392%	0.0205%	76	3.1242%	2.5388%
31	0.0453%	0.0264%	77	3.6235%	2.8903%
32	0.0518%	0.0309%	78	4.1520%	3.1875%
33	0.0584%	0.0345%	79	4.7110%	3.4847%
34	0.0647%	0.0378%	80	5.3016%	3.7819%
35	0.0719%	0.0411%	81	5.9547%	4.2520%
36	0.0775%	0.0438%	82	6.6330%	4.7311%
37	0.0834%	0.0468%	83	7.1838%	5.2191%
38	0.0881%	0.0501%	84	7.9001%	5.7160%
39	0.0941%	0.0539%	85	8.4627%	6.3549%
40	0.1021%	0.0591%	86	9.5515%	7.4018%
41	0.1420%	0.0643%	87	10.9077%	8.4902%
42	0.1784%	0.0713%	88	12.3579%	9.4208%
43	0.2115%	0.0801%	89	13.6163%	10.5719%
44	0.2415%	0.0908%	90	15.2335%	11.5224%
45	0.2684%	0.1014%	91	16.9195%	13.1562%
46	0.2891%	0.1134%	92	18.9699%	14.7364%
47	0.3064%	0.1266%	93	20.6300%	16.6272%
48	0.3206%	0.1435%	94	22.3039%	18.0995%
49	0.3318%	0.1617%	95	24.6664%	19.5152%
50	0.3401%	0.1846%	96	26.4731%	20.6382%
51	0.3799%	0.2126%	97	28.2117%	22.0721%
52	0.4199%	0.2489%	98	30.5959%	22.7737%
53	0.4699%	0.2899%	99	32.1805%	23.1685%
54	0.5218%	0.3365%	100	33.6045%	23.1881%
55	0.5880%	0.3893%	101	35.8628%	24.4834%
56	0.6416%	0.4671%	102	37.1685%	25.4498%
57	0.6971%	0.5444%	103	38.3040%	26.6044%
58	0.7548%	0.6162%	104	39.2003%	27.9055%
59	0.7974%	0.6920%	105	39.7886%	29.3116%
60	0.8400%	0.7716%	106	40.0000%	30.7811%
61	0.9471%	0.8568%	107	40.0000%	32.2725%
62	1.0338%	0.9287%	108	40.0000%	33.7441%
63	1.1422%	0.9991%	109	40.0000%	35.1544%
64	1.2260%	1.0739%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM  
SANITATION**

**PROBABILITIES OF MORTALITY AFTER DISABILITY RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.3697%	0.3400%	65	1.8230%	1.4862%
20	0.3772%	0.3500%	66	1.9818%	1.6133%
21	0.3951%	0.3600%	67	2.1116%	1.7144%
22	0.4137%	0.3697%	68	2.2053%	1.8230%
23	0.4425%	0.3772%	69	2.3558%	1.9818%
24	0.4733%	0.3951%	70	2.4670%	2.1116%
25	0.5171%	0.4137%	71	2.6725%	2.2053%
26	0.5768%	0.4425%	72	2.8985%	2.3558%
27	0.6038%	0.4733%	73	3.1474%	2.4670%
28	0.6188%	0.5171%	74	3.4210%	2.6725%
29	0.6342%	0.5768%	75	3.8014%	2.8985%
30	0.6500%	0.6038%	76	4.1564%	3.1474%
31	0.6662%	0.6188%	77	4.6441%	3.4210%
32	0.6826%	0.6342%	78	5.1896%	3.8014%
33	0.6997%	0.6500%	79	5.7993%	4.1564%
34	0.7170%	0.6662%	80	6.4798%	4.6441%
35	0.7346%	0.6826%	81	7.2779%	5.1896%
36	0.7529%	0.6997%	82	8.1070%	5.7993%
37	0.7716%	0.7170%	83	8.7803%	6.4798%
38	0.7792%	0.7346%	84	9.6557%	7.2779%
39	0.7870%	0.7529%	85	10.3434%	8.1070%
40	0.7950%	0.7716%	86	11.4203%	8.7803%
41	0.8032%	0.7792%	87	12.7642%	9.6557%
42	0.8116%	0.7870%	88	14.1602%	10.3434%
43	0.8202%	0.7950%	89	15.2836%	11.4203%
44	0.8290%	0.8032%	90	16.7569%	12.7642%
45	0.8380%	0.8116%	91	18.7330%	14.1602%
46	0.8472%	0.8202%	92	21.0630%	15.2836%
47	0.8566%	0.8290%	93	22.8904%	16.7569%
48	0.8662%	0.8380%	94	24.6442%	18.7330%
49	0.8760%	0.8472%	95	26.9134%	21.0630%
50	0.8860%	0.8566%	96	28.2854%	22.7737%
51	0.8962%	0.8662%	97	29.5729%	23.1685%
52	0.9066%	0.8760%	98	31.5182%	23.1881%
53	0.9172%	0.8860%	99	32.6370%	24.4834%
54	0.9280%	0.8962%	100	33.6045%	24.5034%
55	0.9416%	0.9066%	101	35.8628%	24.5236%
56	1.0122%	0.9172%	102	37.1685%	25.4498%
57	1.0874%	0.9280%	103	38.3040%	26.6044%
58	1.1675%	0.9416%	104	39.2003%	27.9055%
59	1.2266%	1.0122%	105	39.7886%	29.3116%
60	1.2880%	1.0874%	106	40.0000%	30.7811%
61	1.3985%	1.1675%	107	40.0000%	32.2725%
62	1.4862%	1.2266%	108	40.0000%	33.7441%
63	1.6133%	1.2880%	109	40.0000%	35.1544%
64	1.7144%	1.3985%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.

**NEW YORK CITY TEACHERS' RETIREMENT SYSTEM**

**PROBABILITIES OF MORTALITY AFTER SERVICE RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.0205%	0.0123%	65	0.8897%	0.5921%
20	0.0214%	0.0124%	66	1.0376%	0.6627%
21	0.0227%	0.0125%	67	1.1641%	0.7359%
22	0.0238%	0.0126%	68	1.2609%	0.8360%
23	0.0256%	0.0132%	69	1.3799%	0.8911%
24	0.0271%	0.0138%	70	1.4650%	0.9723%
25	0.0292%	0.0146%	71	1.6146%	1.0643%
26	0.0325%	0.0158%	72	1.7612%	1.1776%
27	0.0337%	0.0165%	73	1.9048%	1.2630%
28	0.0347%	0.0174%	74	2.0453%	1.3704%
29	0.0363%	0.0183%	75	2.2299%	1.4425%
30	0.0392%	0.0205%	76	2.4856%	1.6514%
31	0.0445%	0.0262%	77	2.7947%	1.9002%
32	0.0500%	0.0305%	78	3.1104%	2.1122%
33	0.0556%	0.0340%	79	3.4326%	2.3209%
34	0.0608%	0.0370%	80	3.7991%	2.5246%
35	0.0665%	0.0400%	81	4.4263%	3.0055%
36	0.0707%	0.0424%	82	5.0785%	3.4326%
37	0.0748%	0.0452%	83	5.6361%	3.7991%
38	0.0779%	0.0481%	84	6.3260%	4.4263%
39	0.0818%	0.0514%	85	6.8955%	5.0785%
40	0.0875%	0.0564%	86	7.8204%	5.6361%
41	0.0978%	0.0607%	87	8.9495%	6.3260%
42	0.1078%	0.0658%	88	10.1407%	6.8955%
43	0.1176%	0.0717%	89	11.1587%	7.8204%
44	0.1272%	0.0783%	90	12.4543%	8.9495%
45	0.1364%	0.0842%	91	14.3062%	10.1407%
46	0.1455%	0.0907%	92	16.5497%	11.1587%
47	0.1543%	0.0977%	93	18.5179%	12.4543%
48	0.1631%	0.1071%	94	20.5396%	14.3062%
49	0.1715%	0.1167%	95	23.1217%	16.5497%
50	0.1815%	0.1292%	96	25.2155%	18.5179%
51	0.1998%	0.1426%	97	27.2485%	20.5396%
52	0.2176%	0.1603%	98	29.9756%	22.7737%
53	0.2400%	0.1800%	99	31.9397%	23.1685%
54	0.2629%	0.1998%	100	33.6045%	23.1885%
55	0.2923%	0.2176%	101	35.8628%	24.4834%
56	0.3313%	0.2400%	102	37.1685%	25.4498%
57	0.3722%	0.2629%	103	38.3040%	26.6044%
58	0.4154%	0.2923%	104	39.2003%	27.9055%
59	0.4513%	0.3313%	105	39.7886%	29.3116%
60	0.4875%	0.3722%	106	40.0000%	30.7811%
61	0.5732%	0.4154%	107	40.0000%	32.2725%
62	0.6495%	0.4513%	108	40.0000%	33.7441%
63	0.7429%	0.4875%	109	40.0000%	35.1544%
64	0.8234%	0.5477%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.  
Also used for TRS dependents.

**NEW YORK CITY TEACHERS' RETIREMENT SYSTEM**

**PROBABILITIES OF MORTALITY AFTER DISABILITY RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.7084%	0.4500%	65	2.2907%	1.7289%
20	0.7124%	0.4600%	66	2.3866%	1.7421%
21	0.7265%	0.4725%	67	2.4580%	1.7555%
22	0.7527%	0.4853%	68	2.5029%	1.7691%
23	0.8040%	0.4978%	69	2.5974%	1.7918%
24	0.8588%	0.5106%	70	2.6651%	1.9096%
25	0.9313%	0.5237%	71	2.7452%	2.0068%
26	1.0407%	0.5509%	72	2.8812%	2.1666%
27	1.0781%	0.5509%	73	2.9885%	2.3001%
28	1.1001%	0.5509%	74	3.1561%	2.5011%
29	1.1226%	0.5509%	75	3.3423%	2.6669%
30	1.1809%	0.5795%	76	3.5471%	2.8784%
31	1.2421%	0.7734%	77	3.8879%	3.1561%
32	1.2674%	0.9422%	78	4.2037%	3.3423%
33	1.2740%	1.0909%	79	4.5497%	3.5471%
34	1.2808%	1.2381%	80	5.0785%	3.8879%
35	1.2878%	1.2674%	81	5.6361%	4.2037%
36	1.2950%	1.2740%	82	6.3260%	4.5497%
37	1.3024%	1.2808%	83	6.8955%	5.0785%
38	1.3100%	1.2878%	84	7.8204%	5.6361%
39	1.3178%	1.2950%	85	8.9495%	6.3260%
40	1.3258%	1.3024%	86	10.1407%	6.8955%
41	1.3340%	1.3136%	87	11.1587%	7.8204%
42	1.3424%	1.3220%	88	12.4543%	8.9495%
43	1.3510%	1.3306%	89	14.3062%	10.1407%
44	1.3598%	1.3394%	90	16.5497%	11.1587%
45	1.3688%	1.3484%	91	18.5179%	12.4543%
46	1.3780%	1.3576%	92	20.5396%	14.1002%
47	1.3874%	1.3670%	93	23.1217%	15.6608%
48	1.3970%	1.3766%	94	25.2155%	17.1161%
49	1.4068%	1.3864%	95	27.2485%	18.5008%
50	1.4168%	1.3964%	96	29.9756%	20.1666%
51	1.4270%	1.4066%	97	31.9397%	21.9471%
52	1.4374%	1.4170%	98	33.6045%	22.7737%
53	1.4480%	1.4276%	99	35.8628%	23.1685%
54	1.5165%	1.4384%	100	37.1685%	23.1885%
55	1.6168%	1.4494%	101	38.3040%	24.4834%
56	1.7236%	1.4606%	102	39.2003%	25.4498%
57	1.8101%	1.5165%	103	39.7886%	26.6044%
58	1.8733%	1.6168%	104	40.0000%	27.9055%
59	1.9108%	1.6539%	105	40.0000%	29.3116%
60	1.9511%	1.6659%	106	40.0000%	30.7811%
61	2.0253%	1.6781%	107	40.0000%	32.2725%
62	2.0738%	1.6905%	108	40.0000%	33.7441%
63	2.1601%	1.7031%	109	40.0000%	35.1544%
64	2.2213%	1.7159%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.

**NEW YORK CITY POLICE PENSION FUND**

**PROBABILITIES OF MORTALITY AFTER SERVICE RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.0205%	0.0123%	65	0.9973%	0.7467%
20	0.0214%	0.0124%	66	1.1041%	0.8383%
21	0.0227%	0.0125%	67	1.1921%	0.9165%
22	0.0238%	0.0126%	68	1.3394%	0.9973%
23	0.0256%	0.0132%	69	1.5179%	1.1041%
24	0.0271%	0.0138%	70	1.6666%	1.1921%
25	0.0292%	0.0146%	71	1.8533%	1.3394%
26	0.0325%	0.0158%	72	2.0462%	1.5179%
27	0.0337%	0.0165%	73	2.2756%	1.6666%
28	0.0347%	0.0174%	74	2.5123%	1.8533%
29	0.0363%	0.0183%	75	2.8155%	2.0462%
30	0.0392%	0.0205%	76	3.0718%	2.2756%
31	0.0450%	0.0257%	77	3.4074%	2.5123%
32	0.0512%	0.0295%	78	3.9214%	2.8155%
33	0.0574%	0.0325%	79	4.4692%	3.0718%
34	0.0634%	0.0349%	80	5.0522%	3.4074%
35	0.0701%	0.0373%	81	5.5792%	3.9214%
36	0.0748%	0.0390%	82	6.1261%	4.4692%
37	0.0794%	0.0410%	83	6.9247%	5.0522%
38	0.0827%	0.0432%	84	7.8883%	5.5792%
39	0.0867%	0.0457%	85	8.7037%	6.1261%
40	0.0924%	0.0493%	86	9.5191%	6.9247%
41	0.1022%	0.0536%	87	10.5553%	7.8883%
42	0.1113%	0.0595%	88	12.1521%	8.7037%
43	0.1196%	0.0668%	89	13.5234%	9.5191%
44	0.1273%	0.0757%	90	15.2121%	10.5553%
45	0.1344%	0.0845%	91	16.8338%	12.1521%
46	0.1409%	0.0946%	92	18.8609%	13.5234%
47	0.1468%	0.1055%	93	20.5332%	15.2121%
48	0.1522%	0.1196%	94	22.2456%	16.8338%
49	0.1570%	0.1347%	95	24.5417%	18.5820%
50	0.1614%	0.1468%	96	26.4058%	19.8275%
51	0.2065%	0.1522%	97	28.1805%	21.4014%
52	0.2484%	0.1570%	98	30.5846%	22.2918%
53	0.2934%	0.1614%	99	32.2083%	22.9087%
54	0.3374%	0.2065%	100	33.6045%	23.1601%
55	0.3691%	0.2484%	101	35.8628%	24.4834%
56	0.4154%	0.2934%	102	37.1685%	25.4498%
57	0.4636%	0.3374%	103	38.3040%	26.6044%
58	0.5137%	0.3691%	104	39.2003%	27.9055%
59	0.5537%	0.4154%	105	39.7886%	29.3116%
60	0.5939%	0.4636%	106	40.0000%	30.7811%
61	0.6754%	0.5137%	107	40.0000%	32.2725%
62	0.7467%	0.5537%	108	40.0000%	33.7441%
63	0.8383%	0.5939%	109	40.0000%	35.1544%
64	0.9165%	0.6754%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.

**NEW YORK CITY POLICE PENSION FUND**

**PROBABILITIES OF MORTALITY AFTER DISABILITY RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.0292%	0.0149%	65	1.1921%	0.9165%
20	0.0304%	0.0154%	66	1.3394%	0.9973%
21	0.0323%	0.0160%	67	1.5179%	1.1041%
22	0.0346%	0.0169%	68	1.6666%	1.1921%
23	0.0377%	0.0184%	69	1.8533%	1.3394%
24	0.0414%	0.0198%	70	2.0462%	1.5179%
25	0.0464%	0.0215%	71	2.2756%	1.6666%
26	0.0534%	0.0239%	72	2.5123%	1.8533%
27	0.0574%	0.0253%	73	2.8155%	2.0462%
28	0.0610%	0.0270%	74	3.0718%	2.2756%
29	0.0648%	0.0288%	75	3.4074%	2.5123%
30	0.0690%	0.0320%	76	3.9214%	2.8155%
31	0.0738%	0.0356%	77	4.4692%	3.0718%
32	0.0788%	0.0381%	78	5.0522%	3.4074%
33	0.0864%	0.0401%	79	5.5792%	3.9214%
34	0.0912%	0.0414%	80	6.1261%	4.4692%
35	0.0970%	0.0433%	81	6.9247%	5.0522%
36	0.1044%	0.0453%	82	7.8883%	5.5792%
37	0.1133%	0.0478%	83	8.7037%	6.1261%
38	0.1217%	0.0503%	84	9.5191%	6.9247%
39	0.1361%	0.0536%	85	10.5553%	7.8883%
40	0.1497%	0.0595%	86	12.1521%	8.7037%
41	0.1628%	0.0668%	87	13.5234%	9.5191%
42	0.1752%	0.0757%	88	15.2121%	10.5553%
43	0.1870%	0.0863%	89	16.8338%	12.1521%
44	0.1982%	0.0987%	90	18.8609%	13.5234%
45	0.2089%	0.1101%	91	20.5332%	15.2121%
46	0.2117%	0.1222%	92	22.2456%	16.4390%
47	0.2134%	0.1347%	93	24.5417%	17.9273%
48	0.2140%	0.1505%	94	26.4058%	19.1145%
49	0.2668%	0.1697%	95	28.1805%	20.1960%
50	0.3124%	0.1945%	96	30.5846%	21.1578%
51	0.3510%	0.2140%	97	32.2083%	22.4894%
52	0.3832%	0.2575%	98	33.6045%	23.0808%
53	0.3974%	0.2980%	99	35.8628%	23.3995%
54	0.4179%	0.3510%	100	37.1685%	23.4195%
55	0.4636%	0.3832%	101	38.3040%	24.4834%
56	0.5137%	0.3974%	102	39.2003%	25.4498%
57	0.5537%	0.4179%	103	39.7886%	26.6044%
58	0.5939%	0.4636%	104	40.0000%	27.9055%
59	0.6754%	0.5137%	105	40.0000%	29.3116%
60	0.7467%	0.5537%	106	40.0000%	30.7811%
61	0.8383%	0.5939%	107	40.0000%	32.2725%
62	0.9165%	0.6754%	108	40.0000%	33.7441%
63	0.9973%	0.7467%	109	40.0000%	35.1544%
64	1.1041%	0.8383%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.

**NEW YORK CITY FIRE DEPARTMENT PENSION FUND**

**PROBABILITIES OF MORTALITY AFTER SERVICE RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.0205%	0.0123%	65	0.8721%	0.6640%
20	0.0214%	0.0124%	66	0.9549%	0.7152%
21	0.0227%	0.0125%	67	1.0263%	0.7664%
22	0.0238%	0.0126%	68	1.0780%	0.8175%
23	0.0256%	0.0132%	69	1.1354%	0.8823%
24	0.0271%	0.0138%	70	1.2401%	0.9654%
25	0.0292%	0.0146%	71	1.3931%	1.0334%
26	0.0325%	0.0158%	72	1.5460%	1.1302%
27	0.0337%	0.0165%	73	1.7479%	1.2142%
28	0.0347%	0.0174%	74	1.9497%	1.3305%
29	0.0363%	0.0183%	75	2.1980%	1.4017%
30	0.0392%	0.0205%	76	2.4042%	1.5989%
31	0.0461%	0.0262%	77	2.6666%	1.8345%
32	0.0535%	0.0306%	78	3.1229%	2.0358%
33	0.0611%	0.0338%	79	3.5976%	2.3016%
34	0.0687%	0.0366%	80	4.0910%	2.5675%
35	0.0773%	0.0391%	81	4.6551%	2.8334%
36	0.0844%	0.0415%	82	5.2510%	3.0992%
37	0.0918%	0.0439%	83	6.1653%	3.3650%
38	0.0983%	0.0464%	84	7.2497%	3.8580%
39	0.1063%	0.0492%	85	8.2212%	4.4439%
40	0.1167%	0.0532%	86	9.2116%	5.0529%
41	0.1252%	0.0583%	87	10.4390%	5.6858%
42	0.1335%	0.0615%	88	11.5324%	6.2110%
43	0.1411%	0.0654%	89	12.4186%	7.3676%
44	0.1484%	0.0703%	90	13.6044%	8.3918%
45	0.1555%	0.0747%	91	15.0622%	9.8160%
46	0.1620%	0.0803%	92	17.0188%	11.2767%
47	0.1684%	0.0862%	93	19.7046%	13.0596%
48	0.1743%	0.0937%	94	22.1851%	14.4764%
49	0.1799%	0.1013%	95	25.0224%	15.9320%
50	0.1851%	0.1112%	96	26.8890%	17.3971%
51	0.2192%	0.1216%	97	28.5910%	19.3087%
52	0.2489%	0.1351%	98	30.8789%	20.7326%
53	0.2801%	0.1495%	99	32.3238%	22.1661%
54	0.3085%	0.1650%	100	33.6045%	23.1601%
55	0.3410%	0.1815%	101	35.8628%	24.4834%
56	0.3795%	0.1991%	102	37.1685%	25.4498%
57	0.4178%	0.2545%	103	38.3040%	26.6044%
58	0.4561%	0.3056%	104	39.2003%	27.9055%
59	0.4837%	0.3569%	105	39.7886%	29.3116%
60	0.5096%	0.4081%	106	40.0000%	30.7811%
61	0.5703%	0.4592%	107	40.0000%	32.2725%
62	0.6215%	0.5104%	108	40.0000%	33.7441%
63	0.6999%	0.5616%	109	40.0000%	35.1544%
64	0.7817%	0.6128%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.

**NEW YORK CITY FIRE DEPARTMENT PENSION FUND**

**PROBABILITIES OF MORTALITY AFTER DISABILITY RETIREMENT  
USED IN THE JUNE 30, 2010 OPEB ACTUARIAL VALUATION\***

Age	Males	Females	Age	Males	Females
19	0.0488%	0.0149%	65	1.0885%	0.9165%
20	0.0528%	0.0154%	66	1.2067%	0.9973%
21	0.0570%	0.0160%	67	1.2858%	1.1041%
22	0.0614%	0.0169%	68	1.4217%	1.1921%
23	0.0660%	0.0184%	69	1.5812%	1.3394%
24	0.0708%	0.0198%	70	1.6834%	1.5179%
25	0.0772%	0.0215%	71	1.8644%	1.6666%
26	0.0888%	0.0239%	72	2.0364%	1.8533%
27	0.0957%	0.0253%	73	2.1994%	2.0462%
28	0.1018%	0.0270%	74	2.3535%	2.2756%
29	0.1080%	0.0288%	75	2.5814%	2.5123%
30	0.1150%	0.0320%	76	2.9263%	2.8155%
31	0.1230%	0.0356%	77	3.3329%	3.0718%
32	0.1314%	0.0381%	78	3.7468%	3.4074%
33	0.1441%	0.0401%	79	4.1676%	3.9214%
34	0.1519%	0.0414%	80	4.6502%	4.4692%
35	0.1617%	0.0433%	81	5.5169%	5.0522%
36	0.1689%	0.0453%	82	6.4183%	5.5792%
37	0.1763%	0.0478%	83	7.2019%	6.1261%
38	0.1839%	0.0503%	84	8.1561%	6.9247%
39	0.1917%	0.0536%	85	8.9563%	7.8883%
40	0.1997%	0.0595%	86	9.7016%	8.7037%
41	0.2079%	0.0668%	87	10.6853%	9.5191%
42	0.2163%	0.0757%	88	11.7220%	10.5553%
43	0.2249%	0.0863%	89	12.5825%	12.1521%
44	0.2337%	0.0987%	90	13.7694%	13.5234%
45	0.2427%	0.1101%	91	16.2322%	15.2121%
46	0.2519%	0.1222%	92	18.9693%	16.4390%
47	0.2613%	0.1347%	93	21.2188%	17.9273%
48	0.2709%	0.1505%	94	23.2854%	19.1145%
49	0.2807%	0.1697%	95	25.7915%	20.1960%
50	0.2907%	0.1945%	96	27.6039%	21.1578%
51	0.3009%	0.2140%	97	29.2393%	22.4894%
52	0.3113%	0.2575%	98	31.1481%	23.0808%
53	0.3338%	0.2980%	99	32.5030%	23.3995%
54	0.3711%	0.3510%	100	33.6045%	23.4195%
55	0.4170%	0.3832%	101	35.8628%	24.4834%
56	0.4649%	0.3974%	102	37.1685%	25.4498%
57	0.5147%	0.4179%	103	38.3040%	26.6044%
58	0.5662%	0.4636%	104	39.2003%	27.9055%
59	0.6068%	0.5137%	105	39.7886%	29.3116%
60	0.6538%	0.5537%	106	40.0000%	30.7811%
61	0.7279%	0.5939%	107	40.0000%	32.2725%
62	0.8043%	0.6754%	108	40.0000%	33.7441%
63	0.9070%	0.7467%	109	40.0000%	35.1544%
64	1.0015%	0.8383%	110	100.0000%	100.0000%

\* Used to develop final GASB43/45 results. See Report pages G-2 and G-3.



**APPENDIX H**

## APPENDIX H - ACKNOWLEDGEMENTS

The Actuary acknowledges and expresses appreciation to the following individuals and organizations for their efforts in support of the development of the GASB43 and GASB45 results and the production of this Report:

- The staff of the New York City Office of the Actuary for developing the results, preparing this Report and coordinating the entire OPEB project.
- The staff of Buck Consultants, LLC who collaborated closely with the OA to develop and run the programs that produced the final results. The Actuary also thanks the Buck staff for their consultation and advice, their tireless efforts to meet very tight deadlines and their access and availability to the OA.
- The staff of the Office of Labor Relations for providing supplemental data needed to value the OPEB provided under the Program.
- The staff of the Office of the Comptroller for their insights, cooperation and support.

- The staff of the Office of Management and Budget for information on the NYCRHBT assets and the OPEB Plan financial information and for their insights, cooperation and support.
- The staffs of the Component Units for their cooperation and responsiveness.
- The auditors for the City and the Component Units for their cooperation and assistance.