

**JULY 1, 2005**  
**POST RETIREMENT BENEFITS ANALYSIS**  
**OF**  
**THE CITY OF NEWTON**

**September 2005**

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## SECTION I - OVERVIEW

The City of Newton has engaged Buck Consultants to prepare an actuarial valuation of their post-retirement benefits program as of July 1, 2005. Employee data and premium information as of this date were provided by the City.

The purposes of the valuation are to analyze the current funded position of the City's post-retirement benefits program, determine the level of contributions necessary to assure sound funding and provide reporting and disclosure information for financial statements, governmental agencies and other interested parties.

This valuation report contains information required by the Government Accounting Standards Board's Statements 43 and 45.

Section II provides a summary of the principal valuation results. Section IV provides a projection of funding amounts.

We have used interest-rate assumptions of 2.0% and 8.0%, which represents the rate of return on short-term fixed income investments, a more appropriate rate of return for a funded plan. We have also raised the expected medical trend to reflect current plan experience.

Respectfully Submitted,

BUCK CONSULTANTS, LLC

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Daniel Sherman, ASA, MAAA, EA  
Director

\_\_\_\_\_  
Date

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Robert G. Brau, CEBS  
Senior Consultant

\_\_\_\_\_  
Date

**SECTION II – REQUIRED INFORMATION****July 1, 2005**

a) Discount rate	<u>2.0%</u>	<u>8.0%</u>
b) Actuarial value of assets	\$0	\$0
c) Actuarial accrued liability		
Active Participants	\$470,445,000	\$124,239,000
Retired Participants	<u>\$183,760,000</u>	<u>\$116,651,000</u>
Total	\$654,205,000	\$240,890,000
d) Unfunded actuarial liability (c. – b.)	\$654,205,000	\$240,890,000
e) Funded ratio (c. / b.)	0%	0%
f) Annual covered payroll	N/A	N/A
g) Unfunded actuarial liability as percentage of covered payroll	N/A	N/A
h) Normal Cost for the 2006 fiscal year	\$31,704,660	\$5,275,800
i) Amortization of unfunded actuarial liability For the 2006 fiscal year	\$13,882,443	\$11,729,054
j) Annual Required Contribution (ARC) <sup>1</sup> For the 2006 fiscal year (h. + i.)	\$45,587,103	\$17,004,854
k) Expected benefit payments	\$12,699,984	\$12,699,984
l) Increase in annual cost to fund the Plan (j) – (k)	N/A	\$4,304,870

**SECTION III - MEMBERSHIP DATA AND MEDICAL PREMIUM**


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<sup>1</sup> Assumes payment is made at the beginning of the fiscal year.

**Annual Premiums for the 2005-2006 Fiscal Year**

Harvard Pilgrim	
Individual	\$4,313.52
Family	11,745.48
Tufts Low Option	
Individual	5,087.80
Family	15,125.40
Tufts High Option	
Individual	8,041.44
Family	19,283.88
Medicare Complement Plan	4,514.40
Secure Horizons	2,520.00
First Seniority	2,520.00
Blue Care 65	3,190.80
Medicare Part B Premium	938.40
Basic Life Insurance Premium	113.28

The City pays 80% of the medical premium (including the Medicare Part B premium) and 50% of the life insurance premium.

**Number of employees included in valuation**

Active employees:		2,473
Retired employees:		
Under age 65 (not including covered spouses)		
Harvard Pilgrim		
Family	38	
Individual	71	
Tufts High Option (POS/OOA)		
Family	46	
Individual	87	
Tufts Low Option		
Family	111	
Individual	105	
Over age 65		
Tufts Medicare Compliment	1,656	
Harvard Pilgrim	14	
Tufts High Option (POS/OOA)	90	
Tufts Low Option (EPO)	75	
Secure Horizons	29	
First Seniority	97	
Blue Care 65	<u>10</u>	
Total Retired Employees Included		<u>2,429</u>
Total Number Included In Valuation		4,902

## SECTION IV – REQUIRED SUPPLEMENTARY INFORMATION

## SCHEDULE OF FUNDING PROGRESS

2.0% Discount Rate

Actuarial Valuation Date	Actuarial Value of Assets <u>(a)</u>	Actuarial Accrued Liability (AAL) <u>(b)</u>	Unfunded AAL (UAAL) <u>(b)-(a)</u>	Funded Ratio <u>(a)/(b)</u>	Covered Payroll <u>(c)</u>	UAAL as a Percentage of Covered Payroll <u>[(b)-(a)]/(c)</u>
July 1, 2005	\$0	654,205,000	654,205,000	\$0	n/a	n/a
July 1, 2004	\$0	520,494,247	520,494,247	\$0	n/a	n/a
July 1, 2003*	\$0	210,988,403	210,988,403	\$0	n/a	n/a

\*at 8.0%. The comparable values at 8.0% for July 1, 2005 and July 1, 2004 are \$240,890,000 and \$193,425,000, respectively.

## **SECTION V – SCHEDULE OF EMPLOYER CONTRIBUTIONS**

The Government Accounting Standards Board's Statements 43 and 45 outline various requirements of a funding schedule that will amortize the unfunded actuarial liability and cover normal costs. Amortization of the unfunded actuarial liability is to be based on a schedule that extends no longer than 30 years. The contribution towards the amortization of the unfunded actuarial liability may be made in level payments or in payments increasing at the same rate as salary increases.

In the amortization schedule shown on the following page, the amortization of the unfunded accrued liability is assumed to increase annually by 5.0%. The normal cost is expected to increase at the same rate as the assumed ultimate health care trend rate. The contributions were computed assuming that the contribution is paid on July 1, at the start of the fiscal year.



**SECTION V – SCHEDULE OF EMPLOYER CONTRIBUTIONS**

(continued)

2.0% Discount Rate

Fiscal Year Ending in	Normal Cost	Amortization of the Unfunded Actuarial Liability	Total City ARC
2006	31,704,660	13,882,443	45,587,103
2007	34,716,603	14,576,565	49,293,168
2008	37,841,097	15,305,393	53,146,490
2009	41,057,590	16,070,663	57,128,253
2010	44,342,197	16,874,196	61,216,393
2011	47,667,862	17,717,906	65,385,768
2012	51,004,612	18,603,801	69,608,413
2013	54,319,912	19,533,991	73,853,903
2014	57,579,107	20,510,691	78,089,798
2015	61,033,853	21,536,225	82,570,078
2016	64,695,884	22,613,036	87,308,920
2017	68,577,637	23,743,688	92,321,325
2018	72,692,295	24,930,873	97,623,168
2019	77,053,833	26,177,416	103,231,249
2020	81,677,063	27,486,287	109,163,350
2021	86,577,687	28,860,602	115,438,289
2022	91,772,348	30,303,632	122,075,980
2023	97,278,689	31,818,813	129,097,502
2024	103,115,410	33,409,754	136,525,164
2025	109,302,335	35,080,242	144,382,577
2026	115,860,475	36,834,254	152,694,729
2027	122,812,104	38,675,966	161,488,070
2028	130,180,830	40,609,765	170,790,595
2029	137,991,680	42,640,253	180,631,933
2030	146,271,181	44,772,266	191,043,447
2031	155,047,452	47,010,879	202,058,331
2032	164,350,299	49,361,423	213,711,722
2033	174,211,317	51,829,494	226,040,811
2034	184,663,996	54,420,969	239,084,965
2035	195,743,836	57,142,017	252,885,853
2036	207,488,466	0	207,488,466

## SECTION V – SCHEDULE OF EMPLOYER CONTRIBUTIONS

(continued)

8.0% Discount Rate

Fiscal Year Ending in	Normal Cost	Amortization of the Unfunded Actuarial Liability	Total City ARC
2006	5,275,800	11,729,054	17,004,854
2007	5,777,001	12,315,507	18,092,508
2008	6,296,931	12,931,282	19,228,213
2009	6,832,170	13,577,846	20,410,016
2010	7,378,744	14,256,738	21,635,482
2011	7,932,150	14,969,575	22,901,725
2012	8,487,401	15,718,054	24,205,455
2013	9,039,082	16,503,957	25,543,039
2014	9,581,427	17,329,155	26,910,582
2015	10,156,313	18,195,612	28,351,925
2016	10,765,692	19,105,393	29,871,085
2017	11,411,634	20,060,663	31,472,297
2018	12,096,332	21,063,696	33,160,028
2019	12,822,112	22,116,881	34,938,993
2020	13,591,439	23,222,725	36,814,164
2021	14,406,925	24,383,861	38,790,786
2022	15,271,341	25,603,054	40,874,395
2023	16,187,621	26,883,207	43,070,828
2024	17,158,878	28,227,367	45,386,245
2025	18,188,411	29,638,735	47,827,146
2026	19,279,716	31,120,672	50,400,388
2027	20,436,499	32,676,706	53,113,205
2028	21,662,689	34,310,541	55,973,230
2029	22,962,450	36,026,068	58,988,518
2030	24,340,197	37,827,371	62,167,568
2031	25,800,609	39,718,740	65,519,349
2032	27,348,646	41,704,677	69,053,323
2033	28,989,565	43,789,911	72,779,476
2034	30,728,939	45,979,406	76,708,345
2035	32,572,675	48,278,377	80,851,052
2036	34,527,036	0	34,527,036

**SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS**

**CITY OF NEWTON, ALL GROUPS**

***Interest*** 2.00% per year, net of expenses for an unfunded plan

8.00%, net of expenses if funded

***Actuarial Cost Method:*** Projected Unit Credit

***Medical Care Inflation:***

<i>Year</i>	<i>Inflation Rate</i>
2005	9.5%
2006	9.0%
2007	8.5%
2008	8.0%
2009	7.5%
2010	7.0%
2011	6.5%
2012 and after	6.0%

***Amortization period:*** Closed basis. The amortization period is a specific number of years that is counted from one date, declining to zero with the passage of time.

***Retirement Eligibility:*** As prescribed by the terms of the City's Retirement System.

***Marital status:*** Active participants are assumed to keep their current marital status upon retirement.

GENERAL EMPLOYEES

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, disability, death and service retirement are as follows:

Annual Rates of

Age	Disability	Death		Service Retirement		Years of Service	Rates of Withdrawal
		Male	Female	Male	Female		
25	.02%	.04%	.02%			0	15.0%
30	.03	.04	.03			1	12.0%
35	.06	.08	.05			2	10.0%
40	.10	.11	.07			3	9.0%
45	.15	.15	.11			4	8.0%
50	.19	.21	.17	1.0%	1.5%	5	7.6%
55	.24	.30	.25	2.0	5.5	10	5.4%
60	.28	.49	.39	12.0	5.0	15	3.3%
62	.30	.59	.47	30.0	15.0	20	2.0%
65	.30	.76	.58	40.0	15.0	25	1.0%
69		.95	.73	30.0	20.0	30+	0.0%

DEATHS AFTER RETIREMENT: The RP-2000 Healthy Annuitant Table. For the period after disability retirement, the RP-2000 Healthy Annuitant Table set forward 2 years is used.

POLICE AND FIRE

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of disability, death and service retirement are as follows:

Annual Rates of

Age	Disability	Death		Service Retirements	Years of Service	Rates of Withdrawal
		Male	Female			
25	0.20%	.04%	.02%		0	1.5%
30	0.30	.04	.03		1	1.5
35	0.30	.08	.05		2	1.5
40	0.30	.11	.07		3	1.5
45	1.00	.15	.11	1.0%	4	1.5
50	1.25	.21	.17	2.0	5	1.5
55	1.20	.30	.25	15.0	6	1.5
60	0.85	.49	.39	20.0	7	1.5
62	0.75	.59	.47	25.0	8	1.5
65	0.00	.76	.58	100.0	9	1.5
69		.95	.73		10	1.5
					11+	0.0

DEATHS AFTER RETIREMENT: The RP-2000 Healthy Annuitant Table. For the period after disability retirement, the RP-2000 Healthy Annuitant Table set forward 2 years is used.

## **SCHEDULE B - SUMMARY OF PROGRAM PROVISIONS**

### Pre-Age 65 Retirees

Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65, at which time they enter the Medicare Complement Plan.

Current active employees who are assumed to retire prior to age 65 are valued with a weighted-average premium. This weighted-average premium is based on the medical plan coverage of current retirees under age 65.

At age 65, all participants are assumed to join the Medicare Complement Plan.

### Post-Age 65 Retirees

Current retirees over age 65 remain in their current medical plan until death.

### Medicare Part B Reimbursement

For the purposes of this valuation, all currently active employees hired after April 1, 1986 are assumed to be eligible for Medicare.

All retirees and covered spouses who are participants in the Tufts Medicare Compliment Plan, First Seniority, Secure Horizons or Blue Care 65 are assumed to receive a reimbursement of 80% of the Medicare Part B premium.

Active employees who are not currently in a medical plan are assumed not to be eligible for retiree medical coverage for purposes of this valuation.

For purposes of this valuation, active employees are assumed to keep their current coverage level (family or individual) after they retire.

Participants who retire with a disability are treated as regular retirees – they stay in their chosen plan until age 65.