

CITY OF NEWTON

SELF INSURED
WORKERS COMPENSATION
FUNDING STUDY

AS OF JUNE 30, 2006

SEPTEMBER 27, 2006

FINANCIAL RISK ANALYSTS

September 27, 2006

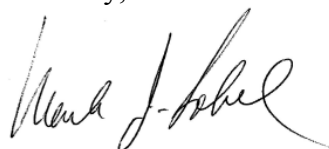
Mr. David C. Wilkinson
Comptroller
City of Newton
Commonwealth Avenue and Walnut St.
Newton Centre, MA 02159

Dear David:

Enclosed you will find our report regarding the City's self funded Workers Compensation program as of June 30, 2006. Projected ultimate losses are very consistent with last year's results.

It has been a pleasure being of service again to the City. Please feel free to contact me if you have any questions regarding this report.

Sincerely,



Mark J. Sobel, FCAS, MAAA
Managing Principal

MJS/cv

CITY OF NEWTON

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION.....	2
CONDITIONS AND LIMITATIONS	3
DISTRIBUTION AND USE.....	6
SUMMARY AND CONCLUSIONS	7
ANALYSIS.....	9
EXHIBITS	

CITY OF NEWTON

INTRODUCTION

Financial Risk Analysts, LLC has been retained by the City of Newton (the City) to provide actuarial services regarding its self funded Workers Compensation program. The City has been fully self-funded on a pay as you go basis since at least 1956. Claims are handled by the City's Personnel Department which administers and processes benefits payments. Excess Workers Compensation coverage is not purchased and the City therefore assumes unlimited exposure to loss.

Financial Risk Analysts has been retained to provide indicated liability levels for the City's self funded Workers Compensation losses as of June 30, 2006. In addition, we have been requested to provide an indicated contribution to the self insurance fund for the one year period beginning July 1, 2006.

CITY OF NEWTON

CONDITIONS AND LIMITATIONS

GENERAL

Throughout this report and its exhibits the term "loss" is used to refer to both losses and allocated loss adjustment expenses (ALAE). ALAE provides for all expenses associated with the handling and settling of claims that can be directly attributable to a particular claim. Such expenses typically include claim handling fees, legal fees, investigatory expenses, medical reports, expert witness fees, rehabilitation costs, etc. No other costs associated with the City's self insured Workers Compensation program other than losses and ALAE have been considered in this report.

DATA

In this report we have used historical data and other information provided to us by the City of Newton. This data consist primarily of historical loss and exposure information for the City. In addition we have relied on various oral representations made to us by employees of the City. Although the data supplied have been reviewed for purposes of reasonability, we have not independently audited or verified this information and we assume it to be accurate and complete.

The results of our analysis will be contingent upon the reliability of the information supplied to us and such reliability is the responsibility of the City. Should the City become aware of any significant discrepancies in the data reported to us we should be notified of such discrepancies and this report will be amended, if necessary.

We were provided with the following data:

- Accident year losses paid during fiscal years 1988-2006 for General Government employees. Losses paid prior to 1988 were not provided to us. The term "accident year" refers to the year in which the accident leading to the injury took place. "Losses" refers to benefits paid for either indemnity (lost wages) or medical benefits.

CITY OF NEWTON

- Data and information for long term disability and death cases. These are referred to as "pension cases".
- Covered payroll information by class code for Fiscal Years 1994-2006 and estimated payroll for fiscal year 2007.

We have made various assumptions to adjust for any missing or incomplete data. The City should recognize, however, that given the considerable breadth and scope of its self funded program, the relatively limited data available increases the uncertainty associated with this actuarial study. The City does not fully establish case reserves for reported Workers Compensation cases. We encourage the City to establish procedures whereby such reserves are set up for all claims. This will considerably increase the accuracy of future actuarial studies and should also improve the City's ability to manage the self insurance program.

In performing our analysis we also relied on data and information obtained from insurance industry sources to supplement the actual historical data provided to us by the City. Such data include loss development patterns, loss trend factors, loss payout patterns, and benefit level changes for Massachusetts Workers Compensation.

UNCERTAINTY

Actuarial projections, by their nature, are estimates of future contingent events that cannot be known with certainty. The ultimate liability of the City for its retained losses will be subject to events that have yet to occur such as the size of future Workers Compensation awards, future economic conditions, and the propensity for workers to file claims for Workers Compensation. No assumptions have been made in this report as to any extraordinary changes in the legal, social, or judicial environment that might affect future losses.

While we believe the results presented in this report are reasonable and reflect the use of accepted actuarial principles and standards of practice, it is possible that actual future loss results of the City will differ, perhaps materially, from those projected herein. In particular, as noted previously, the lack of complete historical loss information and case reserve estimates increases

CITY OF NEWTON

the degree of uncertainty in our loss estimates. In addition, since excess coverage is not purchased, the City is exposed to unlimited losses, which further increases the uncertainty associated with our projections. Nothing in this report should be construed as a warranty or guarantee as to the adequacy of the liability estimates contained herein.

ASSET QUALITY/INVESTMENT INCOME

No attempt has been made to evaluate the quality of the invested or non invested assets supporting the loss and ALAE liabilities of the City. It has been assumed that the City's loss and ALAE liabilities are supported by creditworthy assets with minimal risk of default and/or capital loss.

In this report we present the pension case losses on a discounted basis. This is a generally accepted approach for purposes of establishing liabilities for claims with fixed and determinable payment levels. Discounted reserves reflect the time value of money and represent the present value as of June 30, 2006 of the expected future loss payments.

For purposes of discounting the pension case loss estimates we used an annual interest rate of 5.0%, as selected by the City. It is important to note that interest/appreciation earned on the assets supporting these liabilities must be credited to the self insurance fund. Alternatively, future years' contributions to the self insurance fund can be increased to offset the interest amortization. Financial Risk Analysts, LLC renders no opinion on the reasonability of the use of a 5.0% rate of return or on the ability of the City to earn at least 5.0% on the invested assets supporting the self insurance liabilities.

CITY OF NEWTON

DISTRIBUTION AND USE

This report is provided solely for the use of the City of Newton in evaluating its self funded Workers Compensation liabilities as of June 30, 2006. A copy of this report may also be provided to the City's auditors with the proviso that the report is copied in its entirety and that each party receiving a copy of this report agrees to not distribute the report to any other third party.

Distribution of this report to parties other than those referenced above is not authorized without the express written consent of Financial Risk Analysts, LLC.

CITY OF NEWTON

SUMMARY AND CONCLUSIONS

Indicated Liabilities as Of June 30, 2006

Exhibit 1.1 presents the results of our analysis by type of loss. Based upon our analysis we are recommending the following liability for expected losses as of June 30, 2006:

General Government Workers Compensation Self Insured Liability As of June 30, 2006	
Other than Pension Cases	\$1,134,050
<u>Pension Cases</u>	<u>\$5,108,055</u>
Total Liability	\$6,242,105

The liability indication provided above is intended to provide for all General Government Workers Compensation losses incurred by the City from inception of its self funded program through June 30, 2006 under the terms and conditions of its statutory obligations.

The above liability provides for what is commonly known as "expected losses." Expected losses represent the best estimate of the City's outstanding losses as of June 30, 2006 and reflect a statistical confidence level of approximately 53%. This means there is a 53% likelihood that actual losses will be less than or equal to expected losses.

Any actuarial estimate of loss reserves is subject to inherent variability. While expected losses represent the best estimate of losses to be incurred, actual losses in any given year can be expected to differ from expected losses. Funding at expected loss levels will entail a degree of risk (47%) that reserve levels will be exceeded. If the City wishes to fund at a level with a higher degree of statistical confidence, i.e. with a lower probability of reserves being inadequate, it may wish to fund at a higher loss level than that indicated by expected losses.

CITY OF NEWTON

The liabilities indicated above include a provision for the following:

- Losses on claims that have occurred but that are not yet known and not yet reported to the City. These claims are part of the reserve provision known as *IBNR* or *Incurred But Not Reported*.
- Future loss development on known, recorded claims. This is also considered a part of the IBNR reserve.

Indicated Funding For Fiscal Year 2007

As displayed on Exhibit 1.2 we indicate the City fund \$993,530 for expected losses occurring during the period July 1, 2006 to June 30, 2007. The indicated funding level is based on estimated payroll as shown on Exhibit 1.2 of approximately \$38.5 million for General Government employees. The fiscal year 2007 funding is intended to provide solely for losses occurring during the period July 1, 2006-2007. It does not include a provision to amortize any surplus or deficit in the fund balance as of June 30, 2006. The City may wish to make an adjustment to the extent a surplus or deficit exists.

As also shown on Exhibit 1.2 we are projecting an overall pure premium of \$2.58 for fiscal year 2007. A pure premium is defined as expected losses per unit of exposure. Losses are defined as previously noted. For Workers Compensation the standard exposure unit is \$100 of payroll. No other costs or expenses associated with the operation of the self funded program are included in our estimates.

CITY OF NEWTON

ANALYSIS

BACKGROUND INFORMATION

This analysis reviews the City of Newton's self funded Workers Compensation program as of June 30, 2006. The City has been self funded for a considerable period of time. The actual inception date is unknown. The data provided to us include claims with date of loss going back to 1956. Our analysis therefore includes loss estimates for accident years 1956 through 2006. We have assumed no liability exists for years prior to 1956.

As mentioned previously, the data provided to us does not include any payments made on claims closed prior to 1988 nor does it include payments made prior to 1988 on all other claims.

ASSUMPTIONS AND METHODOLOGY

1. Indicated Outstanding Losses

We have used two commonly applied actuarial methodologies to estimate the City's outstanding indemnity losses. For medical only claims, only the paid loss development method has been used. From the results of these approaches final loss selections were made. The following is a detailed description of each of the methodologies used.

- **Paid Loss Development Method**

The paid loss development method is a method in which paid losses are projected to an ultimate level based on historical development patterns. An analysis of the changes in accident year incurred losses between various valuation points provides a basis for estimating future changes. Paid losses are projected to an ultimate level based on historical paid loss development patterns. This method assumes that loss settlement and payment patterns have remained reasonably stable over time.

CITY OF NEWTON

Paid loss development patterns have been derived from the City's own historical loss experience supplemented with insurance industry experience. Loss development factors are shown on Exhibits 5.1-5.3.

The actual historical loss experience of the City is shown on Exhibits 5.1-5.3. Because medical only claims are paid and closed in a relatively short period of time, we have been able to use the payment history provided to us by the City as the basis for making medical only claims projections.

For claims with indemnity experience displayed on Exhibits 5.1-5.2, we have had to adjust the losses to reflect the missing payments made prior to 1988. The losses have been adjusted using historical experience for the City and the industry. Adjusted losses are presented on Exhibits 5.1 and 5.2 and these are used for purposes of selecting loss development factors.

- **Bornhuetter-Ferguson Paid Loss Method**

This approach is essentially a credibility weighted average of two other reserving methods; the paid loss development method and the expected loss method. The expected loss method simply sets the indicated reserve equal to the difference between expected losses and paid losses. It produces very stable results but fails to incorporate actual results as they emerge.

The Bornhuetter-Ferguson method blends the paid loss development method and the expected loss method by splitting expected losses into two distinct pieces; expected paid losses and expected unpaid losses. As an accident year matures, the expected paid losses are replaced with actual reported losses plus expected unreported losses. Thus, as the year matures, the initial expected incurred loss estimate becomes less important while the actual paid loss experience increases in importance. In order to use this method, one must estimate both the initial expected losses and the expected loss payment pattern.

For fiscal years 2005 and 2006 initial expected indemnity losses are derived on Exhibit 3.1. They are based on results for the more recent years projected to current benefit and trend levels. Years prior to 2005 have been left unchanged from our previous analysis. Expected

CITY OF NEWTON

loss payment patterns are developed from the paid loss development factors on Exhibits 5.1 and 5.2.

We relied on the results of the Bornhuetter-Ferguson approach. The more recent years will be the most uncertain ones and will exhibit the greatest volatility. Use of the Bornhuetter-Ferguson approach will dampen this volatility and should produce more stable and reliable results. The results of this method appear on Exhibit 2.1.

Note that for both methods adjusted paid losses rather than actual paid losses have been used. Our results therefore produce a valid estimate of ultimate losses for a particular year even though payments made prior to 1988 are missing.

Pension Cases

Pension cases have been analyzed separately on Exhibit 2.3. US Life Tables 2001 Vital Statistics for Males and Females have been used to determine annuity values for these claims using a 5.0% annual rate of interest. Amortizing such claims for mortality and interest is a common practice when establishing liabilities for these types of claims.

It has been assumed for the permanent total and death claims that benefits will be payable for life. For the temporary disability claims it has been assumed that benefits will be paid for the statutory maximum eleven years.

Effective July 1, 1999 the City elected to opt out of the Massachusetts Workers Compensation Trust Fund. As a result the City's liability for pension claims increased significantly. Prior to July 1, 1999, the City's net liability for pension claims was limited to the base benefit for each claim. The base benefit is the benefit established at the time of injury. It is a function of the injured worker's salary at the time of injury.

Benefits for pension claims are subject to annual cost of living adjustments. As a participant in the Trust Fund the City was not responsible for paying cost of living adjustments. By opting out the City is now responsible for paying a benefit equal to the initial base benefit plus the

CITY OF NEWTON

accumulated cost of living adjustments. In addition, the City will be responsible for paying future cost of living adjustments. We used a 2.8% annual cost of living adjustment in the pension claim calculation. Offsetting this somewhat is the fact that the City will no longer be subject to assessment by the Trust Fund.

2. Fiscal Year 2007 Funding

Exhibit 1.2 displays recommended funding separately for non-pension indemnity and medical claims for the July 1, 2006-2007 period. Funding is determined by multiplying the pure premium in column (1) by the covered payroll in column (2). The City may wish to adjust the indicated funding if actual payroll amounts are different from those displayed on Exhibit 1.2. A provision for pension claims has also been included based on the City's historical experience for these types of claims.

Based on the payroll data provided to us, we are indicating \$993,530 for General Government employees. Overall, our analysis produces indicated funding of \$2.58 per \$100 of payroll for General Government employees. This consists of \$2.05 for non-pension indemnity claims, \$0.21 for medical only claims, and \$0.32 for pension claims.

CITY OF NEWTON

Exhibit 1.1

WORKERS COMPENSATION
INDICATED LIABILITY
AS OF JUNE 30, 2006
SUMMARY OF RESULTS

Indicated Liability As of June 30, 2006	
GENERAL GOVERNMENT	
A. Other Than Pension Claims	\$1,134,050
B. Pension Claims	\$5,108,055
C. Total	<u>\$6,242,105</u>

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- A. Exhibits 2.1 and 2.2
 - B. Exhibit 2.3

CITY OF NEWTON

WORKERS COMPENSATION
INDEMNITY
INDICATED OUTSTANDING LOSSES
FISCAL YEARS 1988-2006

Fiscal Year (1)	Exposure (2)	Initial Expected Pure Premium (3)	Initial Expected Losses (4)=(2)x(3)	Expected Percent of Losses Paid (5)	Paid Losses	
					Actual (6)	Expected (7)=(4)x(5)
1988	\$207,265	\$4.90	\$1,015,599	100.0%	\$731,803	\$1,015,599
1989	217,129	5.16	1,120,386	100.0%	543,317	1,120,386
1990	220,084	5.39	1,186,253	100.0%	403,358	1,186,253
1991	222,813	5.00	1,114,065	100.0%	1,043,766	1,114,065
1992	226,774	4.63	1,049,964	100.0%	372,200	1,049,964
1993	233,157	4.74	1,105,164	100.0%	290,080	1,105,164
1994	253,882	4.22	1,071,382	100.0%	356,071	1,071,382
1995	256,823	4.41	1,132,589	100.0%	482,406	1,132,589
1996	270,263	4.04	1,091,863	100.0%	272,140	1,091,863
1997	282,380	2.58	728,540	100.0%	818,251	728,540
1998	287,177	2.73	783,993	99.8%	418,525	782,425
1999	309,695	2.56	792,819	99.3%	272,004	787,269
2000	314,406	1.85	581,651	98.3%	684,176	571,763
2001	322,083	1.89	608,737	96.9%	530,492	589,866
2002	354,569	1.80	638,224	94.5%	555,910	603,122
2003	362,190	1.94	702,649	90.0%	622,815	632,384
2004	362,318	1.85	670,288	76.3%	482,874	511,430
2005	365,553	2.00	731,106	62.8%	642,049	459,135
2006	378,519	2.02	764,608	29.5%	227,475	225,559
Total	\$5,447,080		\$16,889,880		\$9,749,712	\$15,778,758

Fiscal Year (1)	Expected Percent of Losses Unpaid (8)=1.0-(5)	Expected Unpaid Losses (9)=(8)x(4)	Indicated Ultimate Losses (10)=(6)+(9)	Indicated Ultimate Pure Premium (11)=(10)/(2)
1988	0.0%	\$0	\$731,803	\$3.53
1989	0.0%	0	543,317	2.50
1990	0.0%	0	403,358	1.83
1991	0.0%	0	1,043,766	4.68
1992	0.0%	0	372,200	1.64
1993	0.0%	0	290,080	1.24
1994	0.0%	0	356,071	1.40
1995	0.0%	0	482,406	1.88
1996	0.0%	0	272,140	1.01
1997	0.0%	0	818,251	2.90
1998	0.2%	1,568	420,093	1.46
1999	0.7%	5,550	277,554	0.90
2000	1.7%	9,888	694,064	2.21
2001	3.1%	18,871	549,363	1.71
2002	5.5%	35,102	591,012	1.67
2003	10.0%	70,265	693,080	1.91
2004	23.7%	158,858	641,732	1.77
2005	37.2%	271,971	914,020	2.50
2006	70.5%	539,049	766,524	2.03
Total		\$1,111,122	\$10,860,834	\$1.99

(2) Exhibit 6

(3) Exhibit 3.1 for 2005 and 2006. Prior years from 6/30/05 analysis.

(5) Reciprocal of cumulative factors from Exhibits 5.1 and 5.2.

(6) Exhibits 5.1 and 5.2

CITY OF NEWTON

Exhibit 2.2

WORKERS COMPENSATION
 MEDICAL ONLY
 INDICATED OUTSTANDING LOSSES

<u>Fiscal Year</u> (1)	<u>Paid Losses</u> (2)	<u>Development Factor</u> (3)	<u>Indicated Ultimate Losses</u> (4)=(2)x(3)	<u>Indicated Outstanding Losses</u> (5)=(4)-(2)
1992	\$50,185	1.000	\$50,185	\$0
1993	55,048	1.000	55,048	0
1994	45,547	1.000	45,547	0
1995	30,253	1.000	30,253	0
1996	38,350	1.000	38,350	0
1997	52,993	1.000	52,993	0
1998	22,036	1.000	22,036	0
1999	26,164	1.000	26,164	0
2000	31,244	1.000	31,244	0
2001	52,561	1.000	52,561	0
2002	98,705	1.000	98,705	0
2003	48,174	1.001	48,222	48
2004	85,212	1.021	87,001	1,789
2005	50,777	1.041	52,859	2,082
2006	29,701	1.640	48,710	19,009
TOTAL	\$716,950		\$739,878	\$22,928

(2), (3) Exhibit 5.3

CITY OF NEWTON

Exhibit 2.3

**WORKERS COMPENSATION
PENSION CLAIMS**

Permanent Total Disability Claims						
<u>Claimant Name</u> (1)	<u>Sex</u> (2)	<u>Date Of Birth</u> (3)	<u>Nearest Age</u> (4)	<u>Net Weekly Benefit</u> (5)	<u>Annuity Factor</u> (6)	<u>Present Value Of Benefit</u> (7)
Brennan, Lawrence	M	12/29/51	55	\$687.09	17.614	\$629,325
Forte, Salvatore	M	08/19/32	74	\$800.37	9.024	375,572
Gentile, Joseph	M	08/24/25	81	\$791.09	6.340	260,807
Hayes, Thomas	M	08/27/49	57	\$951.41	16.678	825,116
Kelly, Stephen	M	12/07/27	79	\$948.44	7.063	348,339
Machain, Eugene	M	12/05/36	70	\$548.69	10.728	306,090
Marchand, Kathleen	F	07/02/21	85	\$637.31	6.006	199,040
McMahon, Robert	M	09/14/44	62	\$929.01	14.351	693,276
Piselli, Lawrence	M	10/03/26	80	\$827.85	6.702	288,509
TOTAL						\$3,926,074

Widow Claims						
<u>Claimant Name</u> (1)	<u>Sex</u> (2)	<u>Date Of Birth</u> (3)	<u>Nearest Age</u> (4)	<u>Net Weekly Benefit</u> (5)	<u>Annuity Factor</u> (6)	<u>Present Value Of Benefit</u> (7)
Adams, Barbara	F	12/03/38	68	\$670.96	13.502	471,084
Cardarelli, Catherine	F	08/07/48	58	\$583.49	18.273	554,430
Terenzio, Anna	F	11/06/24	82	\$351.36	7.149	130,617
TOTAL						\$1,156,131

Temporary Disability Claims						
<u>Claimant Name</u> (1)	<u>Sex</u> (2)	<u>Date Of Birth</u> (3)	<u>Nearest Age</u> (4)	<u>Net Weekly Benefit</u> (5)	<u>Annuity Factor</u> (6)	<u>Present Value Of Benefit</u> (7)
Melanson, David	M	01/28/65	41	\$312.21	0.673	10,926
Murphy, Michael	M	07/07/52	54	\$506.58	0.425	11,195
Tramontozzi, Clementina	F	01/22/48	58	\$103.32	0.694	3,729
TOTAL						\$25,850

GRAND TOTAL PENSION CASES	\$5,108,055
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CITY OF NEWTON

Exhibit 3.1

**WORKERS COMPENSATION
INDEMNITY
PROJECTED PURE PREMIUMS**

<u>Fiscal Year</u> (1)	<u>Selected Ultimate Losses</u> (2)	<u>Exposure</u> (3)	<u>Developed Pure Premium</u> (4)=(2)/(3)	<u>Benefit Level Adjust. Factor</u> (5)	<u>Trend Factor To 1/1/07</u> (6)	<u>On Level Pure Premium</u> (7)
2000	695,807	314,406	2.21	1.071	1.042	2.47
2001	547,468	322,083	1.70	1.043	1.036	1.84
2002	588,153	354,569	1.66	1.024	1.030	1.75
2003	691,947	362,190	1.91	1.022	1.024	2.00
2004	633,048	362,318	1.75	1.022	1.018	1.82
2005	1,022,784	365,553	2.80	1.015	1.012	2.87
2006	770,003	378,519	2.03	1.007	1.006	2.06
8. MEAN						2.12
9. LATEST 5						2.10
10. LATEST 3						2.25
11. BEST 3						1.96
12. SELECTED						2.05
				(13)	(14)	(15)
FORECASTED PURE PREMIUM				2007 SELECTED	ON LEVEL FACTOR	TRENDED ON LEVEL
2005				2.05	1.027	2.00
2006				2.05	1.013	2.02
2007				2.05	1.000	2.05

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- (2) Exhibit 4.1
 - (3) Exhibit 6
 - (5) Based on Massachusetts benefit level changes
 - (6) +0.6% annual trend based on 2005 WCRIB MA filing
 - (7) (4) x (5) x (6)
 - (14) (5) x (6)
 - (15) (13)/(14)

CITY OF NEWTON

Exhibit 3.2

WORKERS COMPENSATION
 MEDICAL ONLY
 PROJECTED PURE PREMIUMS

Fiscal Year (1)	Selected Ultimate Losses (2)	Exposure (3)	Developed Pure Premium (4)=(2)/(3)	Benefit Level Adjust. Factor (5)	Trend Factor To 1/1/07 (6)	On Level Pure Premium (7)
2000	31,244	314,406	0.10	1.000	1.133	0.11
2001	52,561	322,083	0.16	1.000	1.113	0.18
2002	98,705	354,569	0.28	1.000	1.093	0.31
2003	48,222	362,190	0.13	1.000	1.074	0.14
2004	87,001	362,318	0.24	1.000	1.055	0.25
2005	52,859	365,553	0.14	1.000	1.036	0.15
2006	48,710	378,519	0.13	1.000	1.018	0.13
8. MEAN						0.18
9. LATEST 5						0.20
10. LATEST 3						0.18
11. BEST 3						0.18
12. SELECTED						0.21
				(13)	(14)	(15)
FORECASTED PURE PREMIUM				2007 SELECTED	ON LEVEL FACTOR	TRENDED ON LEVEL
2007				0.21	1.000	0.21

- (2) Exhibit 4.2
- (3) Exhibit 6
- (5) Based on Massachusetts benefit level changes
- (6) 1.8% annual trend based on 2005 WCRIB MA filing
- (7) (4) x (5) x (6)
- (14) (5) x (6)
- (15) (13)/(14)

CITY OF NEWTONWORKERS COMPENSATION
INDEMNITY
PROJECTED ULTIMATE LOSSES

<u>Fiscal Year</u> (1)	<u>Paid Losses</u> (2)	<u>Paid LDF</u> (3)	<u>Projected Ultimate Losses</u> (4)=(2)x(3)
1998	418,525	1.002	419,362
1999	272,004	1.007	273,908
2000	684,176	1.017	695,807
2001	530,492	1.032	547,468
2002	555,910	1.058	588,153
2003	622,815	1.111	691,947
2004	482,874	1.311	633,048
2005	642,049	1.593	1,022,784
2006	227,475	3.385	770,003
TOTAL	4,436,320		5,642,480

 (2),(3) Exhibit 5.1

CITY OF NEWTON

Exhibit 4.2

WORKERS COMPENSATION
MEDICAL ONLY
PROJECTED ULTIMATE LOSSES

<u>Fiscal</u> <u>Year</u> (1)	<u>Paid</u> <u>Losses</u> (2)	<u>Paid</u> <u>LDF</u> (3)	<u>Projected</u> <u>Ultimate</u> <u>Losses</u> (4)=(2)x(3)
1998	22,036	1.000	22,036
1999	26,164	1.000	26,164
2000	31,244	1.000	31,244
2001	52,561	1.000	52,561
2002	98,705	1.000	98,705
2003	48,174	1.001	48,222
2004	85,212	1.021	87,001
2005	50,777	1.041	52,859
2006	29,701	1.640	48,710
TOTAL	444,574		467,502

(2),(3) Exhibit 5.3

CITY OF NEWTON

WORKERS COMPENSATION
INDEMNITY
LOSS DEVELOPMENT FACTORS

Fiscal Year	Adjusted Cumulative Paid Losses & ALAE Valued As Of (Months)								
	12	24	36	48	60	72	84	96	108
1981									13,014
1982								50,271	79,896
1983							85,974	151,711	190,854
1984						104,034	131,996	136,739	141,551
1985					47,779	73,645	97,884	112,151	145,836
1986				162,488	213,185	253,463	291,687	355,426	372,283
1987			133,598	187,011	244,851	257,161	257,537	293,215	294,936
1988		309,658	422,764	500,503	574,645	703,346	731,742	731,742	731,742
1989	125,123	302,209	400,338	495,906	533,152	543,317	543,317	543,317	543,317
1990	61,057	136,259	240,897	345,480	396,190	399,793	401,285	401,609	402,383
1991	251,479	533,452	803,595	949,121	983,668	1,004,961	1,024,987	1,034,376	1,043,766
1992	166,946	290,170	332,670	361,869	372,115	372,115	372,198	372,198	372,200
1993	168,348	257,203	286,600	290,080	290,080	290,080	290,080	290,080	290,080
1994	254,543	296,798	312,434	325,287	338,376	351,173	356,071	356,071	356,071
1995	252,219	361,516	405,680	430,313	450,416	475,482	480,425	482,220	482,406
1996	140,989	214,821	238,055	254,226	254,226	254,226	267,113	267,942	270,614
1997	201,014	508,180	623,376	672,936	762,810	784,804	792,020	802,934	803,013
1998	225,712	411,974	413,936	413,936	413,936	418,525	418,525	418,525	418,525
1999	128,424	219,499	269,989	271,972	272,004	272,004	272,004	272,004	
2000	182,578	383,681	497,680	571,098	645,723	672,162	684,176		
2001	242,701	439,427	504,239	517,760	529,022	530,492			
2002	211,650	381,092	463,724	555,910	555,910				
2003	184,764	400,748	477,403	622,815					
2004	326,634	446,143	482,874						
2005	224,297	642,049							
2006	227,475								

Fiscal Year	Development Factors								
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120
1981									1.577
1982								1.589	1.327
1983							1.765	1.258	1.221
1984						1.269	1.036	1.035	1.243
1985					1.541	1.329	1.146	1.300	1.034
1986				1.312	1.189	1.151	1.219	1.047	1.000
1987			1.400	1.309	1.050	1.001	1.139	1.006	1.006
1988		1.365	1.184	1.148	1.224	1.040	1.000	1.000	1.000
1989	2.415	1.325	1.239	1.075	1.019	1.000	1.000	1.000	1.000
1990	2.232	1.768	1.434	1.147	1.009	1.004	1.001	1.002	1.000
1991	2.121	1.506	1.181	1.036	1.022	1.020	1.009	1.009	1.000
1992	1.738	1.146	1.088	1.028	1.000	1.000	1.000	1.000	1.000
1993	1.528	1.114	1.012	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.166	1.053	1.041	1.040	1.038	1.014	1.000	1.000	1.000
1995	1.433	1.122	1.061	1.047	1.056	1.010	1.004	1.000	1.000
1996	1.524	1.108	1.068	1.000	1.000	1.051	1.003	1.010	1.006
1997	2.528	1.227	1.080	1.134	1.029	1.009	1.014	1.000	1.019
1998	1.825	1.005	1.000	1.000	1.011	1.000	1.000	1.000	
1999	1.709	1.230	1.007	1.000	1.000	1.000	1.000		
2000	2.101	1.297	1.148	1.131	1.041	1.018			
2001	1.811	1.147	1.027	1.022	1.003				
2002	1.801	1.217	1.199	1.000					
2003	2.169	1.191	1.305						
2004	1.366	1.082							
2005	2.862								
Mean	1.902	1.230	1.145	1.084	1.072	1.054	1.078	1.074	1.053
3 Yr. Mean	2.132	1.163	1.177	1.051	1.015	1.006	1.005	1.003	1.008
5 Yr. Mean	2.002	1.187	1.137	1.031	1.017	1.016	1.004	1.002	1.005
Best 3	1.927	1.185	1.124	1.007	1.014	1.009	1.002	1.000	1.002
Industry	2.275	1.484	1.216	1.100	1.050	1.031	1.020	1.014	1.011
Selected	2.125	1.215	1.180	1.050	1.025	1.015	1.010	1.005	1.002
Cumulative	3.385	1.593	1.311	1.111	1.058	1.032	1.017	1.007	1.002

CITY OF NEWTON

WORKERS COMPENSATION
INDEMNITY
LOSS DEVELOPMENT FACTORS

Fiscal Year	Adjusted Cumulative Paid Losses & ALAE Valued As Of (Months)												
	120	132	144	156	168	180	192	204	216	228	240	252	264
1978			21,834	21,834	21,834	21,834	21,834	21,834	21,834	21,834	21,834	21,834	21,834
1979		48,767	73,098	110,017	132,877	144,057	145,357	145,357	145,357	145,357	145,357	145,357	145,357
1980	35,296	54,135	73,763	94,286	110,435	110,435	110,435	110,435	110,435	110,435	110,435	110,435	110,435
1981	20,529	27,144	33,759	40,405	42,640	44,884	47,119	49,354	51,589	53,824	56,059	58,294	60,529
1982	106,029	122,456	140,818	159,999	160,887	160,887	160,887	160,887	160,887	160,887	160,887	160,887	160,887
1983	233,090	249,208	260,364	269,481	278,497	287,513	298,111	302,775	307,239	311,703	316,167	320,631	325,295
1984	175,886	181,486	185,599	186,549	186,549	186,549	186,549	186,549	186,549	186,549	186,549	186,549	186,549
1985	150,852	150,852	150,852	150,852	150,852	150,852	150,852	150,852	150,852	150,852	150,852	150,852	150,852
1986	372,283	372,283	372,283	372,283	372,283	372,283	372,283	372,283	372,283	372,283	372,283	372,283	372,283
1987	296,657	297,654	297,654	297,654	297,654	297,654	297,654	297,654	297,654	297,654	297,654	297,654	297,654
1988	731,742	731,742	731,742	731,742	731,742	731,742	731,803	731,803	731,803	731,803	731,803	731,803	731,803
1989	543,317	543,317	543,317	543,317	543,317	543,317	543,317	543,317	543,317	543,317	543,317	543,317	543,317
1990	402,383	403,358	403,358	403,358	403,358	403,358	403,358	403,358	403,358	403,358	403,358	403,358	403,358
1991	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766	1,043,766
1992	372,200	372,200	372,200	372,200	372,200	372,200	372,200	372,200	372,200	372,200	372,200	372,200	372,200
1993	290,080	290,080	290,080	290,080	290,080	290,080	290,080	290,080	290,080	290,080	290,080	290,080	290,080
1994	356,071	356,071	356,071	356,071	356,071	356,071	356,071	356,071	356,071	356,071	356,071	356,071	356,071
1995	482,406	482,406	482,406	482,406	482,406	482,406	482,406	482,406	482,406	482,406	482,406	482,406	482,406
1996	272,140	272,140	272,140	272,140	272,140	272,140	272,140	272,140	272,140	272,140	272,140	272,140	272,140
1997	818,251	818,251	818,251	818,251	818,251	818,251	818,251	818,251	818,251	818,251	818,251	818,251	818,251

Fiscal Year	Development Factors												
	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276
1978			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1979		1.499	1.505	1.208	1.084	1.009	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1980	1.534	1.363	1.278	1.171	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1981	1.322	1.244	1.197	1.055	1.053	1.050	1.047	1.045	1.043	1.042	1.040	1.038	1.028
1982	1.155	1.150	1.136	1.006	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1983	1.069	1.045	1.035	1.033	1.032	1.037	1.016	1.015	1.015	1.014	1.014	1.015	1.000
1984	1.032	1.023	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1985	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1986	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1987	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1988	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1989	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Mean	1.066	1.078	1.068	1.030	1.011	1.007	1.005	1.005	1.005	1.006	1.006	1.007	1.004
3 Yr. Mean	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.005	1.000
5 Yr. Mean	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.003	1.003	1.011	1.006
Best 3	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.005	1.000
Industry	1.007	1.005	1.005	1.004	1.004	1.003	1.004	1.003	1.003	1.003	1.003	1.003	1.003
Selected	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

CITY OF NEWTON

WORKERS COMPENSATION
MEDICAL ONLY
HISTORICAL LOSS DATA

Fiscal Year	Cumulative Paid Losses & ALAE Valued As Of (Months)										
	<u>12</u>	<u>24</u>	<u>36</u>	<u>48</u>	<u>60</u>	<u>72</u>	<u>84</u>	<u>96</u>	<u>108</u>	<u>120</u>	<u>132</u>
1989	16,707	23,305	23,305	23,305	23,305	23,905	23,905	23,905	23,905	23,905	23,905
1990	23,114	29,040	29,646	29,646	29,646	29,646	29,646	29,646	29,646	29,646	29,646
1991	2,960	3,346	12,650	41,187	41,187	41,187	41,187	41,187	41,187	41,187	41,187
1992	33	17,928	50,185	50,185	50,185	50,185	50,185	50,185	50,185	50,185	50,185
1993	10,419	54,025	55,048	55,048	55,048	55,048	55,048	55,048	55,048	55,048	55,048
1994	22,341	45,034	45,547	45,547	45,547	45,547	45,547	45,547	45,547	45,547	45,547
1995	22,975	30,235	30,253	30,253	30,253	30,253	30,253	30,253	30,253	30,253	30,253
1996	23,877	37,585	37,804	38,350	38,350	38,350	38,350	38,350	38,350	38,350	38,350
1997	25,033	36,553	52,993	52,993	52,993	52,993	52,993	52,993	52,993	52,993	52,993
1998	16,124	21,256	22,036	22,036	22,036	22,036	22,036	22,036	22,036	22,036	22,036
1999	21,591	25,809	26,098	26,098	26,164	26,164	26,164	26,164	26,164	26,164	26,164
2000	20,281	30,826	30,920	31,244	31,244	31,244	31,244	31,244	31,244	31,244	31,244
2001	30,700	48,571	48,797	52,561	52,561	52,561	52,561	52,561	52,561	52,561	52,561
2002	39,090	98,179	98,179	98,645	98,645	98,645	98,645	98,645	98,645	98,645	98,645
2003	40,915	47,993	48,174	48,174	48,174	48,174	48,174	48,174	48,174	48,174	48,174
2004	50,401	83,416	85,212	85,212	85,212	85,212	85,212	85,212	85,212	85,212	85,212
2005	35,535	50,777	50,777	50,777	50,777	50,777	50,777	50,777	50,777	50,777	50,777
2006	29,701	29,701	29,701	29,701	29,701	29,701	29,701	29,701	29,701	29,701	29,701
Fiscal Year	Development Factors										
<u>Year</u>	<u>12-24</u>	<u>24-36</u>	<u>36-48</u>	<u>48-60</u>	<u>60-72</u>	<u>72-84</u>	<u>84-96</u>	<u>96-108</u>	<u>108-120</u>	<u>120-132</u>	<u>132-Ult.</u>
1989	1.395	1.000	1.000	1.000	1.026	1.000	1.000	1.000	1.000	1.000	1.000
1990	1.256	1.021	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1991	1.130	3.781	3.256	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1992	543.273	2.799	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1993	5.185	1.019	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1994	2.016	1.011	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1995	1.316	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1996	1.574	1.006	1.014	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1997	1.460	1.450	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1998	1.318	1.037	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1999	1.195	1.011	1.000	1.003	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2000	1.520	1.003	1.010	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2001	1.582	1.005	1.077	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2002	2.512	1.000	1.005	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2003	1.173	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2004	1.655	1.022	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.429	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Mean	33.588	1.323	1.157	1.000	1.002	1.000	1.000	1.000	1.000	1.000	1.000
3 Yr. Mean	1.419	1.009	1.027	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Yr. Mean	1.670	1.007	1.018	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Best 3	1.555	1.004	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Industry	1.890	1.211	1.079	1.041	1.024	1.017	1.017	1.017	1.011	1.009	1.000
Selected	1.575	1.020	1.020	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Cumulative	1.640	1.041	1.021	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000

CITY OF NEWTON

Exhibit 6

WORKERS COMPENSATION EXPOSURE INFORMATION

<u>Fiscal Year</u> (1)	<u>Covered Payroll (\$00)</u> (2)
1992	226,774
1993	233,157
1994	253,882
1995	256,823
1996	270,263
1997	282,380
1998	287,177
1999	309,695
2000	314,406
2001	322,083
2002	354,569
2003	362,190
2004	362,318
2005	365,553
2006	378,519
2007	385,091