

**TAUNTON CONTRIBUTORY
RETIREMENT SYSTEM**

Actuarial Valuation Report

January 1, 2008

TABLE OF CONTENTS

	<u>Page</u>
REPORT SUMMARY	
Highlights	1
Introduction	2
Actuarial Experience	3
ACTUARIAL COSTS AND LIABILITIES	
Normal Costs	4
Present Value of Actuarial Accrued Liabilities	5
Present Value of Future Benefits	6
FUNDED STATUS AND APPROPRIATIONS	
Market Value of Plan Assets	7
Unfunded Actuarial Accrued Liabilities	8
Appropriations	9
Appropriation Forecast	10
GAS No. 25 and GAS No. 27	12
PERAC Annual Statement	13
EXHIBITS	
1 Age/Service Distribution with Salary	15
2 Retiree Distribution	16
3 Disabled Retiree Distribution	17
4 Cashflow Forecast	18
5 Summary of Plan Provisions	19
6 Actuarial Methods and Assumptions	26
7 Glossary of Terms	30
CERTIFICATION	32
BREAKOUTS	33

Report Summary:

<u>Highlights</u>	<u>January 1, 2006</u>	<u>January 1, 2008</u>
<u>Contributions</u>		
Funding Schedule FY 2009	\$11,005,807	\$11,005,807
Funding Schedule FY 2010	11,434,761	12,678,752
<u>Funded Ratios</u>		
GAS No. 25	66.4%	68.1%
<u>Participants</u>		
Actives	1,230	1,213
Retirees and Beneficiaries	618	631
Inactives	203	220
Disabled	<u>96</u>	<u>103</u>
Total	2,147	2,167
<u>Payroll</u>		
Payroll of Active Members	\$47,703,996	\$51,021,751
Average Payroll	38,784	42,062
<u>Normal Cost</u>		
Employer	2,779,059	3,025,151
Employee	3,867,909	4,374,029
Administrative Expenses	<u>342,000</u>	<u>375,000</u>
Total	6,988,968	7,774,180
<u>Actuarial Accrued Liabilities</u>		
Actives	123,277,943	142,331,748
Retirees, Beneficiaries, Disabilities and Inactives	<u>115,299,678</u>	<u>139,455,695</u>
Total	239,916,299	281,787,443
<u>Actuarial Value of Assets</u>	<u>159,373,967</u>	<u>192,018,134</u>
<u>Unfunded Actuarial Accrued Liabilities</u>	\$80,542,332	\$89,769,309

Introduction

This report presents the City of Taunton actuarial valuation findings as of January 1, 2008, under the Commonwealth of Massachusetts Retirement System.

The actuarial valuation is based on:

- Provisions Chapter 32 of the Massachusetts General Laws, "M.G.L", as of January 1, 2008.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employee Retirement Administration Commission by the Taunton Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2008.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The cost of these benefits has been assumed by the State under Proposition Two and One-Half.

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

Since the last actuarial valuation, the total unfunded actuarial accrued liability increased by 11.5% to \$89,769,309, more than expected. The increase is the result of net unfavorable actuarial experience during the preceding years. The primary component of the unfavorable experience was that inactive employees exceeded mortality assumptions. The sources of the (gain)/loss are as follows:

Investment	(6,004,536)
Salary Increases	3,813,902
New Participants	1,520,473
Active - Retirements	(1,783,002)
Active - Terminations	(98,227)
Active - Mortality	625,117
Active - Disabilities	2,251,468
Inactive - Mortality and data adjustments	9,260,825
Other, including service buybacks, data, contributions	<u>877,063</u>
Total (Gain)/Loss	10,463,083

Actuarial Costs and Liabilities:

Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	<u>January 1, 2006</u>	<u>January 1, 2008</u>
Superannuation	\$4,623,123	\$5,240,686
Termination	522,257	539,901
Death	328,067	360,189
Disability	1,173,521	1,258,404
Administrative Expenses	<u>342,000</u>	<u>375,000</u>
Total Normal Cost	6,988,968	7,774,180
% of Pay	14.7%	15.2%
Employee Contributions	3,867,909	4,374,029
% of Pay	8.1%	8.6%
Employer Normal Cost	\$3,121,059	\$3,400,151
% of Pay	6.5%	6.7%

Present Value of Actuarial Accrued Liabilities

The actuarial accrued liabilities (AAL) represents today's value of all benefits based on the past service of the actives and inactive. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	<u>January 1, 2006</u>	<u>January 1, 2008</u>
Actives		
Superannuations	\$108,057,145	\$126,053,815
Termination	1,961,165	1,978,438
Death	3,972,850	4,547,435
Disability	9,286,783	9,752,060
Retirees and Inactives		
Retirees and Beneficiaries	95,099,267	110,659,619
Terminated (Refund)	1,338,678	1,604,625
Disabled	<u>20,200,411</u>	<u>27,191,451</u>
Total	<u>\$239,916,299</u>	<u>\$281,787,443</u>

Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	<u>January 1, 2006</u>	<u>January 1, 2008</u>
Actives		
Superannuation	\$148,084,003	\$171,357,198
Termination	4,043,605	4,192,702
Death	6,675,520	7,521,316
Disability	20,462,723	21,487,357
Retirees and Inactives		
Retirees and Beneficiaries	95,099,267	110,659,619
Terminated (Refund)	1,338,678	1,604,625
Disabled	<u>20,200,411</u>	<u>27,191,451</u>
Total	\$295,904,207	\$344,014,268

Funded Status and Appropriations:

Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	<u>January 1, 2006</u>	<u>January 1, 2008</u>
Cash equivalents	\$2,147,955	\$1,297,397
Short term investments	0	0
Fixed income securities	45,437,890	44,485,111
Equities	74,041,747	91,227,969
International	21,015,557	28,878,725
Real Estate	8,076,196	14,807,410
Venture Capital	0	0
Other	1,536,090	3,466,562
Accounts receivable	7,009,143	8,053,065
Accounts payable	(147,770)	(207,503)
Accrued income	<u>257,158</u>	<u>9,398</u>
Total Market Value	\$159,373,967	\$192,018,134
Total Actuarial Value	\$159,373,967	\$192,018,134

Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

Table VI

	<u>January 1, 2006</u>	<u>January 1, 2008</u>
Actuarial Accrued Liability	\$239,916,299	\$281,787,443
Actuarial Assets	<u>159,373,967</u>	<u>192,018,134</u>
Unfunded Actuarial Accrued Liability	\$80,542,332	\$89,769,309
Funded Status	66.4%	68.1%

Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws. These amounts were calculated to comply with the June 30, 2028, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the unfunded actuarial accrued liability by June 30, 2022
\$ 87,067,623 over 14 years with 4.5% increasing payments
- Increasing amortization of the FY04 Appropriation Deferral by June 30, 2026
\$ 1,401,022 over 18 years with 4.5% increasing payments
- Increasing amortization of the 2002/2003 Early Retirement Incentives by June 30, 2015
\$ 508,345 over 7 years with 4.5% increasing payments
- Increasing amortization of the 2004 Early Retirement Incentive by June 30, 2021
\$ 776,813 over 13 years with 4.5% increasing payments
- Level amortization of the 1992 Housing Early Retirement Incentive by June 30, 2014
\$ 15,507 over 5 years beginning in 2010
- Interest adjustment for payments contributed quarterly over fiscal year.

The pension appropriation for FYE10 is shown in Table VII.

Table VII

	<u>January 1, 2006</u>	<u>January 1, 2008</u>
Normal cost	\$3,375,635	\$3,499,079
Amortization of the unfunded accrued liability	7,053,867	8,087,674
Amortization of the FY04 Deferral	106,066	106,066
Amortization payment of 2002/2003 ERI liability	83,590	83,590
Amortization payment of 2004 ERI liability	75,516	75,516
Amortization payment of 1992 Housing ERI liability	<u>0</u>	<u>3,884</u>
Total cost before interest adjustment	\$10,694,674	\$11,855,809
Interest adjustment	<u>740,087</u>	<u>822,943</u>
Fiscal 2010 cost	\$11,434,761	\$12,678,752

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4.5% per year. The employee contribution rate is expected to increase to 10.5% by 2028 as members contributing base percentages 5%, 7%, and 8% are replaced by new members, whose base contribution is 9%. Payments are assumed to be spread over the fiscal year.

The employer total cost is expected to increase during the next 14 years until the unfunded liabilities are paid off. Amortization of the FY04 deferral will be completed by 2026, at which time only the normal cost will remain. The total FY10 cost represents 23.8% of payroll, and then decreases to approximately 5.1% a year after the unfunded liabilities are fully paid off.

Appropriation Forecast

Fiscal Year	Employee Payroll*	Employee Contribution	Employer Normal Cost with Interest	Amortization Payments with Interest	Employer Total Cost with Interest	Employer Total Cost % of Payroll	Funded Ratio %**
2009	\$51,021,751	\$4,374,029	\$3,636,164	\$7,369,643	\$11,005,807	21.6	67.8
2010	\$53,317,730	\$4,624,939	\$3,741,959	\$8,936,793	\$12,678,752	23.8	70.7
2011	\$55,717,028	\$4,889,574	\$3,849,912	\$9,338,762	\$13,188,674	23.7	73.5
2012	\$58,224,294	\$5,168,661	\$3,960,003	\$9,758,819	\$13,718,822	23.6	76.2
2013	\$60,844,388	\$5,462,964	\$4,072,206	\$10,197,779	\$14,269,985	23.5	78.8
2014	\$63,582,385	\$5,773,287	\$4,186,489	\$10,656,492	\$14,842,981	23.3	81.3
2015	\$66,443,592	\$6,100,477	\$4,302,811	\$11,131,694	\$15,434,505	23.2	83.7
2016	\$69,433,554	\$6,445,424	\$4,421,124	\$11,516,208	\$15,937,332	23.0	86.0
2017	\$72,558,064	\$6,809,062	\$4,541,372	\$12,034,437	\$16,575,809	22.8	88.2
2018	\$75,823,177	\$7,192,376	\$4,663,490	\$12,575,987	\$17,239,477	22.7	90.4
2019	\$79,235,220	\$7,596,399	\$4,787,402	\$13,141,906	\$17,929,308	22.6	92.4
2020	\$82,800,805	\$8,022,220	\$4,913,022	\$13,733,292	\$18,646,314	22.5	94.4
2021	\$86,526,841	\$8,470,982	\$5,040,254	\$14,351,290	\$19,391,544	22.4	96.3
2022	\$90,420,549	\$8,943,888	\$5,168,988	\$14,860,142	\$20,029,130	22.2	98.1
2023	\$94,489,474	\$9,442,202	\$5,299,102	\$201,018	\$5,500,120	5.8	99.9
2024	\$98,741,500	\$9,967,252	\$5,430,458	\$210,063	\$5,640,521	5.7	99.9
2025	\$103,184,867	\$10,520,437	\$5,562,906	\$219,516	\$5,782,422	5.6	100.0
2026	\$107,828,186	\$11,103,224	\$5,696,277	\$229,395	\$5,925,672	5.5	100.0
2027	\$112,680,455	\$11,717,158	\$5,830,387	\$0	\$5,830,387	5.2	100.0
2028	\$117,751,075	\$12,363,863	\$5,965,032	\$0	\$5,965,032	5.1	100.0
2029	\$123,049,874	\$12,920,237	\$6,233,459	\$0	\$6,233,459	5.1	100.0
2030	\$128,587,118	\$13,501,647	\$6,513,965	\$0	\$6,513,965	5.1	100.0
2031	\$134,373,538	\$14,109,222	\$6,807,093	\$0	\$6,807,093	5.1	100.0
2032	\$140,420,347	\$14,744,136	\$7,113,412	\$0	\$7,113,412	5.1	100.0
2033	\$146,739,263	\$15,407,623	\$7,433,516	\$0	\$7,433,516	5.1	100.0
2034	\$153,342,530	\$16,100,966	\$7,768,024	\$0	\$7,768,024	5.1	100.0
2035	\$160,242,944	\$16,825,509	\$8,117,585	\$0	\$8,117,585	5.1	100.0
2036	\$167,453,876	\$17,582,657	\$8,482,876	\$0	\$8,482,876	5.1	100.0
2037	\$174,989,301	\$18,373,877	\$8,864,606	\$0	\$8,864,606	5.1	100.0
2038	\$182,863,819	\$19,200,701	\$9,263,513	\$0	\$9,263,513	5.1	100.0
2039	\$191,092,691	\$20,064,733	\$9,680,371	\$0	\$9,680,371	5.1	100.0
2040	\$199,691,862	\$20,967,646	\$10,115,988	\$0	\$10,115,988	5.1	100.0

* Calendar basis

** Beginning of Fiscal Year

GASB Statements No. 25 and No. 27

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GASB Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to \$0. The required disclosure information is shown in Table VIII.

Table VIII

	<u>January 1, 2006</u>	<u>January 1, 2008</u>
(1) Actuarial Accrued Liability	\$239,916,299	\$281,787,443
(2) Actuarial Value of Assets	<u>159,373,967</u>	<u>192,018,134</u>
(3) Unfunded Actuarial Accrued Liability	80,542,332	89,769,309
(4) Funded Ratio (2)/(1)	66.4%	68.1%
(5) Covered Payroll	\$47,703,996	\$51,021,751
(6) UAAL as a percentage of payroll: (3)/(5)	168.8%	175.9%
(7) Annual Required Contribution (ARC)	\$9,833,936	\$11,005,807
(8) Net Pension Obligation	\$0	\$0

PERAC Annual Statement
APPENDIX PAGE 3
ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by Buck Consultants as of January 1, 2008.

The normal cost for employees on that date was:	\$4,374,029	8.6% of pay
The normal cost for the employer was:	3,025,151	5.9% of pay
The actuarial liability for active members was:		\$142,331,748
The actuarial liability for retired and inactive members was:		139,455,695
Total actuarial accrued liability:		281,787,443
System assets as of that date:		192,018,134
Unfunded actuarial accrued liability:		\$89,769,309
The ratio of system's assets to total actuarial liability was		68.1%

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:		8.0%
Rate of Salary Increase:		5.0%

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a percent of Covered Payroll (b-a)/c
01/01/08	\$192,018,134	\$281,787,443	\$89,769,309	68.1%	\$51,021,751	175.9%
01/01/06	159,373,967	239,916,299	80,542,332	66.4%	47,703,996	168.8%
01/01/04	134,563,000	202,034,000	67,471,000	66.6%	44,752,000	150.8%
01/01/03	115,023,000	191,994,000	76,971,000	59.9%	46,332,000	166.1%
01/01/02	118,245,000	184,647,000	66,402,000	64.0%	45,648,000	145.5%
01/01/00	111,164,000	158,208,000	47,044,000	70.3%	39,651,000	118.6%
01/01/98	85,807,000	135,654,000	49,847,000	63.3%	36,254,000	137.5%

Attach Copy of Current Approved Funding Schedule

EXHIBITS

Age/Service Distribution with Salary as of January 1, 2008

Attained Age	Average Salary	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	2	0	0	0	0	0	0	0	0	0	2
	18,682	0	0	0	0	0	0	0	0	0	18,682
20-24	16	0	0	0	0	0	0	0	0	0	16
	26,022	0	0	0	0	0	0	0	0	0	26,022
25-29	32	10	0	0	0	0	0	0	0	0	42
	30,769	29,006	0	0	0	0	0	0	0	0	30,349
30-34	34	27	12	0	0	0	0	0	0	0	73
	35,402	48,110	52,277	0	0	0	0	0	0	0	42,876
35-39	34	31	41	5	1	0	0	0	0	0	112
	29,838	50,906	57,274	59,341	58,217	0	0	0	0	0	47,283
40-44	56	32	32	34	16	0	0	0	0	0	170
	28,011	41,229	50,522	66,381	58,450	0	0	0	0	0	45,275
45-49	46	63	38	33	36	12	0	0	0	0	228
	25,411	27,714	35,673	55,386	58,910	61,430	0	0	0	0	39,281
50-54	39	38	42	38	37	26	11	0	0	0	231
	23,767	31,078	31,899	37,694	54,418	80,976	77,747	0	0	0	42,658
55-59	21	29	34	29	33	11	31	3	0	0	191
	28,906	35,615	31,530	35,830	49,254	72,296	67,561	92,205	0	0	44,726
60-64	10	8	14	14	26	12	10	5	1	0	100
	42,779	23,181	37,543	53,066	33,107	53,918	41,121	62,981	64,048	0	41,797
65-69	5	10	8	1	6	4	4	1	0	0	39
	18,706	35,329	26,510	24,296	42,290	42,419	29,551	97,776	0	0	33,913
70+	0	1	0	3	3	1	1	0	0	0	9
	0	62,764	0	19,457	32,232	44,971	53,084	0	0	0	35,098
Total Employees	295	249	221	157	158	66	57	9	1	0	1,213
Average Salary	28,642	36,336	41,164	48,907	50,407	68,174	61,967	76,588	64,048	0	42,062

Retiree Distribution as of January 1, 2008

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	1	0	1	5,915	0	5,915
20-24	0	0	0	0	0	0
25-29	0	1	1	0	8,153	8,153
30-34	0	1	1	0	20,163	20,163
35-39	0	2	2	0	16,226	16,226
40-44	4	4	8	71,939	34,940	106,879
45-49	1	6	7	26,361	57,994	84,356
50-54	5	10	15	118,179	210,481	328,660
55-59	28	21	49	1,116,693	271,016	1,387,709
60-64	47	39	86	1,662,857	642,150	2,305,006
65-69	47	50	97	1,424,899	628,853	2,053,752
70-74	47	45	92	1,355,168	570,782	1,925,949
75-79	49	39	88	1,047,840	510,676	1,558,515
80-84	53	50	103	1,079,904	476,237	1,556,141
85-89	21	37	58	295,132	354,200	649,332
90-94	10	8	18	100,072	56,173	156,246
95-99	2	3	5	29,651	37,116	66,767
Total	315	316	631	8,334,609	3,895,159	12,229,768
Average (Age/Payment)	72.1	72.2	72.1	26,459	12,326	19,382
Frequency Percent	49.9	50.1	100	68.2	31.8	100

Disabled Retiree Distribution as of January 1, 2008

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	0	1	1	0	6,253	6,253
45-49	4	1	5	160,100	16,430	176,530
50-54	6	4	10	196,338	99,309	295,647
55-59	13	4	17	496,587	70,593	567,180
60-64	23	1	24	693,649	13,952	707,601
65-69	9	1	10	294,105	2,164	296,270
70-74	12	1	13	232,444	11,058	243,502
75-79	6	0	6	117,645	0	117,645
80-84	9	0	9	145,970	0	145,970
85-89	7	0	7	109,762	0	109,762
90-94	1	0	1	16,082	0	16,082
95-99	0	0	0	0	0	0
Total	90	13	103	2,462,683	219,760	2,682,443
Average (Age/Payment)	67.5	56.7	66.1	27,363	16,905	26,043
Frequency Percent	87.4	12.6	100	91.8	8.2	100

EXHIBIT 4 - CASHFLOW FORECAST:

The following is a 30 year forecast of benefit payments net of state reimbursable COLA payments, Contribution Income and Investment Returns.

Plan Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns	Net change in plan assets
2008	\$6,477,706	\$4,374,029	\$11,005,807	\$16,154,790	\$25,056,920
2009	6,859,207	4,624,939	12,678,752	17,083,728	27,528,212
2010	7,256,493	4,889,574	13,188,674	19,277,573	30,099,328
2011	7,748,241	5,168,661	13,718,822	21,673,901	32,813,143
2012	8,279,866	5,462,964	14,269,985	24,286,300	35,739,383
2013	8,788,543	5,773,287	14,842,981	27,134,260	38,961,985
2014	9,319,160	6,100,477	15,434,505	30,239,722	42,455,544
2015	9,909,824	6,445,424	15,937,332	33,621,833	46,094,765
2016	10,517,908	6,809,062	16,575,809	37,296,170	50,163,133
2017	11,094,862	7,192,376	17,239,477	41,297,904	54,634,894
2018	11,745,512	7,596,399	17,929,308	45,655,237	59,435,432
2019	12,385,198	8,022,220	18,646,314	50,397,838	64,681,174
2020	13,044,709	8,470,982	19,391,544	55,560,162	70,377,979
2021	13,744,885	8,943,888	20,029,130	61,176,169	76,404,302
2022	14,423,277	9,442,202	5,500,120	67,125,626	67,644,670
2023	15,021,511	9,967,252	5,640,521	72,523,373	73,109,636
2024	15,555,449	10,520,437	5,782,422	78,361,586	79,108,997
2025	16,139,488	11,103,224	5,925,672	84,678,578	85,567,985
2026	16,731,287	11,717,158	5,830,387	91,510,455	92,326,713
2027	17,221,151	12,363,863	5,965,032	98,890,195	99,997,939
2028	17,656,089	12,920,237	6,233,459	106,878,073	108,375,680
2029	18,109,856	13,501,647	6,513,965	115,535,662	117,441,418
2030	18,453,111	14,109,222	6,807,093	124,923,086	127,386,290
2031	18,682,602	14,744,136	7,113,412	135,110,814	138,285,760
2032	18,829,751	15,407,623	7,433,516	146,173,991	150,185,379
2033	18,962,276	16,100,966	7,768,024	158,189,987	163,096,701
2034	19,033,784	16,825,509	8,117,585	171,241,568	177,150,878
2035	19,052,486	17,582,657	8,482,876	185,419,854	192,432,901
2036	18,984,813	18,373,877	8,864,606	200,824,402	209,078,072
2037	19,622,012	19,200,701	9,263,513	217,533,240	226,375,441

amounts in thousands

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 2008, and does not take into account any subsequent changes.

1. Administration

Each of the 107 contributory retirement systems for public employees for the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

2. Participation

Participation is mandatory for all full-time employees. Eligibility with respect to part-time, professional, temporary, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

- (i) Group 1: Most general employees in State and local government
- (ii) Group 2: Certain specified hazardous duty positions
- (iii) Group 3: State police officers and inspectors
- (iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

3. **Salary**

Salary is defined as gross regular compensation. Salary does not include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

4. **Member Contributions**

Member contributions vary depending upon date hired as follows:

<u>Date of Hire</u>	<u>Member Contribution Rate</u>
Prior to 1975	5.0% of Salary
1975 to 1983	7.0% of Salary
1984 to 1996	8.0% of Salary
1996 and Later plus	9.0% of Salary
1979 and Later	2.0% of Salary in excess of \$30,000

5. **Average Salary**

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.)

6. **Creditable Service**

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. **Service Retirement**

a. Eligibility:

For an employee to be eligible for service retirement (also referred to as superannuation), one of the following conditions must be met:

- (i) completion of 20 years of service
- (ii) for an employee hired prior to January 1, 1978, attainment of age 55 as an active member
- (iii) for an employee hired on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service
- (iv) if an employee is a State Police officer (Group 3), attainment of age 50

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table:

<u>Age at Retirement</u>	<u>Percentage of Average Salary</u>		
	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.001

For Group 3 (State Police), the benefit is 50% of the participant's final year's rate of regular salary, plus an additional 1% for each year of service in excess of 20 years. In addition, for veterans (all groups) there is an additional benefit of \$15 per year for each year of service, up to a maximum of 20 years of service.

8. Deferred Vested Retirement

a. Eligibility:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after six years.

b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members (on or after 1/1/1984) with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

9. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus \$629.64 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

10. **Ordinary Disability**

a. **Eligibility:**

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55).

b. **Benefit Amount:**

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55. If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55, he will receive not less than the superannuation allowance to which he is entitled.

11. **Survivor Benefits**

a. **Occupational Death:**

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

b. **Non-Occupational Death:**

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of \$250 per month to the surviving spouse, plus \$120 for the first child, plus \$90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of \$250 per month plus \$120 for the first child and \$90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. Cost-of-Living Increases

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is \$12,000. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

- (i) Option A – Life annuity
- (ii) Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member
- (iii) Option C – Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. Valuation Date

January 1, 2008.

3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.0% per annum.

5. Salary Scale

The assumed annual rates for salary increases including longevity are illustrated by the following rates:

<u>Year</u>	<u>Group 1 & 2</u>	<u>Group 4</u>
2008	4.0%	4.0%
2009	4.0%	4.0%
2010	4.0%	4.0%
2011	4.0%	4.0%
2012+	4.75%	5.25%

6. Cost-of-Living Increases

Cost-of-living increases have been assumed to be 3.0% of the lesser of the pension amount and \$12,000 per year.

7. Value of Investments

Assets held by the fund are valued at market value as reported by the Public Employees' Retirement Administration Commission (PERAC).

8. Annual Rate of Withdrawal Prior to Retirement

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

<u>Service</u>	<u>General Employees</u>	<u>Police and Fire Employees</u>
0	0.1500	0.1500
10	0.0540	0.1500
20	0.0200	0.0000
30	0.0000	0.0000

9. Annual Rate of Mortality

It is assumed that both preretirement and postretirement mortality are represented by the RP-2000 Mortality Table for males and females. Mortality for disabled members is represented by the RP-2000 Mortality Table set forward two years for all disabled members.

10. Service Retirement

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages:

<u>Age</u>	<u>Male General Employees</u>	<u>Female General Employees</u>	<u>Male and Female Police and Fire Employees</u>
50	0.0100	0.0150	0.02000
51	0.0100	0.0150	0.02000
52	0.0100	0.0200	0.02000
53	0.0100	0.0250	0.05000
54	0.0200	0.0250	0.07500
55	0.0200	0.0550	0.15000
56	0.0250	0.0650	0.10000
57	0.0250	0.0650	0.10000
58	0.0500	0.0650	0.10000
59	0.0650	0.0650	0.15000
60	0.1200	0.0500	0.20000
61	0.2000	0.1300	0.20000
62	0.3000	0.1500	0.25000
63	0.2500	0.1250	0.25000
64	0.2200	0.1800	0.30000
65	0.4000	0.1500	1.00000
66	0.2500	0.2000	1.00000
67	0.2500	0.2000	1.00000
68	0.3000	0.2500	1.00000
69	0.3000	0.2000	1.00000
70	1.0000	1.0000	1.00000

11. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

<u>Attained Age</u>	<u>General Employees</u>	<u>Police and Fire Employees</u>
20	0.0001	0.0010
30	0.0003	0.0030
40	0.0010	0.0030
50	0.0019	0.0125

In addition, it is assumed for the general employees that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

12. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

13. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2008 is \$375,000 and is anticipated to increase at 4.5% per year.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. Actuarial Accrued Liability

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

3. Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. Actuarial Present Value

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. Forecast

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the Taunton Contributory Retirement System contributing as of January 1, 2008, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost is reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

Buck Consultants, LLC

Daniel W. Sherman, ASA, MAAA
Enrolled Actuary No. 08-4086

June 2008

BREAKOUTS

Breakouts

	<u>Total</u>	<u>City</u>	<u>GATRA</u>	<u>Landfill</u>	<u>Sewer</u>	<u>Water</u>	<u>Nursing Home</u>	<u>Light</u>	<u>Housing</u>
(1) Participants									
(a) Actives	1,213	882	15	1	1	35	88	164	27
(b) Inactives	220	150	3	0	0	1	34	19	13
(c) Retirees and Beneficiaries	631	437	2	0	14	18	13	133	14
(e) Disabled Retirees	<u>103</u>	<u>60</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>22</u>	<u>3</u>
(f) Total	2,167	1,529	20	1	18	60	144	338	57
(2) Payroll of Active Participants	51,021,751	32,228,467	592,336	55,659	51,699	1,487,983	2,774,987	12,499,325	1,331,295
Percent of Total Payroll	100.00%	63.17%	1.16%	0.11%	0.10%	2.92%	5.44%	24.50%	2.61%
(3) Normal Cost									
(a) Total Normal Cost	7,399,180	4,876,986	67,339	6,078	2,746	144,157	362,298	1,798,718	140,858
(b) Expected Employee Contributions	4,374,029	2,783,870	50,434	5,155	2,401	114,423	234,543	1,066,408	116,795
(c) Administrative Expenses	<u>375,000</u>	<u>266,723</u>	<u>1,583</u>	<u>81</u>	<u>2,770</u>	<u>9,250</u>	<u>7,125</u>	<u>81,464</u>	<u>6,003</u>
(d) Net Employer Normal Cost (a) - (b) + (c)	3,400,151	2,359,839	18,488	1,004	3,115	38,984	134,880	813,774	30,066
(4) Actuarial Accrued Liability	281,787,443	182,457,505	1,452,488	74,328	2,541,522	8,485,475	6,536,609	74,732,763	5,506,753
(5) Assets*	<u>192,018,134</u>	<u>124,331,834</u>	<u>989,767</u>	<u>50,649</u>	<u>1,731,867</u>	<u>5,782,249</u>	<u>4,454,235</u>	<u>50,925,072</u>	<u>3,752,461</u>
(6) Unfunded Actuarial Accrued Liability (4) - (5)	89,769,309	58,125,671	462,721	23,679	809,655	2,703,226	2,082,374	23,807,691	1,754,292
(7) Amortizations									
(a) Unfunded Actuarial Accrued Liability	6,637,545	4,721,035	28,025	1,434	49,037	163,722	126,120	1,441,923	106,249
(b) Early Retirement Incentive	152,255	66,610	0	0	13,892	26,604	5,747	18,819	20,582
(c) Holiday	101,499	70,569	0	21	733	2,447	1,885	25,843	0
(8) Total Required Employer Contributions (3d) + (7)	10,291,450	7,218,053	46,513	2,460	66,777	231,757	268,633	2,300,359	156,897
(7) Fiscal 2009 Cost	11,005,807	7,059,259	63,491	7,327	124,117	354,366	298,642	2,850,386	248,219
Percentage of total	100.00%	64.14%	0.58%	0.07%	1.13%	3.22%	2.71%	25.90%	2.26%
(8) Fiscal 2010 Cost	12,678,752	8,894,131	57,428	3,034	80,669	282,584	330,897	2,834,642	195,368
Percentage of total	100.00%	70.15%	0.45%	0.02%	0.64%	2.23%	2.61%	22.36%	1.54%
(9) Fiscal 2011 Cost	13,188,674	9,252,551	59,675	3,152	84,291	294,706	343,235	2,947,571	203,492
(10) Fiscal 2012 Cost	13,718,822	9,625,219	62,007	3,275	88,077	307,347	356,013	3,064,923	211,960
(11) Fiscal 2013 Cost	14,269,985	10,012,690	64,429	3,402	92,033	320,529	369,247	3,186,869	220,787
(12) Fiscal 2014 Cost	14,842,981	10,415,543	66,943	3,534	96,167	334,275	382,950	3,313,583	229,986

P:\Actrl\13007\2008\[Taunton08_Val.xls]Output

Appropriation Forecast - Municipal Light Plant

<u>Fiscal</u> <u>Year</u> <u>Ending</u>	<u>Employer Normal</u> <u>Cost and Admin</u> <u>Expense</u>	<u>Unfunded</u> <u>Liability</u> <u>Amortization</u>	<u>ERI</u> <u>Amortization</u>	<u>Holiday</u> <u>Amortization</u>	<u>Employer</u> <u>Total Cost</u>
2010	\$905,830	\$1,878,932	\$21,031	\$28,881	\$2,834,674
2011	\$931,963	\$1,963,484	\$21,977	\$30,180	\$2,947,604
2012	\$958,613	\$2,051,840	\$22,967	\$31,538	\$3,064,959
2013	\$985,775	\$2,144,173	\$24,000	\$32,957	\$3,186,906
2014	\$1,013,440	\$2,240,661	\$25,080	\$34,441	\$3,313,621
2015	\$1,041,598	\$2,341,491	\$26,209	\$35,990	\$3,445,288
2016	\$1,070,239	\$2,446,858	\$0	\$37,610	\$3,554,706
2017	\$1,099,348	\$2,556,966	\$0	\$39,302	\$3,695,616
2018	\$1,128,909	\$2,672,030	\$0	\$41,071	\$3,842,010
2019	\$1,158,905	\$2,792,271	\$0	\$42,919	\$3,994,095
2020	\$1,189,314	\$2,917,923	\$0	\$44,851	\$4,152,088
2021	\$1,220,114	\$3,049,230	\$0	\$46,869	\$4,316,213
2022	\$1,251,277	\$3,186,445	\$0	\$48,978	\$4,486,700
2023	\$1,282,774	\$0	\$0	\$51,182	\$1,333,956
2024	\$1,314,572	\$0	\$0	\$53,485	\$1,368,057
2025	\$1,346,634	\$0	\$0	\$55,892	\$1,402,526