# City of Pawtucket Police and Firefighters Pension Plan



**Actuarial Valuation July 1, 2011** 

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October 12, 2012

Ms. Joanna L'Heureux Finance Director City of Pawtucket City Hall 137 Roosevelt Avenue Pawtucket, RI 02860

#### Dear Ms. L'Heureux:

Stone Consulting, Inc. is pleased to present the enclosed July 1, 2011 actuarial valuation of the City of Pawtucket Police and Firefighters Pension Plan. This valuation and report was prepared using generally accepted actuarial practices. To the best of our knowledge, this report is complete and accurate, and the assumptions used represent our best estimate of anticipated experience of the Plan.

As part of performing the valuation, Stone Consulting, Inc. was furnished member data by the City of Pawtucket Personnel Department and financial information from the office of the City of Pawtucket's Finance Director. Although examined for general reasonableness, neither the data nor the financial information was audited by the actuary or by the plan's auditors.

The employer contribution rate is determined by adding the current cost of benefits (i.e. normal cost) plus an amortization of the unfunded actuarial accrued liability (UAAL). The normal cost is expected to remain at a level percentage of payroll. The unfunded actuarial accrued liability has been amortized over the past few years using a funding schedule that use a rolling (open) amortization of the UAAL over a period of 30 years. Beginning with this valuation a closed amortization period is being used starting with 29 years in Fiscal 2013. The prior valuation (July 1, 2010) was used for FY 2011 and FY 2012. We recommend the City develops a written funding policy.

In this report, we have reflected the results recent experience study performed by Stone Consulting, Inc. Numerous actuarial assumptions have been changed and are discussed in detail in this report.

In the past, the City has not fully funded the recommended employer contribution amount but has been increasing its contributions. For Fiscal 2012 the City has made a significant increase in the contribution rate and has almost fully funded the recommended contribution amount. In the short-term, the unfunded actuarial accrued liability (UAAL) is expected to grow since the level of contributions (\$10,154,000 in Fiscal 2012) is not sufficient to cover the interest cost on the unfunded actuarial

accrued liability (\$11,409,000) and the net normal cost of \$3,107,000 (cost for the benefits due to service). This does not diminish the achievement of increased funding of the retirement plans. The rate of growth in the UAAL is expected to lessen due to the increase in the contributions being made. The long-term objective is to fully fund the System. Actuarial valuations have been performed annually. This is consistent with the guidelines promulgated by the Governmental Accounting Standards Board.

In prior valuations, the results of the actuarial valuation were used for the fiscal year which included the valuation date. This presented budget difficulties since the valuation results were only available after the beginning of the fiscal year. Starting with this valuation, we have adjusted the actuarial results to calculated recommended contribution amount for the fiscal year that starts one year after the valuation date.

Please let us know if you have any questions on the material presented. Use of excerpts of this report may result in inaccurate or misleading understanding of these results.

Respectfully submitted,

STONE CONSULTING, INC.

Actuaries for the Plan

Lawrence B. Stone

Member, American Academy of Actuaries

Kaurence B. Stone



## **SECTION I: MANAGEMENT SUMMARY**

#### **Actuarial Certification**

## October 12, 2012

#### CITY OF PAWTUCKET POLICE AND FIREFIGHTERS PENSION PLAN

This is to certify that we have prepared an actuarial valuation of the Plan as of July 1, 2011 in accordance with generally accepted actuarial principles and practices.

To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate, and in my opinion, the assumptions individually and used in the aggregate:

- a.) are reasonably related to the experience of the Plan and to reasonable expectations; and
- b.) represent our best estimate of anticipated experience under the Plan.
- I, Lawrence Stone, am a consultant for Stone Consulting, Inc. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Lawrence B. Stone

Member, American Academy of Actuaries

Harrence B. Stone

## Highlights of July 1, 2011 Valuation

		July 1, 2011	July 1, 2010
Actuarial Results:			
Employer Contribution (assumes quarterly contributions)		\$11,791,452 (Fiscal 2013)	\$10,531,718 (Fiscal 2011)
Development of Unfunded Actuarial Accrued La	iability		
Actuarial Accrued Liability Market Value of Assets	\$	218,309,558 73,435,524	\$ 201,065,830 60,989,068
Unfunded Actuarial Accrued Liability	\$	144,874,034	\$ 140,076,762
Funding Ratio		34%	30%
Development of Normal Cost			
Total Normal Cost	\$	4,410,290	\$ 3,909,118
Less Expected Members' Contributions		1,302,940	 1,264,877
Net Normal Cost	\$	3,107,350	\$ 2,644,241
Expense Allowance		42,700	 42,700
Employer Normal Cost	\$	3,150,050	\$ 2,686,941
Interest rate		7.875%	7.875%



## Highlights of July 1, 2011 Valuation (Continued)

	July 1, 2011	<b>July 1, 2010</b>
Active Employees:		
Number	280	292
Average Age	41.3	41.2
Average Service	13.6	13.5
Total projected salaries	\$19,259,761	\$18,858,528
Average projected salaries	\$66,139	\$64,584
Number eligible to retire on a normal pension	76	83
Pensioners:		
Number	302	293
Average age	62.2	62.2
Average monthly benefit	\$2,850	\$2,720
Beneficiaries:		
Number	48	43
Average age	70.2	68.8
Average monthly benefit	\$1,261	\$1,181
"Old" Police and Fire Pension Plan		
Pensioners:		
Number	19	22
Average age	86.3	85.8
Average monthly benefit	\$1,452	\$1,356
Beneficiaries:		
Number	36	38
Average age	85.4	85.0
Average monthly benefit	\$587	\$603
Accrued Liability	\$3,424,357	\$3,694,412
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## Actuarial Funding Schedule

The funding schedule is composed of the net normal cost (normal cost offset by expected employee contributions) plus expected administrative expense, and the amortization of the Unfunded Actuarial Accrued Liability (UAAL) over a period of twenty-nine years. In developing the funding schedule, we used a closed amortization approach in which the UAAL is amortized over a specified number of years. This is different from the open amortization method which reamortizes the unfunded every year over thirty-years. Details of the funding schedule are presented on page 9. As calculated in the funding schedule, the recommended contribution amount for Fiscal 2013 is \$11,791,452.

The development of the recommended contribution is as follows:

•	Net Employer Normal Cost for Fiscal 2013	\$ 3,276,052
•	Amortization (Twenty-nine years)	 8,187,506
•	Sum of Net Normal Cost and Amortization	\$ 11,463,558
•	Recommended Contribution	\$ 11,791,452
	(Adjusted for quarterly contributions)	

Although actuarial gains and losses are not explicitly recognized in the funding schedule, gains and losses are calculated each time an actuarial valuation is performed in order to monitor the accuracy of the actuarial assumptions. Actuarial gains and losses are the result of actuarial assumptions not being exactly realized, and are calculated as the difference between the actual UAAL and the expected UAAL based on the prior year's numbers. Examples of some of the causes of actuarial gains and losses are salary increases being different from the salary assumption, and asset returns being different than the interest assumption. The Unfunded Actuarial Accrued Liability has increased since the July 1, 2010 valuation. This is due primarily to adverse liability experience and changes in actuarial assumptions which increased the liability by \$4,541,883 offset in part by favorable investment performance for the prior year. A change to the mortality assumption to recognize improvements in longevity increased the unfunded accrued liability by \$7,689,283. A change to pre-retirement disability increased the unfunded accrued liability by \$1,493,318. The new variable retirement assumption and salary scale assumption decreased the unfunded liability by \$2,771,076 and \$1,869,642 respectively. We expect the UAAL to increase in the short-term due to the use of a twenty nine-year increasing amortization method. Under this method the amortization payment starts out to be lower than accrued interest on the unfunded liability and increases each year by 4%. The funding schedule on page 9 illustrates the expected increase in the UAAL until it peaks in 2024 and then starts to decline until it reaches \$0 in 2042. This assumes the use of a closed 29-year amortization versus the open amortization that the City of Pawtucket has used in the past. Note that this would require fully funding the contribution amount.

The funding status is a measure of the percentage of the Actuarial Accrued Liability that is covered by the assets. The funding status is as follows:

<u>July 1, 2011</u>	<u>July 1, 2010</u>
34%	30%



The City of Pawtucket should be mindful that future asset losses, as well as contributions which are less than the funding schedule contribution, will cause the funding status to deteriorate. We do not anticipate cash flow problems in the near future since the level of benefits being paid is approximately \$11.1 million and the assets are \$73.4 million.

Firefighters who were hired prior to July 1, 1972, and police officers who were hired prior to July 1, 1973, are part of the so-called "old plan." All of the "old plan" participants are now retirees or beneficiaries. The liabilities for the "old plan" are not contained in the actuarial results or the funding schedule contained in this valuation report. The actuarial accrued liability for the "old plan" is approximately \$3.4 million. The liability is not funded but is paid for on a "pay-as-yougo" basis.

## **Timing of Contributions**

Employer contributions are assumed to be made in four equal payments on July 1, October 1, January 1 and April 1. The contribution amount has been adjusted to reflect the timing of the contributions.

#### **Assets**

The Finance Director of the City of Pawtucket furnished Stone Consulting, Inc. with the amount of plan assets as of June 30, 2011. The assets were not audited by Stone Consulting, Inc. or the System's auditors. The market value of assets was \$73,435,524 as of June 30, 2011 compared with assets of \$60,989,068 as of June 30, 2010. Assets were invested 71% in equities (including a 3% investment in hedge fund) and 29% in fixed income and cash.

The actuarial value of assets is the same as the market value of assets. When the City starts funding the full contribution requirement on a consistent basis, we recommend that an asset-smoothing technique be examined for future use in the actuarial valuation. The use of an asset-smoothing technique can lower the volatility of contribution requirements. Asset-smoothing phases investment gains and losses over a number of years, typically 3 to 5 years. In order for the actuarial value of assets not to depart significantly from the market value of assets, a limit or corridor is often used. For example, the actuarial value of assets might be limited to no less than 90% and no greater than 110% of the market value of assets.

The actuarial asset gain is the amount that the investment experience for the year exceeds the expected investment experience. The expected investment experience was \$4,938,000 and the actual investment experience was \$11,838,000. This results in an actuarial asset gain of approximately \$6,900,000.



## Analysis of Valuation Results

## Actuarial Assumptions and Actuarial Cost Method

The cost of a pension plan is the benefits that are paid to the participants and their beneficiaries along with administrative expenses and investment related expense. The present value of the future benefits (PVFB) represents the dollar value today of all benefits expected to be received by participants and beneficiaries (including current retirees and survivors) if all actuarial assumptions are exactly realized. The actuarial cost method is the method used to allocate the PVFB between the liability that is attributable to past service (called the Actuarial Accrued Liability) and that attributable to future service. The Unfunded Actuarial Accrued Liability (UAAL) is the Actuarial Accrued Liability minus the Actuarial Value of Assets. The Actuarial Value of Assets is the value of the assets of the pension plan. The portion of the PVFB that the actuarial cost method attributes to benefits to be earned in the upcoming year is called the Normal Cost.

Actuarial assumptions are made to project the benefits that will be paid to participants and their beneficiaries in the future. The following lists some of the most important assumptions:

- Interest Rate used to project the return on assets and discount the value of future payments
- Salary Increase projects the salary of an individual when they retire
- Mortality used to calculate the length of time a benefit will be payable. Also used to project
  the possibility of pre-retirement death for participants within the group
- Disability projects the probability of disability for an active participant
- Retirement projects when an active participant will choose a service retirement
- Withdrawal projects when an active participants leaves employment for reasons other than death, disability or retirement.
- Administrative expense cost of administrative expense for the year. The interest rate is <u>net</u> of investment-related costs.

The principal actuarial assumptions and actuarial cost method used in this valuation are listed in the actuarial assumptions and methodology section of the report and are summarized in the following table:

<b>Assumption</b>	July 1, 2011 Valuation
<ul> <li>Interest Rate</li> </ul>	7.875%
<ul> <li>Salary Increase</li> </ul>	4.00%
• Mortality	RP2000 combined mortality adjusted to Blue Collar (male tables) with 1 year set back. (RP2000 projected 10 years with Scale AA in prior valuation)
<ul> <li>Overall Disability</li> </ul>	Age-based
<ul> <li>Retirement</li> </ul>	Completion of (20-39) years of service or age 65
	(Earlier of age 65 or 27 years of service in the prior valuation)
<ul> <li>Withdrawal</li> </ul>	None
<ul> <li>Administrative Expense</li> </ul>	\$42,700
<ul> <li>Actuarial Cost Method</li> </ul>	Projected Unit Credit (pro rata by service)



## **SECTION II: ACTUARIAL VALUATION RESULTS**

## **SUMMARY OF VALUATION RESULTS**

	Member Data as of July 1, 2011 Active Members	Current Valuation <u>July 1, 2011</u>	<u>July 1, 2010</u>	Percent Change
	a. Number	280	292	-4.11%
	b. Annual Compensation	\$18,519,001	\$18,858,528	-1.80%
	c. Average Annual Compensation	\$66,139	\$64,584	2.41%
	d. Average Attained Age	41.3	41.2	0.24%
	e. Average Past Service	13.6	13.5	0.74%
2.	Retired Members and Beneficiaries			
	a. Number	350	336	4.17%
	b. Total Annual Retirement Benefit	\$11,055,750	\$10,173,069	8.68%
	c. Average Annual Retirement Benefit	\$31,588	\$30,277	4.33%
<u>B.</u>	Actuarial Components as of July 1, 2011			
1.	Normal Cost			
	a. Total Normal Cost as of July 1, 2011	\$4,410,290	\$3,909,118	12.82%
	b. Less Expected Members' Contributions	<u>1,302,940</u>	1,264,877	3.01%
	c. Net Normal Cost	\$3,107,350	\$2,644,241	17.51%
	d. Expense Allowance	42,700	42,700	0.00%
	e. Employer Normal Cost	\$3,150,050	\$2,686,941	17.24%
	Employer Normal Cost Adjusted to Fiscal f. Year 2013	\$3,276,052		
		. , ,		
2.	Actuarial Accrued Liability as of July 1, 2011			
	a. Active Members	\$71,809,973	\$72,801,636	-1.36%
	b. Retired Members and Beneficiaries	146,499,585	128,264,194	14.22%
	c. Total	\$218,309,558	\$201,065,830	8.58%



## **SUMMARY OF VALUATION RESULTS (continued)**

			Current Valuation <u>July 1, 2011</u>	Prior Valuation <u>July 1, 2010</u>	Percent Change
3.	Un	funded Actuarial Accrued Liability			
	a.	Actuarial Accrued Liability	\$218,309,558	\$201,065,830	8.58%
	b.	Less Actuarial Value of Assets	73,435,524	60,989,068	20.41%
	c.	Unfunded Actuarial Accrued Liability	\$144,874,034	\$140,076,762	3.42%
	d.	UAAL adjusted to Fiscal Year 2013	\$149,031,948		
	-				
4.	Fu	nding Schedule			
	a.	Unfunded Actuarial Accrued Liability	\$149,031,948	\$140,076,762	6.39%
	b.	Payment required to amortize UAAL*	8,187,506	7,551,914	8.42%
	c.	Employer Normal Cost	<u>3,276,052</u>	<u>2,686,941</u>	21.92%
	d.	Annual Employer Cost (b.+ c.)	\$11,463,558	\$10,238,855	11.96%
	e.	Annual Employer Cost (adjusted for contribution timing)	\$11,791,452	\$10,531,718	11.96%
	f.	Payroll	\$18,519,001	\$18,858,528	-1.80%
		Employer Cost as a Percentage of			
	g.	Payroll	61.22%	55.85%	9.63%
5.	a.	Contribution made for Fiscal Year	\$10,154,000	\$9,561,000	6.2%

- The July 1, 2011 valuation uses a 29-year amortization with 4.0% increasing amortization.
- The July 1, 2010 valuation used a 30-year amortization with 4.0% increasing amortization.



## City of Pawtucket Police and Firefighters Pension Plan Twenty Nine Year Funding Schedule

					Recommended
			Funding		Contrib. Adjusted
Fiscal	Normal	Unfunded	Amortization	Recommended	for Quarterly
Year	Cost	Liability	of UAL	Contribution	Contributions
2013	3,276,052	149,031,948	8,187,506	11,463,558	11,791,452
2014	3,407,094	151,935,942	8,515,007	11,922,101	12,263,110
2015	3,543,378	154,715,334	8,855,607	12,398,985	12,753,634
2016	3,685,113	157,346,180	9,209,831	12,894,944	13,263,779
2017	3,832,517	159,802,087	9,578,224	13,410,742	13,794,331
2018	3,985,818	162,053,992	9,961,353	13,947,171	14,346,104
2019	4,145,251	164,069,934	10,359,807	14,505,058	14,919,948
2020	4,311,061	165,814,799	10,774,200	15,085,261	15,516,746
2021	4,483,503	167,250,046	11,205,168	15,688,671	16,137,416
2022	4,662,844	168,333,413	11,653,374	16,316,218	16,782,912
2023	4,849,357	169,018,591	12,119,509	16,968,867	17,454,229
2024	5,043,332	169,254,885	12,604,290	17,647,621	18,152,398
2025	5,245,065	168,986,829	13,108,461	18,353,526	18,878,494
2026	5,454,867	168,153,789	13,632,800	19,087,667	19,633,634
2027	5,673,062	166,689,518	14,178,112	19,851,174	20,418,979
2028	5,899,985	164,521,679	14,745,236	20,645,221	21,235,738
2029	6,135,984	161,571,338	15,335,046	21,471,030	22,085,168
2030	6,381,423	157,752,400	15,948,448	22,329,871	22,968,574
2031	6,636,680	152,971,014	16,586,385	23,223,066	23,887,317
2032	6,902,147	147,124,918	17,249,841	24,151,988	24,842,810
2033	7,178,233	140,102,739	17,939,834	25,118,068	25,836,522
2034	7,465,363	131,783,233	18,657,428	26,122,791	26,869,983
2035	7,763,977	122,034,463	19,403,725	27,167,702	27,944,783
2036	8,074,536	110,712,908	20,179,874	28,254,410	29,062,574
2037	8,397,518	97,662,511	20,987,069	29,384,587	30,225,077
2038	8,733,418	82,713,633	21,826,552	30,559,970	31,434,080
2039	9,082,755	65,681,939	22,699,614	31,782,369	32,691,443
2040	9,446,065	46,367,183	23,607,598	33,053,664	33,999,101
2041	9,823,908	24,551,902	24,551,902	34,375,810	35,359,065
2042	10,216,864	-	-	10,216,864	10,509,098

## Amortization of Unfunded Liability as of July 1, 2012

		Original Amort	Percentage	Original #	Current Amort.	Years
Year	Type	Amount	Increasing	of Years	Amount	Remaining
2013	Fresh Start	8,187,506	4.00%	29	8,187,506	29

## **Notes on Amortization of the Unfunded Liability**

**Year** is the year the amortization base was established.

**Type** is the reason for the creation of the base. Examples are Gain/(Loss) or Fresh Start.

Original Amortization Amount is the annual amortization amount when the base was established.

**Percentage Increasing** is the percentage that the Original Amortization Amount increases per year.

**Original # of Years** is the number of years over which the base is being amortized.

Current Amortization Amount is the amortization payment amount for this year.

Years Remaining is the number of years left to amortize the base.



## DISCLOSURE INFORMATION UNDER GASB STATEMENT NO. 25

## SCHEDULE OF FUNDING PROGRESS NEW PLAN

	Actuarial	Actuarial Accrued	Unfunded			UAAL as a % of
Actuarial	Value of	Liability	AAL (UAAL)	Funded	Covered	Covered
Valuation	Assets	(AAL)	(b-a)	Ratio	Payroll	Payroll
Date	(a)	(b)		(a/b)	(c)	((b-a)/c)
7/1/2011	\$73,435,524	\$218,309,558	\$144,874,034	33.6%	\$18,519,001	782%
7/1/2010	\$60,989,068	\$201,065,830	\$140,076,762	30.3%	\$18,858,528	743%
7/1/2009	\$54,729,846	\$185,122,805	\$130,392,959	29.6%	\$17,731,200	735%
7/1/2008	\$68,844,727	\$177,376,163	\$108,531,436	38.8%	\$17,461,156	622%
7/1/2007	\$70,420,028	\$164,198,973	\$93,778,945	42.9%	\$18,107,293	518%
7/1/2006	\$64,012,986	\$157,865,288	\$93,852,302	40.5%	\$17,886,311	525%

The most recent actuarial valuation of the System was prepared by Stone Consulting, Inc. as of July 1, 2011.

The normal cost for employees on that date was \$1,3	302,940 7.0% of pay	/roll
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The normal cost for the employer was	\$3.107.350	16.8% of payroll

The actuarial accrued liability for active members was	\$71,809,973
The actuarial accrued liability for retired members was	146,499,585
Total actuarial accrued liability	\$218,309,558
Market value of assets	\$73,435,524
Unfunded actuarial accrued liability	\$144,874,034

The ratio of System's assets to total actuarial liability was 34%

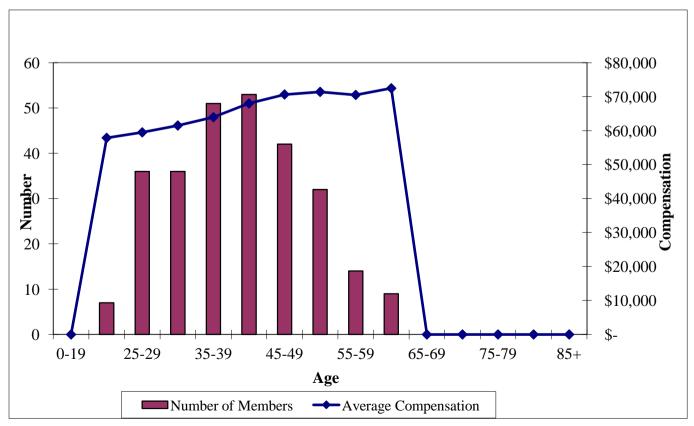
The principal actuarial assumptions used in the valuation are as follows:

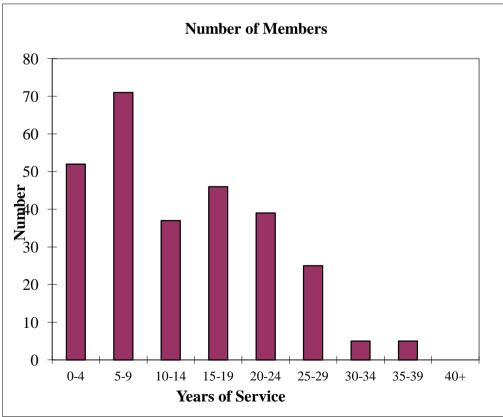
Investment Return: 7.875% per annum
Rate of Salary Increase: Select and Ultimate
Type of Amortization: Closed over 29 years



## City of Pawtucket Police and Firefighters Pension Plan Distribution of Plan Members as of July 1, 2011 Active Members

AGE	0-4 Years	5-9 Years	10-14 Years	15-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40 + Years	Total	Total Compensation	Average Compensation
0-19	0	0	0	0	0	0	0	0	0	0 9	-	\$ -
20-24	7	0	0	0	0	0	0	0	0	7	405,122	57,875
25-29	20	16	0	0	0	0	0	0	0	36	2,141,908	59,497
30-34	17	19	0	0	0	0	0	0	0	36	2,214,405	61,511
35-39	4	22	19	6	0	0	0	0	0	51	3,261,686	63,955
40-44	4	10	11	21	7	0	0	0	0	53	3,604,199	68,004
45-49	0	4	6	15	11	6	0	0	0	42	2,967,057	70,644
50-54	0	0	1	3	16	12	0	0	0	32	2,285,164	71,411
55-59	0	0	0	1	4	5	3	1	0	14	987,210	70,515
60-64	0	0	0	0	1	2	2	4	0	9	652,248	72,472
65-69	0	0	0	0	0	0	0	0	0	0	-	-
70-74	0	0	0	0	0	0	0	0	0	0	-	-
<b>75-79</b>	0	0	0	0	0	0	0	0	0	0	-	-
80-84	0	0	0	0	0	0	0	0	0	0	-	-
85+	0	0	0	0	0	0	0	0	0	0	-	-
TOTAL	52	71	37	46	39	25	5	5	0	280	\$ 18,519,001	\$ 66,139



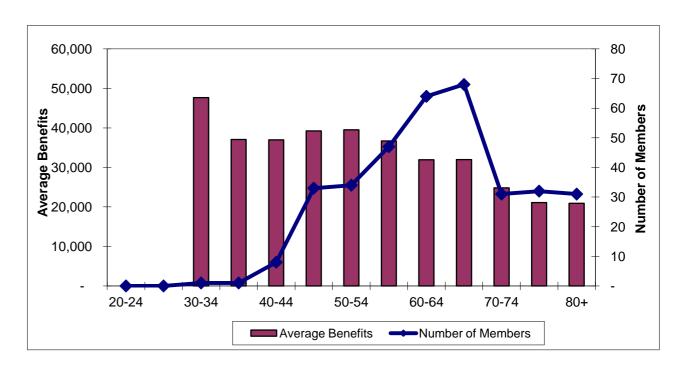




## City of Pawtucket Police and Firefighters Pension Plan Distribution of Plan Members as of July 1, 2011 Retired Members

		Disabled Member			<b>Retired Members and Beneficiaries</b>			
Age	Number	<b>Average Benefit</b>	<b>Total Benefit</b>	Age	Number	Average Benefit	<b>Total Benefit</b>	
20-24	-	-	-	20-24	-	-	-	
25-29	-	-	-	25-29	-	-	-	
30-34	1	47,686	47,686	30-34	-	-	-	
35-39	1	37,092	37,092	35-39	-	-	-	
40-44	4	40,695	162,778	40-44	4	33,269	133,077	
45-49	7	39,929	279,505	45-49	26	39,082	1,016,140	
50-54	1	40,197	40,197	50-54	33	39,516	1,304,033	
55-59	4	40,243	160,971	55-59	43	36,359	1,563,432	
60-64	4	35,170	140,680	60-64	60	31,702	1,902,128	
65-69	-	-	-	65-69	68	31,985	2,174,971	
70-74	-	-	-	70-74	31	24,827	769,628	
<b>75-79</b>	-	-	-	75-79	32	21,092	674,956	
80+	-	-	-	80+	31	20,919	648,475	
<b>TOTAL</b>	22	\$ 39,496	\$ 868,909	TOTAL	328	\$ 31,057	\$ 10,186,841	

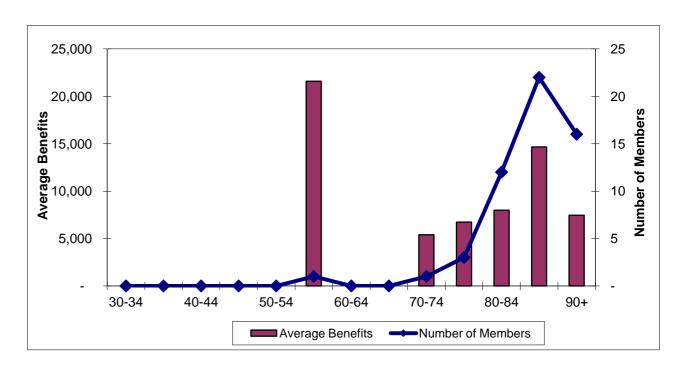
<u>Total</u>					
Age	Number	<b>Average Benefit</b>	<b>Total Benefit</b>		
20-24	-	-	-		
25-29	-	-	-		
30-34	1	47,686	47,686		
35-39	1	37,092	37,092		
40-44	8	36,982	295,855		
45-49	33	39,262	1,295,645		
50-54	34	39,536	1,344,230		
55-59	47	36,689	1,724,403		
60-64	64	31,919	2,042,808		
65-69	68	31,985	2,174,971		
70-74	31	24,827	769,628		
75-79	32	21,092	674,956		
80+	31	20,919	648,475		
<b>TOTAL</b>	350	\$ 31,588	\$ 11,055,750		



## City of Pawtucket Police and Firefighters "Old" Pension Plan Distribution of Plan Members as of July 1, 2011 Retired Members

		<b>Retired Member</b>				<b>Beneficiaries</b>	
Age	Number	<b>Average Benefit</b>	<b>Total Benefit</b>	Age	Number	<b>Average Benefit</b>	<b>Total Benefit</b>
30-34	-	-	-	30-34	-	-	-
35-39	-	-	-	35-39	-	-	-
40-44	-	-	-	40-44	-	-	-
45-49	-	-	-	45-49	-	-	-
50-54	-	-	-	50-54	-	-	-
55-59	-	-	-	55-59	1	21,598	21,598
60-64	-	-	-	60-64	-	-	-
65-69	-	-	-	65-69	-	-	-
70-74	-	-	-	70-74	1	5,405	5,405
<b>75-79</b>	-	-	-	75-79	3	6,730	20,191
80-84	3	10,555	31,664	80-84	9	7,134	64,203
85-89	13	19,289	250,753	85-89	9	7,973	71,759
90+	3	16,240	48,721	90+	13	5,432	70,618
<b>TOTAL</b>	19	17,428	\$ 331,137	TOTAL	36	\$ 7,049	\$ 253,774

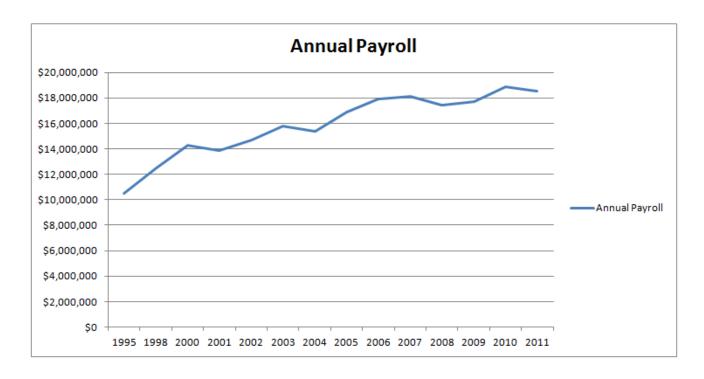
<u>Total</u>			
Age	Number	Average Benefit	<b>Total Benefit</b>
30-34	-	-	-
35-39	-	-	-
40-44	-	-	-
45-49	-	-	-
50-54	-	-	-
55-59	1	21,598	21,598
60-64	-	-	-
65-69	-	-	-
70-74	1	5,405	5,405
<b>75-79</b>	3	6,730	20,191
80-84	12	7,989	95,866
85-89	22	14,660	322,511
90+	16	7,459	119,339
TOTAL	55	\$ 10,635	\$ 584,911



## SCHEDULE OF ACTIVE MEMBER VALUATION DATA

**Schedule of Active Member Valuation Data** 

		belieudie of Active is	ichiber varuation D	ata
Valuation		Annual	Annual	% Increase
<u>Date</u>	<u>Number</u>	<u>Payroll</u>	<u>Average Pay</u>	<u>In Average Pay</u>
-4400-	• • •	10.1-2	27.201	27/4
7/1/1995	296	10,472,776	35,381	N/A
7/1/1998	281	12,488,783	44,444	7.9
7/1/2000	292	14,297,381	48,964	5.0
7/1/2001	289	13,858,966	47,955	-2.1
7/1/2002	288	14,659,470	50,901	6.1
7/1/2003	294	15,760,360	53,607	5.3
7/1/2004	280	15,386,235	54,951	2.5
7/1/2005	293	16,897,240	57,670	4.9
7/1/2006	292	17,886,311	61,254	6.2
7/1/2007	291	18,107,293	62,224	1.6
7/1/2008	286	17,461,156	61,053	-1.9
7/1/2009	287	17,731,200	61,781	1.2
7/1/2010	292	18,858,528	64,584	4.5
7/1/2011	280	18,519,001	66,139	2.4





## **ACTUARIAL METHODS AND ASSUMPTIONS**

## **Actuarial Methods**

1. Actuarial Cost Method

The Projected Unit Cost Method has been used in this valuation. Under this method, the normal cost is the present value of the prospective benefits prorated by one year of service to the amount of service at termination of employment.

The actuarial accrued liability represents the theoretical accumulation of all prior years' normal costs for the plan members as if the program had always been in effect. The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over plan assets.

2. Asset Valuation Method

Market value of assets.

## **Actuarial Assumptions**

1. Investment Return

7.875% per year net of investment expenses

2. Salary Increases

Years of	Salary
<u>Service</u>	<u>Increase</u>
0-1	8.50%
2-4	3.25
5	11.00
6-9	3.50
10	4.25
11-14	3.75
15	4.50
16-19	3.75
20	4.75
21-24	3.25
25+	2.00



# ACTUARIAL METHODS AND ASSUMPTIONS (continued)

3. Withdrawal Prior to Retirement

No withdrawal is assumed.

4. Disability Prior to Retirement

	Disability	Prior
$\underline{Age}$	<b>Assumption</b>	<b>Valuation</b>
25	.40%	.11%
30	.40	.14
35	.40	.18
40	.40	.28
45	1.00	.45
50	1.25	.76
55	1.20	1.26
60	.85	2.03

## 5. Rates of Retirement

Retirement is assumed to happen at the earlier of age 65 or years of completed service shown below. *Prior year valuation used earlier of age 65 and 27 years of service.* 

	Retirement	· · · · · · · · · · · · · · · · · · ·	Retirement
<u>Service</u>	<b>Assumption</b>	<u>Service</u>	<b>Assumption</b>
20	20%	30	25%
21	7	31	20
22	8	32	20
23	20	33	35
24	10	34	35
25	10	35	50
26	10	36	50
27	10	37	50
28	10	38	50
29	10	39+	100



# ACTUARIAL METHODS AND ASSUMPTIONS (continued)

6.	Mortality	The RP-2000 combined mortality table adjusted to Blue
		Collar (male tables) with 1 year setback. Prior year
		valuation used RP-2000 projected 10 years.

Disabled Life Mortality

The RP-2000 combined mortality table adjusted to Blue Collar (male tables) set forward 1 year for males and 2 years for females. Prior year valuation used PBGC mortality table for disabled participants receiving Social Security Benefits.

Male employees are assumed 90% married with one dependent child. Female employees are assumed 75% married with one dependent child. The age difference between member and spouse is assumed to be 3 years (the male being the older).

Administrative amount of \$42,700 for the Fiscal Year excluding investment management fees and custodial fee. Administrative expense is added to the Normal Cost.

Longevity increases are assumed to be part of the salary increase assumption.

Contributions are assumed to be made in four equal contributions on July 1, October 1, January 1 and April 1.

12. Valuation Date July 1, 2011.



7.

8.

9.

10. Longevity

11. Contribution Timing

**Family Composition** 

Administrative Expenses

#### SUMMARY OF PRINCIPAL PROVISIONS

1. <u>Participation</u> Participation is mandatory for employees of the City of

Pawtucket who are covered under a collective bargaining agreement between the City of Pawtucket and the Pawtucket Fire Fighters Independent Union and the City of Pawtucket and the Pawtucket Lodge No. 4, Fraternal

Order of Police.

2. <u>Member Contributions</u> Member contributions are 7.5% of pay.

3. Service Retirement

a. Eligibility Completion of 20 years of service.

b. Benefit Amount 50% of final average compensation plus an additional 3%

of final average compensation for each year of service over 20 years, not to exceed 3 1/3 years. Final average

compensation is defined as the highest year's salary rate.

4. <u>Disability Retirement</u>

a. Eligibility Total and permanently incapacitated for duty.

b. Benefit Amount 66 2/3% of compensation at date of disability plus an additional 10% of compensation for each dependent child

(until the child attains age 21), not to exceed 80% of compensation, payable to normal retirement date. If the date of disability is after 20 years of service, the disability benefit is payable until the member would have completed 25 years of employment. A normal retirement benefit is payable after the disability benefit is no longer

payable.

5. Pre-retirement Death

a. Eligibility No age or service requirements.

b. Retirement Allowance 50% of compensation at date of death plus an additional

10% of compensation for each dependent child (until the child attains age 21), not to exceed 70% of compensation, payable for the lifetime of the surviving spouse or until

the spouse remarries.



# SUMMARY OF PRINCIPAL PROVISIONS (continued)

## 6. Termination Non-Vested

a. Eligibility None

b. Benefit Amount Refund of employee contributions, if any, plus interest.

## 7. Post-Retirement Death

Benefit payable for the remainder of the 10-year certain period. Then a benefit of  $67\frac{1}{2}\%$  of the participant's pension benefit is payable to the surviving spouse.

## 8. <u>Funeral Allowance</u> (Firefighters)

\$10,000 funeral allowance payable to firefighters who die in the line of duty.

# 9. <u>Post-Retirement Cost-of-Living Increases</u>

#### **Fire**

Effective Date	Increase	Compounded
April 1, 1984	3.00%	Every 3 Years
July 1, 1986	1.50%	Annually
July 1, 1994	1.75%	Annually
July 1, 1995	2.00%	Annually
July 1, 1999	3.00%	Annually
July 1, 2004	3.00%	Annually

## **Police**

Effective Date	Annual Increase	
July 1, 1988	1.00%	
July 1, 1989	1.50%	
July 1, 1994	1.75%	
July 1, 1996	2.00%	
July 1, 1998	3.00%	
July 1, 2004	3.00%	

The cost-of-living adjustment is made on the service retirement benefit and the continuation of the service retirement benefit during the 10-year certain period. It is not applicable to a disability benefit or to a survivor benefit except as noted above.



## **GLOSSARY OF TERMS**

1. <u>Present Value of Benefits</u> Represents the dollar value today of all benefits

expected to be earned by current members if all

actuarial assumptions are exactly realized.

2. Actuarial Cost Method The procedure that is used to allocate the present

value of benefits between the liability that is attributable to past service (Actuarial Accrued

Liability) and that attributable to future service.

3. <u>Actuarial Assumptions</u> Estimates are made as to the occurrence of certain

events that determine the level of benefits to be paid and how long they will be provided. The more important actuarial assumptions include the investment return on assets, salary increases and the rates of withdrawal, disability, retirement and

mortality.

4. <u>Actuarial Accrued Liability</u> The portion of the Present Value of Benefits that is

attributable to past service.

5. Normal Cost The portion of the Present Value of Benefits that is

attributable to benefits to be earned in the coming

year.

6. <u>Actuarial Assets</u> Market value of assets of the funds.

7. <u>Unfunded Actuarial</u> That portion of the Actuarial Accrued Liability not

Accrued Liability covered by System Assets.

8. GASB Governmental Accounting Standards Board is the

agency that oversees financial reporting and issues guidance for disclosure of pension system

liabilities.



9. Funding Schedule

A schedule of contributions intended to fund the pension plan. The funding schedule is composed of two parts: an amortization of the unfunded liability and the normal cost. The unfunded liability is funded over a period of time, referred to as the length of the funding schedule, until the unfunded liability would become fully funded.