City of East Providence
Rhode Island

Police and Fire Fighters Pension Fund

2012 Experience Study

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City of East Providence, Rhode Island

Police and Fire Fighters Pension Fund

2012 Experience Study

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City of East Providence, Rhode Island

Police and Fire Fighters Pension Fund

2012 Experience Study

1. Introduction

The financial determination of benefit liabilities and obligations of the City of East Providence Police and Fire Fighters Pension Plan is completed each year by means of the annual actuarial valuation. Using the current benefit provisions of the Pension Plan and participant census data, the annual actuarial valuation employs several actuarial assumptions about future events to project the timing and amount of annual pension benefits to be paid.

The annual actuarial valuation is a mathematical model of the operation of the Pension Plan in future years. It is used to determine the retirement benefit liabilities and annual contribution levels to be made. It is also used to determine the funded status of the Pension Plan, by means of comparison of the assets of the Pension Plan to the accumulated liabilities. The funded status is usually expressed as a ratio, equal to assets divided by liabilities.

The experience study looks at actual events of the Pension Plan operation and compares these actual events to the expected results based on the actuarial assumptions. In this way, the mathematical model potentially becomes more realistic, and will produce approximate results that are considered and accepted to be reasonable.

With respect to this experience study, comments to be noted include:

+ No changes are made to the existing Pension Plan benefit provisions.

+ The Pension Plan is not a large plan, and many of the results involve small numbers, which may be subject to a lack of statistical reliability.

+ In a movement toward more accurate individual actuarial assumptions, it is expected that the overall results will continue to remain reasonable in the aggregate.

+ There have been significant Pension Plan related activities in Rhode Island at the State level. These events are to be recognized and will provide benchmarks for consideration in setting actuarial assumptions from this experience study.

2. Historical Background Information (20 Years : 1991 – 2010)

As background information for this experience study, the chart on page 3 following provides a 20 year summary of the aggregate actuarial gains and losses during the 20 years beginning with 2001 through 2010. These results have been calculated and presented in each annual actuarial valuation during this period.

The actuarial gains and losses are divided each year into gains and losses from investment experience and gains and losses from all other actuarial sources. The net result of these gain and loss sources is also provided.

The twenty year period can be divided into two separate 10 year segments. For the first ten years from 1991 through 2000, the results show that investment gains were positive, and provided an offsetting effect to the other actuarial results. For the second 10 year period from 2001 through 2010, the results show significant investment losses throughout, which has resulted in significant net actuarial losses.

In the second chart on page 4 following, the funded status of the Pension Plan is documented for the 20 year period of 1991 through 2010. The funded status is presented in two ways:

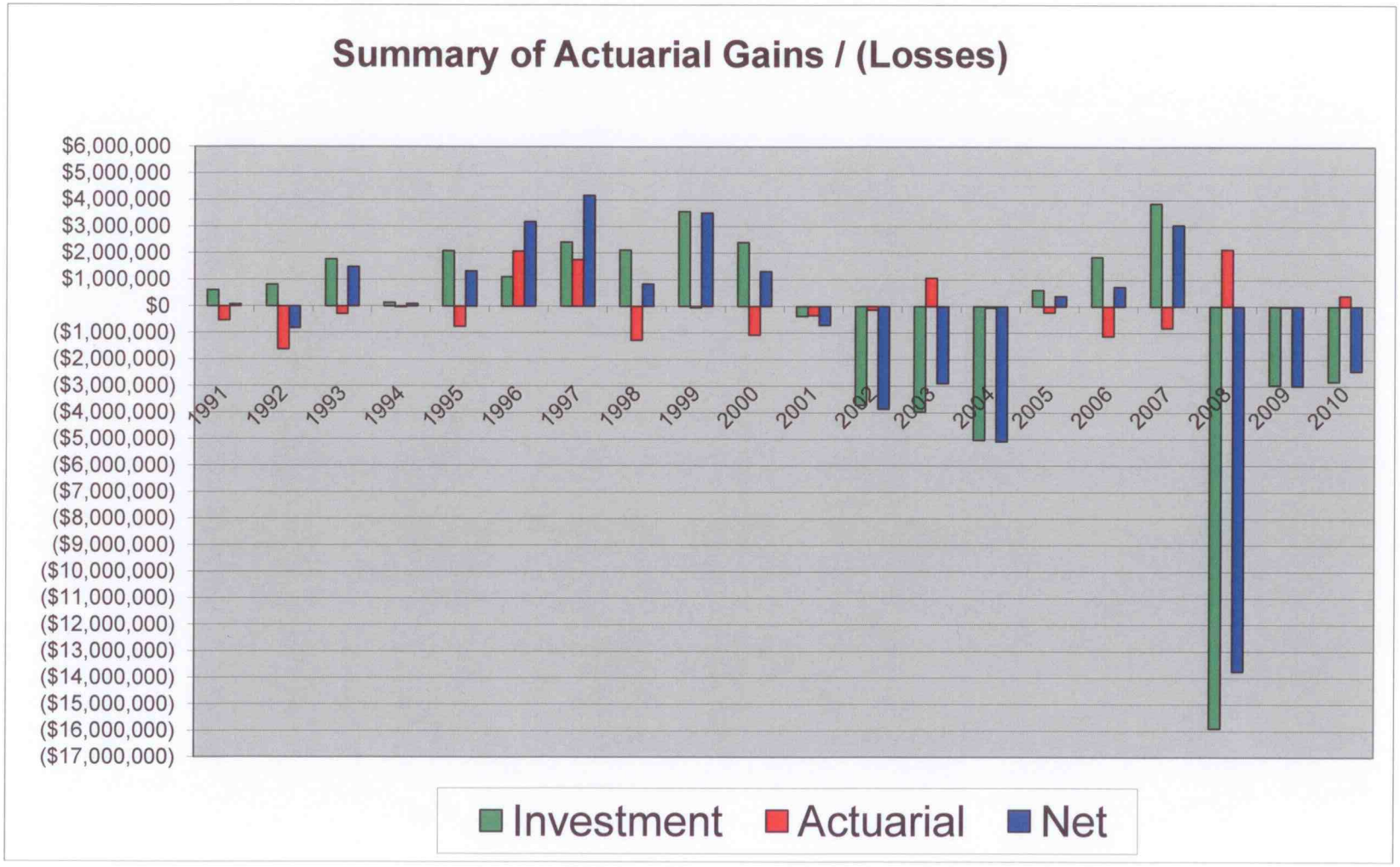
+ **Market based calculations** – using the actuarial present value of accrued benefits and the market value of assets each year, and

+ **Funding based calculations** – using the actuarial accrued liability for funding and the actuarial value of assets.

The funded status of the Pension Plan shows improvement from 1991 through 2000, and then deteriorates from 2001 through 2010 as result of the investment losses experienced in 2001, 2002 and 2008.

City of East Providence, Rhode Island

Police and Fire Fighters Pension Plan



City of East Providence, Rhode Island

Police and Fire Fighters Pension Fund

Funded Status of Pension Fund 1991 - 2010 (20 Years)
($$ in Millions)

	Market Based Calculations				Funding Calculations		
Year Ending October 31 (a)	Present Value Accrued Benefits (b)	Market Value of Plan Assets (c)	Funded Ratio (c) / (b) (d)	Inv. Return MV Assets During Year (e)	Actuarial Accrued Liabilty (f)	Actuarial Value of Plan Assets (g)	Funded Ratio (f) / (g) (h)
1991	$41.298	$42.388	102.64%	25.0%	$45.929	$40.968	89.20%
1992	$45.507	$44.984	98.85%	9.4%	$50.561	$43.777	86.58%
1993	$48.190	$51.034	105.90%	17.4%	$53.903	$47.538	88.19%
1994	$51.841	$48.924	94.37%	0.0%	$57.142	$49.525	86.67%
1995	$55.491	$56.178	101.24%	20.6%	$61.795	$53.156	86.02%
1996	$57.629	$60.031	104.17%	12.7%	$63.813	$55.911	87.62%
1997	$59.717	$68.008	113.88%	19.2%	$66.247	$60.030	90.62%
1998	$64.143	$73.389	114.41%	13.3%	$69.280	$64.074	92.49%
1999	$67.592	$78.711	116.45%	12.6%	$72.944	$69.648	95.48%
2000	$72.036	$80.946	112.37%	8.2%	$77.875	$74.240	95.33%
2001	$76.030	$71.447	93.97%	-6.6%	$82.356	$76.146	92.46%
2002	$80.000	$63.247	79.06%	-5.3%	$86.860	$74.580	85.86%
2003	$83.075	$67.129	80.81%	14.3%	$90.219	$72.285	80.12%
2004	$87.345	$68.501	78.43%	9.1%	$94.767	$68.959	72.77%
2005	$91.899	$70.107	76.29%	9.9%	$99.588	$70.753	71.05%
2006	$97.587	$76.878	78.78%	17.5%	$105.479	$73.764	69.93%
2007	$102.655	$84.928	82.73%	17.3%	$111.247	$79.299	71.28%
2008	$105.941	$54.557	51.50%	-30.9%	$114.673	$65.469	57.09%
2009	$111.463	$57.316	51.42%	15.2%	$120.059	$62.974	52.45%
2010	$117.063	$58.336	49.83%	12.8%	$124.589	$59.604	47.84%
2011	**$115.762**	**$53.439**	**46.16%**	**0.0%**	**$131.051**	**$53.521**	**40.84%**

3. Review of Actuarial Assumptions and Methods

The various actuarial assumptions to be reviewed can be separated into two groups: the first to include certain economic assumptions and the second to include certain demographic assumptions. The actuarial methods include three primary items: actuarial cost method, asset valuation method, and amortization of the unfunded actuarial accrued liability. There are also other minor assumptions that further describe participant characteristics.

The economic actuarial assumptions define the financial aspects of the Pension Fund operation, and include:

+ Investment earnings on Plan assets
+ Investment related expenses on Plan assets
+ Annual increases in participant compensation
+ Annual rate of inflation
+ Annual cost of living adjustments ("COLA's")

The demographic actuarial assumptions define future events that trigger the payment of retirement and other benefits of the Pension Plan, and include:

+ Rates of retirement
+ Rates of disability
+ Rates of employment termination
+ Rates of mortality (pre-retirement, post-retirement and disabled)

The actuarial methods are used to determine benefit liabilities and plan assets to be used primarily in the calculation of contribution requirements, and include:

+ Actuarial cost method – spreads benefit liability over years of service
+ Asset valuation method – smoothing of market value peaks and valleys
+ Amortization of unfunded actuarial accrued liability – period over which shortfall of current assets is to be paid

Finally, one additional actuarial assumption is used to define marital status of the Plan participants:

+ Percentage of participants married

4. Economic Assumptions

The most significant actuarial assumption of the Pension Plan valuation is the interest rate used to discount the benefit liabilities in the annual actuarial valuation. The interest rate in dependent on the investment performance of the Pension Plan assets set aside and accumulated for the eventual payment of benefits.

A. Investment Results – Annual Return and Expenses

The following chart on page 7 shows the annual investment return achieved in the last 25 years – for the period from 1986 through 2010. The annual investment return percentage has an average of 9.8% for the 25 years in this period. The chart also shows the compound equivalent rates for 3, 5, and 10 year periods. The declining rates of investment return reflect the losses in years 2001, 2002 and 2008.

The next chart on page 8 shows a 14-year comparison with similar annual rates of investment return for the Employees' Retirement System of Rhode Island (published on page 17 of recent ERSRI experience study). While the pattern of annual results is similar, the accumulated results show slightly better results for the City of East Providence Police and Fire Fighters Pension Fund over this period of time.

The annual returns shown on the charts must be adjusted for investment expenses. The annual administrative and investment related expenses are documented in the next exhibit on page 9. For the 10-year period ending in 2010, the administrative and investment expenses have averaged about .60% of assets each year (about 60 "basis points"). The documented equivalent for the ERSRI is about 40 basis points. Over the 14-year period, the City of East Providence Police and Fire Fighters Pension Fund has earned a gross investment return of about 90 to100 basis points more than that of the ERSRI .

The current actuarial assumption for interest rate used is 8.50% per year. We will be suggesting that the interest rate be reduced in the future. This reflects the expectation of a lower growth rate in the economy and recent investment experience.

The interest rate will be reduced to 8.00% per year.

City of East Providence, Rhode Island

Police and Fire Fighters Pension Fund

Pension Fund Investment Performance 1986 - 2010

Year Ending October 31	Approximate Annual Rate of Return	Compound Equivalent Rates		
		3 Year Cycles	5 Year Cycles	10 Year Cycles
1986	24.6%	- -	- -	- -
1987	2.4%	- -	- -	- -
1988	5.6%	10.4%	- -	- -
1989	24.6%	10.4%	- -	- -
1990	-3.1%	8.4%	10.2%	- -
1991	25.0%	14.7%	10.3%	- -
1992	9.4%	9.8%	11.8%	- -
1993	17.4%	17.1%	14.2%	- -
1994	0.0%	8.7%	9.2%	- -
1995	20.6%	12.3%	14.1%	12.2%
1996	12.7%	10.8%	11.8%	11.0%
1997	19.2%	17.4%	13.7%	12.7%
1998	13.3%	15.0%	12.9%	13.5%
1999	12.6%	15.0%	15.6%	12.4%
2000	8.2%	11.3%	13.1%	13.6%
2001	-6.6%	4.4%	9.0%	10.4%
2002	-5.3%	-1.5%	4.1%	8.8%
2003	14.3%	0.4%	4.3%	8.5%
2004	9.1%	5.7%	3.6%	9.4%
2005	9.9%	11.1%	3.9%	8.4%
2006	17.5%	12.1%	8.8%	8.9%
2007	17.3%	14.8%	13.6%	8.7%
2008	-30.9%	-1.6%	2.7%	3.5%
2009	15.2%	-2.3%	3.8%	3.7%
2010	12.8%	-3.5%	4.4%	4.1%
Average Rate	9.8%	8.7%	9.3%	9.4%

City of East Providence, Rhode Island

Police and Fire Fighters Pension Plan

Investment Return on Market Value of Plan Assets

(COEP P & FF - Gross before Investment Expenses)
(ERS RI - Net of Investment Expenses)

Year	COEP P & FF YE 10/31	ERS RI YE 6/30
1997	19.2%	19.1%
1998	13.3%	16.1%
1999	12.6%	10.1%
2000	8.2%	9.1%
2001	-6.6%	-11.0%
2002	-5.3%	-8.4%
2003	14.3%	2.6%
2004	9.1%	18.7%
2005	9.9%	11.4%
2006	17.5%	11.7%
2007	17.3%	18.2%
2008	-30.9%	-5.8%
2009	15.2%	-20.1%
2010	12.8%	13.9%

Compound Equivalent Last Number of Years:

			Difference	Difference Before Expenses
14	6.7%	5.4%	1.3%	0.9%
11	4.5%	2.9%	1.6%	1.2%
8	6.8%	5.5%	1.3%	0.9%
5	4.4%	2.5%	1.9%	1.5%

City of East Providence, Rhode Island

Police and Fire Fighters Pension Plan

Gross Experience Rates - 2001 through 2010 - 10 Years

Administrative and Investment Expenses

Year Ending	Annual Expenses	Assets MV at BOY	Expense Rate
2001	498,603	80,946,387	0.616%
2002	459,332	71,447,029	0.643%
2003	427,028	63,246,850	0.675%
2004	349,556	67,129,154	0.521%
2005	517,025	68,500,985	0.755%
2006	479,289	70,106,722	0.684%
2007	463,751	76,878,378	0.603%
2008	449,139	84,928,351	0.529%
2009	265,325	54,557,461	0.486%
2010	295,321	57,315,573	0.515%
		Average Rate	0.603%

4. Economic Assumptions (Continued)

B. Annual Compensation Increases

The chart on page 11 following presents the increases in the annual base compensation amounts for the last 10 years – 2001 through 2010. Increase rates are shown separately for Police and Fire Fighters. The increases each year have been documented for the "general" portion increase that applies to all position levels, and then the total increase percentage, which includes promotions within position levels.

The increases by year show the effect of periodic bargaining negotiations that have taken place. In several cases, the negotiated increases are delayed beyond the reporting date for annual compensation increases (the October 31 valuation date). As a result, some years show a 0.00% increase in the general rate. Also, the latest 3 years reflect 0.00% increases for the Fire Fighters, which reflects stalled negotiations for this group.

The current actuarial assumption for annual compensation increases is 5.00% per year. We will be suggesting that the annual compensation increase assumption be reduced in the future and also, possibly consider a different rate for each group. This reflects the expectation of lower inflation, lower growth rate in the economy as well as recent annual compensation increase experience.

The annual compensation increase will be reduced to 4.25% per year.

City of East Providence, Rhode Island

Police and Fire Fighters Pension Plan

Gross Experience Rates - 2001 through 2010 - 10 Years

Increases in Annual Base Compensation

Year	Police		Fire Fighters	
Ending	General	Total	General	Total
2001	3.00%	4.62%	3.00%	3.84%
2002	4.00%	4.88%	4.00%	4.90%
2003	0.00%	1.54%	0.00%	0.59%
2004	0.00%	2.91%	2.00%	3.07%
2005	4.04%	5.65%	2.00%	2.50%
2006	3.50%	4.32%	3.50%	5.61%
2007	6.61%	8.04%	6.62%	8.21%
2008	0.00%	0.87%	0.00%	1.49%
2009	3.00%	3.12%	0.00%	1.10%
2010	3.00%	5.72%	0.00%	0.73%
Average Rate	2.72%	4.17%	2.11%	3.20%
Compound Rate	2.69%	4.15%	2.09%	3.18%
Difference	- -	1.46%	- -	1.09%

4. Economic Assumptions (Continued)

C. Annual Rate of Inflation

The annual rate of inflation is not used directly in any of the economic actuarial assumptions for the annual actuarial valuation. However, there is an implied inflation rate in the annual interest rate, the annual increases in compensation and the annual cost of living adjustments. Currently, this implied rate is about 3.50% per annum. We will be reducing this expectation for the future, again to reflect lower growth rates in the economy and wages.

D. Annual Cost of Living Adjustments ("COLA's ")

The COLA increases provided to post retirement annual payments are currently set at 3.00% per year. Even though the inflation expectation is lowered, the COLA adjustments will continue to assume 3.00% annual adjustment as required by the existing provisions of the COEP Police and Fire Fighters Pension Plan.

5. Demographic Assumptions

The demographic assumptions predict events that trigger the commencement and termination of various retirement benefits from the Pension Plan. The following chart on page 14 shows the actual experience for the last 10 years 2001 through 2010 for the number of active plan participants taking service retirements, employment terminations, disability retirements, and deaths with survivors. Numbers of participants are shown separately for Police and Fire Fighters.

The overall rate of decrement from the active participant group over the 10 year period is about 3.9% per year from all sources. This would suggest that for a fixed group over a period of time, the group would completely replace itself in about 25.4 years. Comparing the active participant decrement rates for Police and Fire Fighters suggests that the Police group is turning over a little faster than the Fire Fighters.

The current actuarial assumptions include decrements for retirement, disability and death. The decrement for termination of employment has not been included, assuming active participants do not receive benefits from termination of employment, which includes a refund of employee contributions. The employment termination assumption will be added, however, as the incidence of this event has been previously low but recently increasing.

A. Retirement from Active Employment

The most significant decrement is retirement from active service. The current assumption is that retirement begins to occur at the completion of 20 years of service at the rate of 20.0% upon first eligibility age, with 10.0% each year thereafter, and with 100% upon the attainment of age 55. Additional analysis of recent retirements shows average retirement ages and years of service for retirements in 2001 through 2011. The average age and years of service for actual retirements has been:

Service Retirements	Police	Fire Fighters
Number	29	27
Average Age	51.3	55.2
Average Years of Service	25.9	26.6

It appears that the Police group has been retiring somewhat earlier than the Fire Fighter group. Actual retirement details for the 10 years is shown on page 15.

City of East Providence, Rhode Island

Police and Fire Fighters Pension Plan

Gross Experience Rates - 2001 through 2010 - 10 Years

Decrements from Active Employment

Year Ending	Exposures - Active Employees			Service Retirements			Employment Terminations			Disability Retirements			Deaths with Survivors		
	Police	Fire	Total	Police	Fire	Total	Police	Fire	Total	Police	Fire	Total	Police	Fire	Total
2001	95	112	207	2	1	3	1	0	1	0	0	0	0	0	0
2002	93	118	211	0	2	2	1	0	1	2	0	2	1	0	1
2003	92	116	208	4	2	6	0	0	0	0	0	0	0	0	0
2004	97	114	211	1	2	3	2	1	3	0	1	1	0	0	0
2005	97	110	207	2	2	4	1	1	2	1	0	1	0	0	0
2006	96	107	203	3	6	9	0	0	0	0	1	1	0	0	0
2007	103	106	209	1	2	3	2	0	2	0	0	0	0	0	0
2008	102	115	217	1	2	3	2	0	2	0	0	0	0	0	0
2009	99	112	211	2	8	10	3	0	3	0	1	1	0	0	0
2010	99	103	202	11	0	11	2	3	5	2	0	2	0	0	0
	973	1,113	2,086	27	27	54	14	5	19	5	3	8	1	0	1
Decrement Rates				2.775%	2.426%	2.589%	1.439%	0.449%	0.911%	0.514%	0.270%	0.384%	0.103%	0.000%	0.048%
Total - All Decrements				4.830%	3.145%	3.931%									
Service Years				20.70	31.80	25.44									

City of East Providence, Rhode Island

Police and Fire Fighters Pension Plan

Gross Experience Rates - 2001 through 2010 - 10 Years

Analysis of Service Retirements

Police

Year	Age	Years Svc	Name
2010	41	20	Abbott
2010	43	22	McGregor
2001	44	23	Szeliga
2004	44	21	Miranda
2009	44	22	Allsworth
2010	47	22	Rossi
2006	48	20	Smith, W
2010	48	26	Kennedy
2007	49	25	Enos
2001	50	28	Gallagher
2005	50	26	Bilodeau
2006	50	28	Burney
2010	50	25	Hogan
2005	51	26	McGirergan
2010	51	21	Twomey
2003	52	31	Crowshaw
2003	52	30	Dias
2010	52	24	Sabourin
2003	53	28	Deaquair
2010	53	25	Wyrostek
2010	54	21	Skelton
2010	56	24	Charbonneau
2006	57	29	Newburg
2010	57	31	Barlow
2010	57	31	Dubois
2011	57	33	Clark
2009	58	26	Paquette
2003	59	30	Souza, R
2011	60	32	Pacheco
Avg.	51.3	25.9	

Under 50	9	22.3
50 - 54	12	26.1
55 - 59	7	29.1
60 and Over	1	32.0

Fire Fighters

Year	Age	Years Svc	Name
2002	47	21	Mello
2009	48	23	NiCastro
2004	49	23	Buxbaum
2009	50	21	Harrington
2009	50	22	Moore
2007	51	20	Cunha
2009	51	23	Dziedzic, P
2001	53	20	Francis
2006	53	21	Curren
2003	54	30	Afferbach
2008	54	22	Wise
2009	55	24	Penedo
2006	56	21	Neale
2008	56	27	Prew
2009	56	29	Ledo
2006	57	25	Pina
2009	57	29	Dziedzic, J
2004	58	30	Anker
2005	58	31	Salvaggio
2006	58	25	Massey
2005	59	36	Castro
2006	59	32	Devine
2002	60	31	Queenan
2006	60	34	Brassill
2009	60	29	Gomes
2003	61	38	Bessette
2007	61	30	Muniz
Avg.	55.2	26.6	

Under 50	3	22.3
50 - 54	8	22.4
55 - 59	11	28.1
60 and Over	5	32.4

5. Demographic Assumptions (Continued)

B. Disability Retirements

During the 11 year period from 2001 through 2011 there have been 9 disability retirements, with details shown on page 17. The retirements for disability occur at an earlier age and with lower number of years of service than the non-disability retirements (ie.,service retirements). The incidence of disability retirement has been small, well under 1% per year. The current disability rates are probably adequate, but not significantly different than the proposed rates of disability. The disability rates will be age related, grading from about .50% at age 25 to 3.00% at age 55.

C. Termination of Employment

The termination of service decrement has also been very small, under 1% per year. This decrement has not been reflected previously in the actuarial assumptions. For consistency, a termination decrement will be added, related to service, and grading from about 4.00% at 1 year of service, to about 1.00% at 15 years of service, and 0.00% after 20 years of service.

D. Mortality

` This is another of the most important actuarial assumptions employed. It determines the duration of benefit payments. The current mortality table is outdated and predicts more expected deaths than have occurred. The most recent mortality table is the RP-2000 table, which is currently prescribed by funding rules for private sector pension plans. In addition to improvements in mortality to current day, this table also prescribes a method for improvements in future mortality, progressively increasing the longevity expected for younger pension plan participants. The RP-2000 table also provides adjustments for blue collar employment categories.

E. Other Assumptions

The retirement benefit provisions continue the monthly payments to surviving spouses of retired Police and Fire Fighters. An assumption is made as to the percentage of active members who are married, and who will have an eligible spouse at retirement for the survivor annuity payments. The 100% married rate will be reduced to 85% for this assumption, as the value of a survivor annuity is not insignificant.

City of East Providence, Rhode Island

Police and Fire Fighters Pension Plan

Gross Experience Rates - 2001 through 2010 - 10 Years

Analysis of Disability Retirements

Police				Fire Fighters			
Year	Age	Years Svc	Name	Year	Age	Years Svc	Name
2002	46	23	Houle	2004	47	16	D'Ippolito
2002	46	17	Tabela-Sailor	2006	46	19	Connors
2005	35	3	Anderson	2009	51	22	Courtemanche
2010	51	16	Saisselin	2011	37	13	Braga
2010	45	21	Schroder				
Avg.	44.6	16.0		Avg.	45.3	17.5	

City of East Providence, Rhode Island

Police and Fire Fighters Pension Plan

Gross Experience Rates - 2001 through 2010 - 10 Years

Deaths Among Retired Participants and Beneficiaries

Year Ending	Exposures - Service Retirements			Deaths		
	Police	Fire	Total	Police	Fire	Total
2001	80	89	169	3	2	5
2002	79	88	167	4	1	5
2003	80	89	169	1	5	6
2004	83	90	173	1	1	2
2005	83	91	174	3	0	3
2006	83	95	178	2	1	3
2007	85	100	185	3	4	7
2008	87	99	186	4	2	6
2009	86	101	187	1	2	3
2010	87	107	194	2	2	4
	833	949	1,782	24	20	44
				2.881%	2.107%	2.469%

Year Ending	Exposures - Disability Retirements			Deaths		
	Police	Fire	Total	Police	Fire	Total
2001	18	22	40	0	0	0
2002	18	22	40	1	0	1
2003	19	22	41	0	1	1
2004	19	21	40	0	1	1
2005	19	22	41	0	1	1
2006	20	20	40	0	0	0
2007	20	21	41	2	1	3
2008	18	20	38	1	0	1
2009	17	20	37	0	0	0
2010	17	21	38	0	0	0
	185	211	396	4	4	8
				2.162%	1.896%	2.020%
	Total - All Deaths			2.750%	2.069%	2.388%

6. Actuarial Methods

A. Actuarial Cost Method

The current Projected Unit Credit ("PUC") actuarial cost method will be changed to the Entry Age Normal ("EAN") actuarial cost method. This change is slightly more conservative and will increase the actuarial accrued liability by just under 2%. This is offset somewhat by a similar percentage decrease in the normal cost using the revised actuarial cost method.

B. Asset Valuation Method

The market value of assets fluctuates in peaks and valleys from year to year. For the purpose of determining annual contributions, it is common practice to use an asset valuation method to smooth out these ups and downs, resulting in a more predictable result. The asset valuation method replaces the actual realized and unrealized investment gains and losses with a 5 year average of the realized and unrealized investment gains and losses. This asset valuation method will not be changed.

C. Amortization of Unfunded Actuarial Accrued Liability

The determination of required annual contributions includes payment toward any existing unfunded actuarial accrued liability. The current practice is to spread these amortization payments over 30 years using a percentage of payroll method. The parameters for this element of the annual contribution require specification of the length of the payment period and an assumption for the rate at which participant payroll will increase (this percentage will typically be different than the assumption for the annual increase in participant compensation in determining future retirement benefits).

The ERSRI has adopted a 19 year period and a 3.75% annual increase percentage for this calculation. A change from 30 years to 19 years will result in a significant increase in the annual contribution requirements. We are recommending that the City continue with a 30 year amortization period for the payments toward the unfunded actuarial accrued liability.

7. Summary and Recommendations

	Current Basis	Revised Basis
1. Interest Rate – Annual	8.50%	8.00%
2. Inflation Rate Implied – Annual	3.50%	2.75%
3. Salary Increase – Annual	5.00%	4.25%
4. Mortality Table (For non-disabled)	GA 1951 Table (No Projection of Improvements)	RP 2000 Table (With Blue Collar Adjustments and Future Generational Improvements)
5. Percentage Married	100%	85%
6. Retirement Rates	After Age 40: With 20 Years 20% Each year thereafter 10% At Age 55 100%	After Age 40: With 20 Years 12% 21 – 23 Years 14% 24 – 26 Years 16% 27 – 29 Years 18% 30 Plus Years 20% At Age 60 100%
7. Disability Rates	Age Related Age 25 0.00% Age 40 0.29% Age 55 1.36%	Age Related Age 25 0.50% Age 40 1.10% Age 55 3.00%
8. Rate of Employment Termination	None	Service Related 1 Year 4.00% 15 Years 1.00% After 20 Years 0.00%
9. Actuarial Funding Method	Projected Unit Credit Prorated on Service	Entry Age Normal Level Percentage of Pay
10. Amortization of Unfunded Actuarial Accrued Liability	30 Years Level Percentage of Pay 5.00% per Year Increase (Factor = 5.15% of UAAL)	30 Years Level Percentage of Pay 3.75% per Year Increase (Factor = 5.62% of UAAL)

8. Impact on Funded Status and Annual Contributions

The impact of the suggested "revised" changes to the actuarial assumptions and methods are summarized below, with a comparison of 2011 results to the results for the prior 2010 year, using the "current" assumptions and methods. The annual actuarial valuation is performed as of October 31 each year, and applies to the City's fiscal year that ends on the following October 31.

	As of October 31 ($$ in 000's)		
	2010 - Current	2011 - Current	2011 - Revised
Number of Participants			
Active	185	188	188
Retirees	243	247	247
Total	428	435	435
Total Active Payroll – Includes Holiday Pay and Longevity	$ 11,774.	$ 12,325	$ 12,325
Annual Normal Cost – City	$ 1,500.	$ 1,674	$ 1,577
Actuarial Accrued Liability	$ 124,589.	$ 131,051	$ 151,557
Plan Assets – Actuarial Value	$ 59,604.	$ 53,521	$ 53,521
Unfunded Actuarial Accrued Liability	$ 64,985.	$ 77,530	$ 98,035
City's Customary Contribution			
Annual Amount	$ 4,848.	$ 5,669	$ 7,088
Percent of Payroll	41.2%	46.0%	57.5%
Plan Funded Ratios			
Accrued Benefits	49.8%	44.2%	40.4%
Actuarial Accrued Liability	47.8%	40.8%	35.3%