Stoneham Retirement System

Actuarial Valuation
January 1, 2012

S T O N E
CONSULTING, INC.

February 2013

February 22, 2013

Stoneham Retirement Board
35 Central Street
Stoneham, MA 02180

Dear Stoneham Retirement Board:

Stone Consulting, Inc. has performed a January 1, 2012 actuarial valuation of the Stoneham Retirement System. This valuation and report was prepared using generally accepted actuarial principles and practices and meets the parameters set by the Governmental Accounting Standards Board Statement (GASB) No. 25. 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 system.

As part of performing the valuation, Stone Consulting, Inc. was furnished member data by the Stoneham Retirement System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary. In addition, the administrative staff furnished financial statements that were not audited by the actuary or by the plan's auditors.

The funding objective of the plan is to fully fund the system while attempting to maintain a stable contribution amount for the upcoming fiscal year that is consistent with prior funding schedules or if employer finances allow it, to increase the contribution amount. This funding objective is being met.

We anticipate over time the contribution level to increase as a percentage of payroll. The contribution rate is determined by adding the normal cost plus an amortization of the unfunded actuarial accrued liability. The normal cost is expected to remain at a level percentage of payroll. The number of years of the amortization and/or the rate of increase of the amortization is adjusted to maintain a stable contribution level for the upcoming fiscal year. The length of the funding schedule contained in this actuarial valuation report is ten years (fully funded by 2023) and the amortization increase is set so that the contribution increases by $300,000 starting in FY 2014. The increase in the contribution increases by $41,423 each year. For example, the second year contribution increase is $341,423 and the third year contribution increase is $382,846. While this type of contribution pattern does not follow a regular increasing amortization, it generates contributions were are greater than the contributions under a 17 year funding schedule with 4.5% increasing amortizations

The contribution amount for Fiscal Year 2014 is $4,551,178 that is $300,000 higher than the anticipated contribution amount from the prior funding schedule. Chapter 32 and GASB indicate that actuarial valuations should be conducted at least every other year. The Stoneham Retirement Board conducted their previous actuarial valuation effective January 1, 2011. This satisfies the biennial requirement.

We are pleased to present the results of this valuation. If the Retirement Board has any questions on the content of this report, we would be glad to respond. Please note that this report is meant to be used in its entirety. Use of excerpts of this report may result in inaccurate or misleading understanding of the results.

The undersigned is a consultant for Stone Consulting, Inc. and a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,
STONE CONSULTING, INC.
Actuaries for the Plan

Lawrence B. Stone

Lawrence B. Stone
Member, American Academy of Actuaries

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INTRODUCTION

This report presents the results of the actuarial valuation of the Stoneham Retirement System. The valuation was performed at the request of the Retirement Board as of January 1, 2012 for the purpose of determining the contribution requirements for Fiscal Year 2014 and beyond. The contribution requirements are based on:

- The financial condition of the system as of December 31, 2011
- The benefit provisions of M.G.L. Chapter 32 and related statutes;
- The demographics of members in the system (i.e., active and inactive participants, retirees and beneficiaries as of January 1, 2012);
- Economic assumptions regarding salary increases and investment earnings; and
- Other actuarial assumptions (e.g., withdrawals, retirement, death, etc.)

JANUARY 1, 2012 VALUATION SUMMARY

Valuation Date	January 1, 2012	January 1, 2011	Change
Contribution Fiscal 2014	$4,551,178	$4,251,178	$300,000
Funding Schedule Length	10 years	10 years	0 years
Funding Ratio	66%	70%	-4%
Interest Rate Assumption	8.00%	8.00%	0.00%
Salary Increase Rate Assumption	4.50% ultimate rate plus Groups 1 and 2: 2.50% first 8 years Group 4: 5.00% first 5 years	5.00%	-0.50% Ultimate rate

- The Fiscal Year 2014 contribution is $300,000 more than the planned 2014 contribution. Stone Consulting, with agreement from the Retirement Board, values assets using a five year asset smoothing method. In this approach, asset gains and losses are recognized over a five-year period. The purpose of this approach is to avoid wide swings in asset value from one year to the next.

  The System, over the past year from January 1, 2011 through December 31, 2011, experienced a (.2%) annual return on the market value of assets versus the assumption of an 8.00% return which resulted in a $4.7 million net actuarial loss. The System's asset portfolio, effective December 31, 2011 is approximately 77% equities and 23% fixed income and short-term investments. The interest rate assumption was maintained at 8.00% to reflect anticipated market performance.

- The salary increase assumption has changed from the prior year. We used a select table with an ultimate rate of 4.50%. For Groups 1 & 2 an additional 2.50% is assumed in the first 8 years of employment and for Group 4 an additional 5% is assumed in the first 5 years of employment. The 2011 actuarial valuation used a 5.00% salary increase. This change decreased the accrued liability by $903,000 and the normal cost by $4,000. This assumption is based on expected future experience. Total compensation changed by -1.5% over the prior valuation; however average annual compensation (compensation divided by number of active members) changed by 3.2%.

- The funding level of the Stoneham Retirement System is 66% compared to 70% for the January 1, 2011 actuarial valuation. Chapter 68 requires a minimum funding ratio of 65% along with additional criteria in order to avoid being labeled an "under performing system". Stoneham Retirement System is <u>not</u> considered an underperforming system. The funding level is estimated to be in the upper half of Massachusetts' Contributory Retirement Systems.

- The schedule length is 10 years which is the same as the prior valuation. The maximum period permitted under Section 22D of Chapter 32 of the Massachusetts General Laws is 17 years (2030). The amortization is set so that the total payment increases by $300,000 over the expected FY2014 contribution. Each successive year the increase goes up an additional $41,423. The table below illustrates this pattern for the first four years.

Fiscal Year	Increase Over Prior Fiscal Year
2014	$300,000
2015	$341,423
2016	$382,846
2017	$424,269

Note that the Fiscal 2024 payment does not follow this pattern and in fact, there is a significant drop in the required contribution in that year. See pages 15 and 16 for additional details. The maximum amortization permitted under Chapter 32, Section 22D is 4.5%. While this type of contribution pattern does not follow a regular increasing amortization pattern, it generates contributions which are greater than the contributions under a 17 year funding schedule with 4.5% increasing amortization.

- Non-economic assumptions were changed from the January 1, 2011 actuarial valuation. The mortality assumption is based upon the RP2000 Table projected 17 years with Scale AA. The previous assumption used the RP2000 Table with no projection. The net effect of this change increased the accrued liability by $3.1 million and the normal cost $30,000.
- This valuation also recognizes net 3(8)(c) payments. This increased the contribution by $102,000.

JANUARY 1, 2012 ACTUARIAL VALUATION RESULTS

Valuation Date	January 1, 2012	January 1, 2011	Percentage Change
Funding			
• Contribution for Fiscal 2014	$4,551,178		
• Contribution for Fiscal 2014 based on current schedule		$4,251,178	7%
Members *			
• ***Actives***			
a. Number	256	268	-4.5%
b. Annual Compensation	$11,623,693	$11,796,020	-1.5%
c. Average Annual Compensation	$45,405	$44,015	3.2%
d. Average Attained Age	49.2	N/A	N/A
e. Average Past Service	13.0	N/A	N/A
• ***Retired, Disabled and Beneficiaries***			
a. Number	287	286	0.3%
b. Total Benefits*	$6,611,871	6,376,171	3.7%
c. Average Benefits*	$ 23,038	$22,294	3.3%
c. Average Age	73.7	74.8	-1.5%
• ***Inactives***			
a. Number	66	62	6.5%
Normal Cost			
a. Total Normal Cost	$1,564,280	$1,710,470	-8.5%
b. Less Expected Members' Contributions	1,032,682	1,020,441	1.2%
c. Normal Cost to be funded by the Municipality	$531,598	$690,029	-23.0%
d. Eighteen month Adjustment	36,284	69,416	-47.7%
e. Administrative Expense Assumption	239,695	220,000	9.0%
f. Adjusted Normal Cost and expense	$807,576	$979,445	-17.5%

*Excluding State reimbursed COLA

SUMMARY OF JANUARY 1, 2012 VALUATION
(Continued)

Valuation Date	January 1, 2012	January 1, 2011	Percentage Change
Actuarial Accrued Liability as of January 1, 2012			
a. Active Members	$33,469,700	$35,163,632	-4.8%
b. Inactive Members	597,004	664,304	-10.1%
c. Retired Members and Beneficiaries	60,549,478	55,356,012	9.4%
d. Total	$94,616,182	$90,519,644	4.5%
Unfunded Actuarial Accrued Liability			
a. Actuarial Accrued Liability as of January 1, 2012	$94,616,182	$90,519,644	4.5%
b. Less Actuarial Value of Assets	62,496,448	63,751,707	-2.0%
c. Unfunded Actuarial Accrued Liability	$32,119,734	$26,767,937	20.0%
d. Eighteen month adjustment	$ 630,595	N/A	N/A
e. Adjusted Unfunded Actuarial Accrued Liability	$32,750,329	$26,767,937	

DEMOGRAPHIC INFORMATION

Valuation Date	January 1, 2012	Percentage Change
Members		
• ***Actives***		
a. Number	256	-4.5%
b. Annual Compensation	$11,623,693	-1.5%
c. Average Annual Compensation	$45,405	3.2%
d. Average Attained Age	49.2	N/A
e. Average Past Service	13.0	N/A
• ***Retired, Disabled and Beneficiaries***		
a. Number	287	0.3%
b. Total Annual Retirement Allowance excluding State-reimbursed COLA	$6,611,871	3.7%
• ***Inactives***		
a. Number	66	62

- The data was supplied by the Stoneham Retirement Board. The data was checked under broad parameters for reasonableness. With the assistance of the staff of the Stoneham Retirement Board, we were able to develop a database sufficient for valuation purposes.

- Payroll changed by -1.5% over the course of the past year. Average annual compensation changed by 3.2% over the same time period.

- The salary increase assumption includes general wage adjustments, step increases, and promotional increases.

HISTORY OF ACTIVE PARTICIPANTS

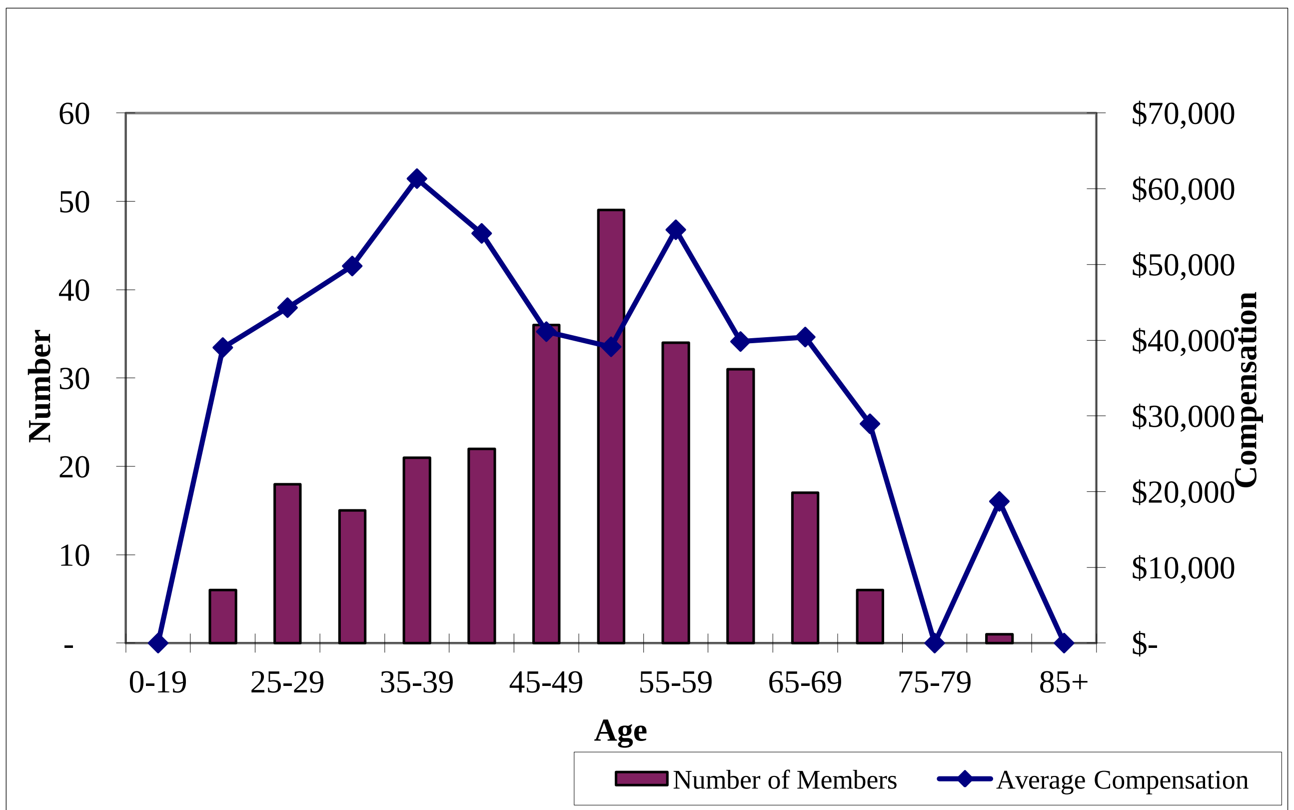
Valuation Year	Number	Average Age	Average Past Service	Average Ann'l Compensation
2012	256	49.2	13.0	$45,405
2011	268	N/A	N/A	$44,015

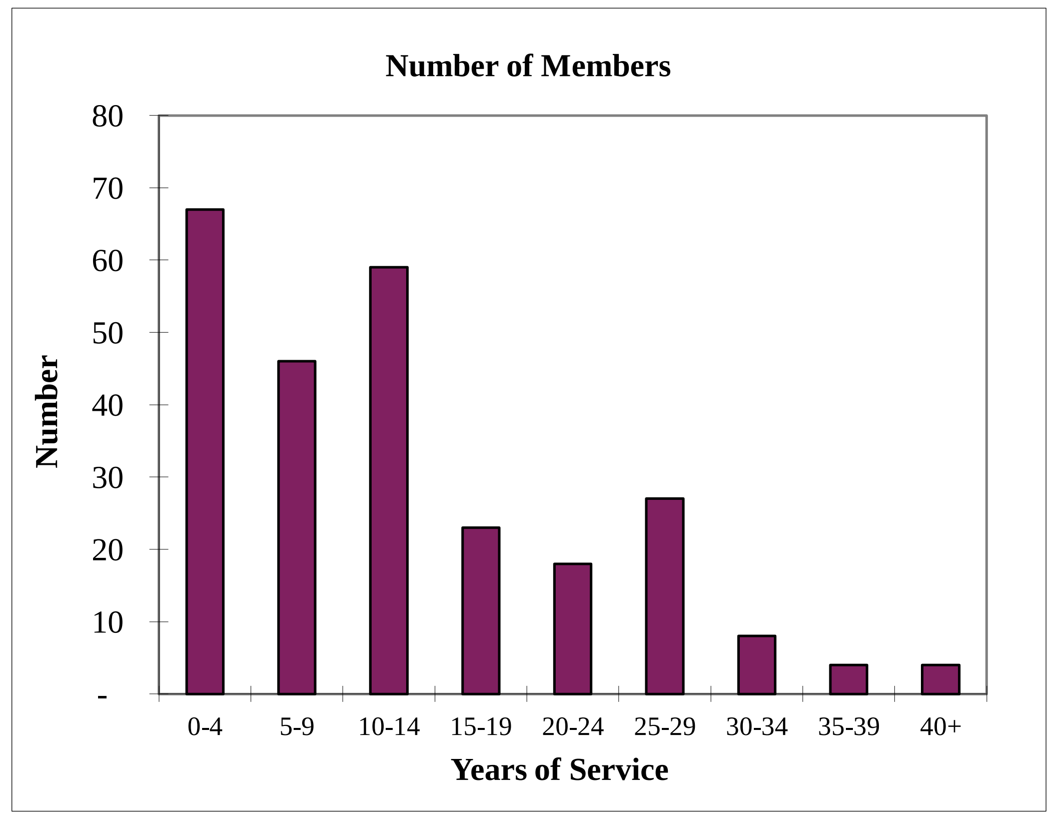
- Average annual compensation has grown by 3.2% annually.

The charts on the following pages summarize demographic information regarding active and retiree members.

STONEHAM RETIREMENT SYSTEM
Distribution of Plan Members as of January 1, 2012
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	-	-	-	-	-	-	-	-	-	-	$ -	$ -
20-24	6	-	-	-	-	-	-	-	-	6	234,158	39,026
25-29	15	3	-	-	-	-	-	-	-	18	797,258	44,292
30-34	7	6	2	-	-	-	-	-	-	15	746,860	49,791
35-39	4	5	12	-	-	-	-	-	-	21	1,287,990	61,333
40-44	6	3	4	8	1	-	-	-	-	22	1,190,200	54,100
45-49	11	10	7	3	3	2	-	-	-	36	1,480,527	41,126
50-54	11	9	17	2	2	5	2	1	-	49	1,917,202	39,127
55-59	2	2	8	5	3	8	5	1	-	34	1,855,673	54,579
60-64	4	5	7	3	6	3	1	1	1	31	1,234,326	39,817
65-69	1	1	2	2	2	6	-	-	3	17	687,033	40,414
70-74	-	2	-	-	-	3	-	1	-	6	173,754	28,959
75-79	-	-	-	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	1	-	-	-	-	1	18,712	18,712
85+	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	**67**	**46**	**59**	**23**	**18**	**27**	**8**	**4**	**4**	**256**	**$ 11,623,693**	**$ 45,405**





STONEHAM RETIREMENT SYSTEM
Distribution of Plan Members as of January 1, 2012
Retired Members

Disabled Member

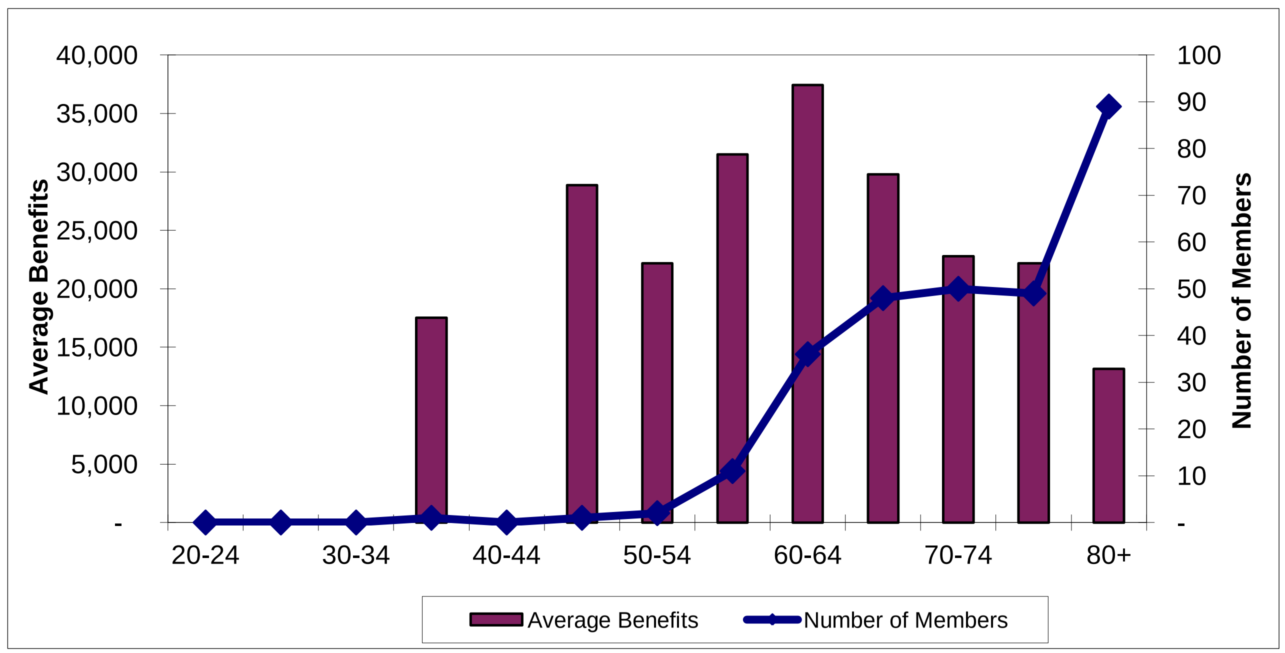
Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	-	-	-
40-44	-	-	-
45-49	1	28,852	28,852
50-54	-	-	-
55-59	3	42,481	127,442
60-64	6	39,158	234,947
65-69	7	35,307	247,150
70-74	4	23,873	95,490
75-79	3	25,126	75,378
80+	2	16,122	32,244
TOTAL	**26**	**$ 32,366**	**$ 841,503**

Retired Members and Beneficiaries

Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	1	17,519	17,519
40-44	-	-	-
45-49	-	-	-
50-54	2	22,178	44,356
55-59	8	27,381	219,050
60-64	30	37,099	1,112,967
65-69	41	28,871	1,183,709
70-74	46	22,683	1,043,412
75-79	46	21,980	1,011,098
80+	87	13,083	1,138,258
TOTAL	**261**	**$ 22,109**	**$ 5,770,368**

Total

Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	1	17,519	17,519
40-44	-	-	-
45-49	1	28,852	28,852
50-54	2	22,178	44,356
55-59	11	31,499	346,492
60-64	36	37,442	1,347,914
65-69	48	29,810	1,430,859
70-74	50	22,778	1,138,903
75-79	49	22,173	1,086,476
80+	89	13,152	1,170,501
TOTAL	**287**	**$ 23,038**	**$ 6,611,871**



Benefits shown are net of State reimbursed COLA.

VALUATION METHODOLOGY

Stone Consulting, Inc. used the Entry Age Normal actuarial funding method in this actuarial valuation. The use of the Entry Age Normal actuarial funding method is consistent with the requirements of Chapter 32 of the Massachusetts General Laws.

NORMAL COST

Valuation Date		January 1, 2012	% of Payroll*
Gross Normal Cost (GNC)	$	1,564,280	13.5%
Employees Contribution		1,032,682	8.9%
Net Normal Cost (NNC)	$	531,598	4.6%
Adjusted to Beginning of Fiscal Year 2014	$	36,284	
Administrative Expense	$	239,695	2.1%
Adjusted Net Normal Cost With Admin. Expense	$	807,576	

*Payroll paid in 2011 for employees as of January 1, 2012 is $11,623,693. Payroll for new hires in 2011 was annualized.

- The gross normal cost (GNC) is the "price" of benefits accruing in the current year if the assumptions underlying the normal cost were realized.
- An individual normal cost represents that part of the cost of a member's future benefits that 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 withdrawals) are included in this calculation.
- Anticipated employee contributions to be made during the year are subtracted from the GNC to determine employer normal cost, or net normal cost (NNC).
- Administrative expenses added to the NNC. The administrative expense does not include investment manager and custodial fees. These fees are considered part of the interest rate assumption that is net of fees.

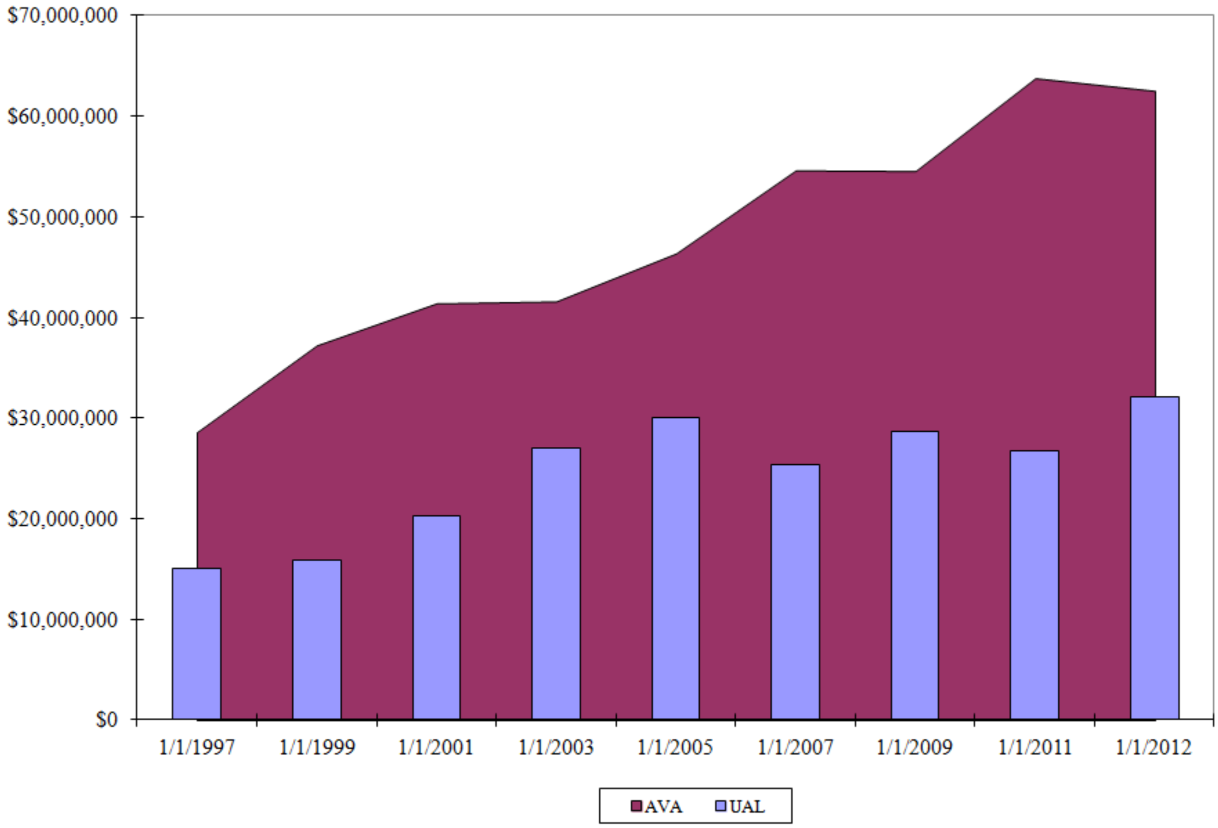
ACTUARIAL ACCRUED LIABILITY AND FUNDED STATUS

Valuation Date				January 1, 2012	Percentage Change
Active Actuarial Accrued Liability			$	33,469,700	-4.8%
Superannuation	$	30,738,015			
Death	$	726,616			
Disability	$	1,762,500			
Withdrawal	$	242,569			
Retiree, Inactive, Survivor and Beneficiary Actuarial Accrued Liability				61,146,482	9.2%
Retirees and Beneficiaries	$	51,674,081			
Disabled	$	8,875,397			
Inactive	$	597,004			
Total Actuarial Accrued Liability (AAL)			$	94,616,182	4.5%
Actuarial Value of Assets (AVA)			$	62,496,448	-2.0%
Unfunded Actuarial Accrued Liability			$	32,119,734	20.0%
Funded Ratio (AVA / AAL)					
2012 (8.00% interest rate):		66%			
2011 (8.00% interest rate):		70%			

- Actuarial Accrued Liability (AAL) is the “price” of benefits attributable to benefits earned in past years, or in other words, represents today’s value of all benefits earned by active and inactive members.
- The total AAL is $94,616,182. This along with an actuarial value of assets of $62,496,448 produces a funded status of 66%. This compares to a funded status of 70% for the 2011 valuation.

The chart on the following page is a history of the unfunded actuarial accrued liability (UAL) and the valuation assets (AVA) over the course of the past nine actuarial valuations,

HISTORY OF ACTUARIAL VALUATION OF ASSETS (AVA) AND UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAL)



DEVELOPMENT OF FUNDING SCHEDULE

Net Employer Normal Cost for Fiscal 2014	$	807,576
Net 3(8)(c) Payments		$102,224
Amortization		3,612,283
Interest adjustment to August 1		29,095
Total Appropriation required for Fiscal 2014	$	4,551,178

- The funding schedule is composed of the normal cost, the net 3(8)(c) payments and the amortization of the actuarial accrued unfunded liability and is adjusted by the administrative expense assumption. The contribution is assumed to be made on August 1. The 3(8)(c) payments are the amount that the Stoneham Retirement System pays to or receives from other retirement boards for service that a retiree had with a different retirement system. The net 3(8)(c) payments is the difference between what the Stoneham Retirement System paid out minus what was received by the System.

- The contribution amount for Fiscal 2014 is $4,551,178. The funding schedule is presented on page 16. The schedule's length is 10 years (for the fresh start base) which is the same as the January 1, 2011 valuation schedule's length. The maximum period permitted under Section 22D of Chapter 32 of the Massachusetts General Laws is 17 years (2030). Under Section 22F of Chapter 32 of the Massachusetts General Laws extended this to twenty-seven years to Fiscal 2040.

- In developing the funding schedule, we used a fresh start approach in which the unfunded actuarial accrued liability (UAAL), other than the UAAL due to past early retirement incentives, is reamortized instead of maintaining the existing amortization amount and separately amortizing the actuarial gain or loss. The use of a fresh-start approach can result in a funding schedule in which the changes in contribution amounts from year to year are more consistent. The amortization percentage is not applicable as the contribution is set to increase an additional $300,000 plus $41,423 multiplied by the number of years since Fiscal 2014. The maximum amortization permitted under Chapter 32, Section 22D is 4.5% and the maximum amortization increase allowed under Section 22F of Chapter 32 is 4.00%.

STONEHAM RETIREMENT SYSTEM
FUNDING SCHEDULE

Fiscal Year	Normal Cost	Unfunded Accrued Liability[1]	Funding Amortization of UAL	Net 3(8)(c) Payments	Schedule Contribution	Adjusted for August 1 Payments
2014	807,576	32,750,329	3,612,283	102,224	4,522,083	4,551,178
2015	843,917	31,469,090	3,915,182	102,224	4,861,323	4,892,601
2016	881,893	34,004,003	4,257,604	102,224	5,241,722	5,275,447
2017	921,578	32,126,111	4,639,476	102,224	5,663,278	5,699,716
2018	963,049	31,066,565	5,060,720	102,224	6,125,993	6,165,408
2019	1,006,387	28,086,312	5,521,256	102,224	6,629,866	6,672,523
2020	1,051,674	24,370,261	6,021,000	102,224	7,174,898	7,221,061
2021	1,098,999	19,817,202	6,559,864	102,224	7,761,087	7,811,022
2022	1,148,454	14,317,926	7,137,757	102,224	8,388,435	8,442,406
2023	1,200,135	7,754,582	7,754,582	102,224	9,056,941	9,115,213
2024	1,254,141	0	0	102,224	1,356,365	1,365,092

Amortization of Unfunded Liability as of July 1, 2013

Year	Type	Original Amort. Amount	Percentage Increasing	Original # of Years	Current Amort. Amount	Years Remaining
2003	2002 ERI	73,706	3.50%	18	107,608	7
2014	Fresh Start	3,420,519	N/A	10	N/A	10

<u>Notes on Amortization of Unfunded Liability</u>

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.

[1]Funding schedule and the Unfunded Accrued Liability reflects recognition of previously unrecognized gains/losses due to asset smoothing method in Fiscal 2016 and Fiscal 2018.

ASSUMPTIONS AND METHODOLOGY SUMMARY

The principal actuarial assumptions used in this valuation are the same as the assumptions used in the previous valuation, except where noted, and are summarized in the following table:

Assumption	**January 1, 2012 Valuation**
Interest Rate	8.00%
Salary Increase	4.50% ultimate plus Steps / Groups 1 and 2: 2.50%, 8 years / Group 4: 5.00%, 5 years *(Previously 5.00%)*
COLA	3% of $13,000
COLA Frequency	Granted every year
Mortality	RP-2000 table projected 17 years with scale AA. For members retired under an Accidental Disability (job-related), 40% of deaths are assumed to be from the same cause as the disability. Disabled mortality RP-2000 table projected 17 years with scale AA, ages set forward 2 years. Pre retirement mortality is for healthy employees an post-retirement is for healthy annuitants. *(Prior valuation used RP2000 without projection.)*
Overall Disability	Groups 1 and 2 55% ordinary disability 45% accidental disability Group 4 10% ordinary disability 90% accidental disability
Retirement Rates	Groups 1 and 2 Ages 55 – 70 Group 4 Ages 50 – 65

Salary increase steps:

Steps	Groups 1 and 2	Group 4
	2.50% 8 years	5.00% 5 years

ASSETS

a.	Cash	$	26,400.62
b.	PRIT Cash		140,066.20
c.	PRIT Fund		54,455,654.61
d.	Sub-Total:	$	54,622,121.43
e.	Accounts Receivable		2,192,675.80
f.	Accounts Payable		(13,823.12)
g.	Prepaid Expenses		673.00
h.	Sub-Total:	$	2,179,525.68
i.	Market Value of Assets [(d) + (g)]	$	56,801,647.11

- We were furnished with the System's annual report by the Board. The market value of assets as of December 31, 2011 (adjusted for payables and receivables) is $56,801,647.11.

- The assets are invested 77% in equities and 23% fixed income. Historically, 10 to 11% has been the expected long-term rate of return for equities, and 6% to 7% has been the expected long-term rate of return for fixed income securities. Many economists and investment professionals are projecting lower returns of 7.25% to 9.50% for equities and 2.90% to 6.00% for fixed income securities and real estate. In light of these projections as well as historical returns, the 8.00% interest rate assumption is within the reasonable assumption range. We encourage close monitoring for changes in investment performance against expectations.

- Actuarial value of assets (AVA) of $62,496,448 is based on a five year smoothing method. Investment gains or losses above or below the expected rate of investment return are recognized over 5 years, 20% per year. The AVA must be no more than 115% of the market value of assets and no less than 85% of the market value of assets.

- The unfunded accrued liability in future years are affected by the deferred net losses. At the time of the next valuation, as of January 1, 2014, there will be $4,246,000 of net losses recognized. Assuming no gains or losses in calendar years 2012 and 2013, the actuarial valuation of assets will be about $1.4 million more than the market value of assets.

CALCULATION OF VALUATION ASSETS

as of January 1, 2012
5-Year Phase-In of Asset Gains and Losses

1. Market value of assets including receivable/payable as of January 1, 2012 — $56,801,647

2. Phase-in of asset gains and losses

	Plan Year (1)	Original Amount (2)	Percent Unrecognized (3)	Amount Unrecognized (2) x (3)
a.	2011	($4,652,559)	80%	($3,722,047)
b.	2010	$2,400,120	60%	$1,440,072
c.	2009	$3,874,355	40%	$1,549,742
d.	2008	($24,472,743)	20%	($4,894,549)
e.	Total			($5,626,782)

3. Valuation assets without corridor as of January 1, 2012 (1. - 2.e.) — $62,428,429

4. Corridor Check
   a. 85% of Market Value — $48,281,400
   b. 115% of Market Value — $65,321,894

5. Valuation assets with corridor as of January 1, 2012 3. within Corridor — $62,496,448

6. Calculation of return on valuation assets

   a. Valuation assets as of January 1, 2011 — $63,751,707

   b. ER contribs + EE contribs - Ben Pymts - Expenses — (1,680,919)

   c. Actual return on valuation assets 5. - (6.a. + 6.b.) — $357,641

   d. Weighted value of valuation assets — $62,800,080

   e. Return on valuation assets 6.c. / 6.d. — 0.6%

DISCLOSURE INFORMATION UNDER GASB STATEMENT 25

Schedules of Funding Progress

(Dollars In Thousands)

Actuarial Valuation Date	Actuarial Value of Assets A	Actuarial Accrued Liability B	Unfunded AAL (UAAL) B-A	Funded Ratio A/B	Covered Payroll C	UAAL as a % of Covered Payroll (B-A)/C
1/1/2012	$62,496	$94,616	$32,120	66%	$11,624	276%
1/1/2011	$63,752	$90,520	$26,768	70%	$12,386	216%
1/1/2009	$54,534	$83,201	$28,667	66%	$11,800	243%
1/1/2007	$54,605	$80,019	$25,414	68%	$11,578	220%
1/1/2005	$46,352	$76,389	$30,037	61%	$11,770	257%

Notes to Schedules

Additional information as of the latest actuarial valuation follows:

Valuation date	1/1/2012
Actuarial cost method	Entry Age Normal
Amortization method	Approximate level percent of payroll Closed
Remaining amortization period	10 years for the fresh start base
Asset valuation method	Market value adjusted by accounts payable and receivables adjusted to phase in over 5 years investment gains or losses above or below the expected rate of investment return. The actuarial value of assets must be no less than 90% of the adjusted market value nor more than 110% of the adjusted market value. Market value of assets is $56,801,647.
Actuarial assumptions:	
Investment Rate of Return	8.00% per year
Projected Salary Increases	4.5% ultimate rate plus:

Steps	Groups 1 and 2	Group 4
	2.50% 8 years	5.00% 5 years

PERAC INFORMATION DISCLOSURE

The most recent actuarial valuation of the System was prepared by Stone Consulting, Inc. as of January 1, 2012

The normal cost for employees on that date was:	$1,032,682	8.9% of payroll
The normal cost for the employer was:	$531,598	4.6% of payroll

The actuarial liability for active members was:	$33,469,700
The actuarial liability for retired members was (includes inactives):	$61,146,482
Total actuarial accrued liability:	$94,616,182
System assets as of that date:	62,496,448
Unfunded actuarial accrued liability:	$32,119,734

The ratio of system's assets to total actuarial liability was: 66%

As of that date the total covered employee payroll was: $11,623,693

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

Investment Return:	8.00% per annum
Rate of Salary Increase:	Select and a 4.50% ultimate rate

SCHEDULE OF FUNDING PROGRESS (Dollars in $000's)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
1/1/2012	$62,496	$94,616	$32,120	66%	$11,624	276%
1/1/2011	$63,752	$90,520	$26,768	70%	$12,386	216%
1/1/2009	$54,534	$83,201	$28,667	66%	$11,800	243%
1/1/2007	$54,605	$80,019	$25,414	68%	$11,578	220%
1/1/2005	$46,352	$76,389	$30,037	61%	$11,770	257%

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Methods

1.	Actuarial Cost Method	The Entry Age Normal Actuarial Cost Method has been used in this valuation. Under this method, the normal cost is the amount calculated as the level percentage of compensation necessary to fully fund the prospective benefits from each member's entry age to retirement age. 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 (adjusted by payables and receivables) adjusted to phase in investment gains or losses above or below the expected rate of investment return over a five-year rolling period. The phase-in is 20% for year one, 40% for year two, 60% for year three, 80% for year four and 100% for year five. The actuarial value of assets may be no less than 85%, or more than 115% of the market value of assets plus payables and receivables.
3.	Fiscal Year Adjustment	The actuarial results are adjusted by the valuation interest rate and salary scale to the beginning of Fiscal Year 2014. The unfunded actuarial accrued liability is rolled forward with normal cost and further adjusted by anticipated contributions and interest.

Actuarial Assumptions

1.	Investment Return	8.00% per year net of investment expenses. (Same as the prior valuation)

ACTUARIAL METHODS AND ASSUMPTIONS
(Continued)

2. Salary Increases

4.5% ultimate rate plus:

Steps	Groups 1 and 2	Group 4
	2.50% 8 years	5.00% 5 years

(Prior valuation used 5.00% increase per year)

3. Withdrawal Prior to Retirement

The rates shown at the following sample ages illustrate the withdrawal assumption. Withdrawal rates are set to zero if the retirement rate at that age is nonzero.

	Rate of Withdrawal	
Service	***Group 1 and 2***	***Group 4***
0	15%	1.5%
1	12%	1.5%
2	10%	1.5%
3	9%	1.5%
4	8%	1.5%
5	7.6%	1.5%
10	5.4%	1.5%
15	3.3%	0.0%
20	2.0%	0.0%
25	1.0%	0.0%
30+	0.0%	0.0%

ACTUARIAL METHODS AND ASSUMPTIONS
(Continued)

4. Disability Prior to Retirement

The rates shown at the following sample ages illustrate the assumption regarding the incidence of disability:

	Rate of Disability	
Age	***Group 1 and 2***	***Group 4***
20	0.01%	0.10%
25	0.02%	0.20%
30	0.03%	0.30%
35	0.06%	0.30%
40	0.10%	0.30%
45	0.15%	1.00%
50	0.19%	1.25%
55	0.24%	1.20%
60	0.28%	0.85%

Disability is assumed to be 55% ordinary and 45% accidental for Group 1 and 2 and 10% ordinary and 90% accidental for Group 4.

ACTUARIAL METHODS AND ASSUMPTIONS
(Continued)

5. Rates of Retirement

The rates shown at the following ages illustrate the assumption regarding the incidence of retirement, once the member has achieved 10 years of service:

Rates of Retirement

Age	*Group 1 & 2* Male	*Group 1 & 2* Female	*Group 4*
50	1%	1.5%	2%
51	1%	1.5%	2%
52	1%	2.0%	2%
53	1%	2.5%	2%
54	2%	2.5%	7.5%
55	2%	5.5%	15%
56	2.5%	6.5%	10%
57	2.5%	6.5%	10%
58	5%	6.5%	10%
59	6.5%	6.5%	15%
60	12%	5%	20%
61	20%	13%	20%
62	30%	15%	25%
63	25%	12.5%	25%
64	22%	18%	30%
65	40%	15%	100%
66	25%	20%	N/A
67	25%	20%	N/A
68	30%	25%	N/A
69	30%	20%	N/A
70	100%	100%	N/A

6. Mortality

The RP-2000 mortality table (sex-distinct) projected 17 years with scale AA. (*Prior valuation used RP-2000 mortality table without projection.).* During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used.

7. Disabled Life Mortality

The RP-2000 mortality table for healthy annuitants (sex-distinct) projected 17 years with scale AA set-forward by 2 years. Death is assumed to be due to the same cause as the disability 40% of the time. *(Prior valuation used RP-2000 mortality table set forward 2 years).*

ACTUARIAL METHODS AND ASSUMPTIONS
(Continued)

8.	Regular Interest Rate Credited to Annuity Savings Account	2% per year.
9.	Family Composition	Members assumed married with 2 dependent children – one male and one female both age 15; age difference between member and spouse assumed to be 3 years (the male being the older).
10.	Cost-of-Living Increases	A 3% COLA on the first $13,000 of a member's retirement allowance is assumed to be granted every year.
11.	Step Increases	Step increases are assumed to be part of the salary increase assumption.
12.	Credited Service	All service is assumed to be due to employment with the municipality.
13.	Contribution Timing	Contributions are assumed to be made on August 1.
14.	Total Payroll Increase	The total payroll is assumed to increase at 4.50% per year.
15.	Net 3(8)(c) Payments	Amounts paid to other retirement boards minus amounts received from other retirement boards for service with other retirement systems.
16.	Valuation Date	January 1, 2012.

SUMMARY OF PRINCIPAL PROVISIONS

1. Participant

Participation is mandatory for all full-time employees whose employment commences before age 65. There are three classes of members in the retirement system:

Group 1: general employees

Group 2: employees in specified hazardous occupations (e.g., electricians)

Group 4: police and firefighters

2. Member Contributions

Member contributions vary depending upon date hired as follows:

Date of Hire	Member Contribution Rate
Prior to 1975	5% of Pay
1975 – 1983	7% of Pay
1984 – June 30, 1996	8% of Pay
After June 30, 1996	9% of Pay

Members hired after 1978 contribute an additional 2% of pay over $30,000.

3. Pay

a. Pay

Gross regular compensation excluding bonuses, overtime, severance pay, unused sick pay, and other similar compensation.

b. Average Pay

The average of pay during the 3 consecutive years that produce the highest average or, if greater, during the last three years (whether or not consecutive) preceding retirement.

4. Credited Service

Period during which an employee contributes to the retirement system plus certain periods of military service and "purchased" service.

SUMMARY OF PRINCIPAL PROVISIONS
(Continued)

5. Service Retirement

a. Eligibility

Completion of 20 years of credited service or attainment of age 55 and completion of 10 years of credited service. If hired prior to 1978 or a member of group 4, attainment of age 55.

b. Retirement Allowance

Determined as the product of the member's benefit percentage, average pay and credited service, where the benefit percentage is shown below (maximum allowance of 80% of average pay):

Benefit Percentage	Group 1	Group 2	Group 4
2.5%	65+	60+	55+
2.4	64	59	54
2.3	63	58	53
2.2	62	57	52
2.1	61	56	51
2.0	60	55	50
1.9	59	N/A	49
1.8	58	N/A	48
1.7	57	N/A	47
1.6	56	N/A	46
1.5	55	N/A	45

In addition, veterans receive an additional $15 per year for each year of credited service up to 20 years.

6. Deferred Vested Retirement

a. Eligibility

Completion of 10 years of credited service (for elected and appointed members, 6 years in the event of involuntary termination).

SUMMARY OF PRINCIPAL PROVISIONS
(Continued)

6. Deferred Vested Retirement *(continued)*

b. Retirement Allowance	Determined in the same manner as 5b. with the benefit payable at age 55, unless deferred until later at the member's option. Member contributions with interest may be withdrawn after separation from service. If contributions are withdrawn, eligibility for retirement benefits is forfeited. Members hired before 1984 receive full interest on contributions that are withdrawn; otherwise, one half the credited interest is provided for members who withdraw after 5 but before 10 years of credited service and no interest is provided for withdrawals before 5 years of credited service.

7. Ordinary Disability Retirement

a. Eligibility	Non-job related disability after completion of 10 years of credited service.
b. Retirement Allowance	Determined in the same manner as 5b. with the benefit payable immediately. Veterans receive 50% of pay (during final year) plus an annuity based on accumulated member contributions with interest.

8. Accidental Disability Retirement

a. Eligibility	Disabled as a result of an accident in the performance of duties. No age or service requirement.
b. Retirement Allowance	72% of pay plus an annuity based on accumulated member contributions with interest. Also, a dependent's allowance per year for each child. Total allowance not to exceed 100% of pay (75% for members hired after 1987).

SUMMARY OF PRINCIPAL PROVISIONS
(Continued)

9. Non-Occupational Death

a. Eligibility	Dies while in active service, but not due to occupational injury. 2 years of service.
b. Retirement Allowance	Benefit as if Option C had been elected (see below). Minimum monthly benefits provided as follows: spouse - \$250, first child - \$120, each additional child - \$90.

10. Occupational Death

a. Eligibility	Dies as a result of an occupational injury.
b. Benefit Amount	Same as 8b.

11. Cost-of-Living Increases — An increase of up to 3% applied to the first \$13,000 of annual benefit. Funded by the Municipality from Fiscal Year 1999. Percentage increase is voted on each year by the Retirement Board. Cost-of-living increases granted during Fiscal Year 1982 through Fiscal 1998 are reimbursed by the Commonwealth.

12. Optional Forms of Payment

a. Option A	Allowance payable monthly for the life of the member.
b. Option B	Allowance payable monthly for the life of the member with a guarantee of remaining member contributions with interest.
c. Option C	Allowance payable monthly for the life of the member with 66-2/3% continuing to the member's beneficiary upon the member's death. If the beneficiary predeceases the member, the allowance amount "pops up" to the non-reduced amount.

GLOSSARY OF TERMS

1.	Present Value of Benefits	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.	Actuarial Assumptions	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 turnover, disability, retirement and mortality.
4.	Actuarial Accrued Liability	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.	Actuarial Assets	Market value of assets (adjusted by payables and receivables) adjusted to phase in investment gains or losses above or below the expected rate of investment return over a five-year rolling period. The phase-in is 20% for year one, 40% for year two, 60% for year three, 80& for year four and 100% for year five. The actuarial value of assets may be no less than 85%, or more than 115% of the market value of assets plus payables and receivables.
7.	Unfunded Actuarial Accrued Liability	That portion of the Actuarial Accrued Liability not covered by System Assets.
8.	PERAC	Public Employee Retirement Administration Commission, a division of the State government which has regulatory authority over the administration of the retirement system.

GLOSSARY OF TERMS
(Continued)

9.	PRIT	Pension Reserves Investment Trust Fund is the state controlled and administered fund for the investment of assets for members of the retirement system.
10.	GASB	Government Accounting Standards Board (issues guidance for disclosure of retirement system liabilities).
11.	3(8)(c) Payment	Payment made by a retirement system to another retirement system. The purpose is to reimburse the portion of a retirement allowance due to service with a previous retirement system.