Hampshire County Retirement System

Actuarial Valuation and Review
as of January 1, 2010

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SEGAL

The Segal Company
116 Huntington Ave., 8th Floor Boston, MA 02116
T 617.424.7300 F 617.424.7390 www.segalco.com

October 26, 2010

Retirement Board
Hampshire County Retirement System
99 Industrial Drive
Northampton, MA 01060

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2010. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2011 and later and analyzes the preceding three years' experience.

The census information and financial information on which our calculations were based was prepared by the staff of the Hampshire County Retirement System. That assistance is gratefully acknowledged. The actuarial calculations were completed under my supervision.

This actuarial valuation has been completed 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. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By: _____

Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Actuary

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Purpose

This report has been prepared by The Segal Company to present a valuation of the Hampshire County Retirement System as of January 1, 2010. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of M.G.L. Chapter 32;
- The characteristics of covered active participants, inactive participants, and retired participants and beneficiaries as of January 1, 2010;
- The assets of the Plan as of December 31, 2009;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The actuarial valuation report as of January 1, 2010 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected. We are prepared to work with the Board to model the effects of these or any other subsequent developments.
- During the plan years ended 2007, 2008 and 2009, the market value rates of return were 5.87%, -24.50% and 20.01%, respectively. Because the actuarial value of assets gradually recognizes market value fluctuations over a five-year period, the actuarial rate of return for the plan years ended 2007, 2008 and 2009 were 8.31%, -9.20% and 6.65%, respectively. The actuarial value of assets as of December 31, 2009 was $179.9 million, or 106.3% of the market value of assets of $169.2 million reported in the Annual Statement. The actuarial value of assets as of December 31, 2006 was $163.5 million, or 97.5% of the market value of assets of $167.7 million.
- As indicated in Section 2, Subsection B of this report, the total unrecognized investment loss as of December 31, 2009 is $10,646,745. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 8.00% per year (net of expenses) on a market value basis will result in investment losses on the actuarial value of assets in the next few years. The funding

schedule shown in Section 3, Exhibit G reflects the deferred investment losses in accordance with the asset valuation method adopted by the Board.

- The following actuarial assumptions were changed with this valuation:
  - The investment return assumption was decreased from 8.25% to 8.00%.
  - An estimated liability of future net 3(8)(c) payments has been included.
- The unfunded liability increased from $94.4 million as of January 1, 2007 to $133.0 million as of January 1, 2010, compared to the expected unfunded liability of $90.6 million. As detailed in Subsection C of Section 2 of the report, the increase is primarily due to the investment loss on an actuarial basis and the changes in assumptions noted above, partially offset by demographic gains primarily due to salary and mortality experience.
- The preliminary recommended contribution of $13,868,543 is based on an 18-year level amortization of the 2002 and 2003 ERI liabilities and a 23-year increasing (3.50% per year) amortization of the remaining unfunded liability. Because the fiscal 2011 appropriation has already been budgeted at $13,310,682, the results of this valuation will first be reflected in the fiscal 2012 appropriation. In projecting the unfunded actuarial accrued liability for future fiscal years, the deferred investment losses have been reflected in accordance with the asset valuation method approved by the Board. The fiscal 2012 appropriation of $14,201,225 and the fiscal 2013 appropriation of $15,154,105 are set at the prior year's amount increased by 7% (non-ERI components). Exhibit G in Section 3 shows the recommended contributions through fiscal 2033 based on this funding schedule.

Summary of Key Valuation Results

	2010	2007
Contributions for fiscal year beginning July 1:		
Recommended for fiscal 2011 and 2009	$13,310,682	$12,385,744
Recommended for fiscal 2012 and 2010	14,201,225	12,839,352
Recommended for fiscal 2013 and 2011	15,154,105	13,310,682
Funding elements for plan year beginning January 1:		
Normal cost, including administrative expenses	$10,179,456	$9,653,740
Market value of assets	169,213,772	167,718,336
Actuarial value of assets	179,860,517	163,497,369
Actuarial accrued liability	312,877,626	257,885,435
Unfunded actuarial accrued liability	133,017,109	94,388,066
GASB 25/27 for fiscal year beginning July 1:		
Annual required contributions	$13,310,682	$14,378,596
Actual contributions	--	14,378,596
Percentage contributed	--	100.00%
Funded ratio based on actuarial value of assets	57.49%	63.40%
Funded ratio based on market value of assets	54.08%	65.04%
Demographic data for plan year beginning January 1:		
Number of retired participants and beneficiaries	1,033	996
Number of inactive participants entitled to a return of their employee contribution	941	1,017
Number of inactive participants with a vested right to a deferred or immediate benefit	99	42
Number of active participants	1,979	2,413
Total payroll	$64,850,666	$64,759,080
Average payroll	32,769	26,838

Note: With the January 1, 2010 actuarial valuation, 278 call firefighters, reserve police officers and part-time EMTs who worked in 2009 are included with the inactive participants entitled to a return of their employee contributions. The corresponding figure for the prior valuation was 286.

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, inactive participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A and B.

A historical perspective of how the participant population has changed over the past nine valuations can be seen in this chart.

CHART 1

Participant Population: 1995 – 2009

Year Ended December 31	Active Participants	Inactive Participants	Retired Participants and Beneficiaries
1995	2,600	600	812
1997	2,678	608	847
1999	2,720	587	879
2001	2,707	589	922
2003	2,648	677	1,002
2005	2,733	693	989
2006	2,413	1,059*	996
2009	1,979	1,040**	1,033

* *286 call firefighters, reserve police officers and part-time EMTs who worked in 2006 are included with the inactive participants.*
** *278 call firefighters, reserve police officers and part-time EMTs who worked in 2009 are included with the inactive participants.*

Active Participants
Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 1,979 active participants with an average age of 48.0, average years of service of 11.0 years and average payroll of $32,769. The 2,413 active participants in the prior valuation had an average age of 46.4, average service of 9.8 years and average payroll of $26,838.

Among the active participants, there were none with unknown age and/or service information.

Inactive Participants
In this year's valuation, there were 99 participants with a vested right to a deferred or immediate vested benefit and 941 participants entitled to a return of their employee contributions. 278 call firefighters, reserve police officers and part-time EMTs who worked in 2009 are included with the inactive participants.

These graphs show a distribution of active participants by age and by years of service.

CHART 2

Distribution of Active Participants by Age as of December 31, 2009

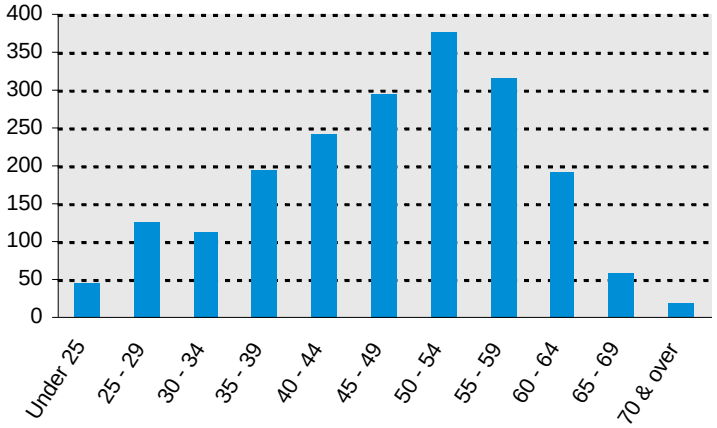
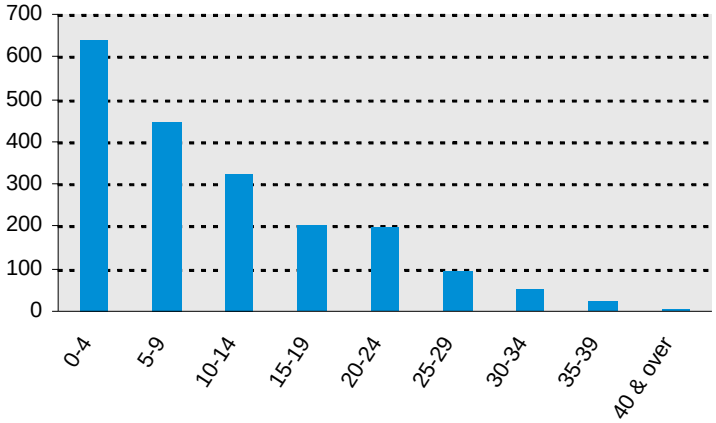


CHART 3

Distribution of Active Participants by Years of Service as of December 31, 2009



Retired Participants and Beneficiaries

As of December 31, 2009, 896 retired participants and 137 beneficiaries were receiving total monthly benefits of $1,327,453, excluding COLAs reimbursed by the Commonwealth. For comparison, in the previous valuation, there were 862 retired participants and 134 beneficiaries receiving monthly benefits of $1,128,615, excluding COLAs reimbursed by the Commonwealth.

These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.

CHART 4

Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of December 31, 2009

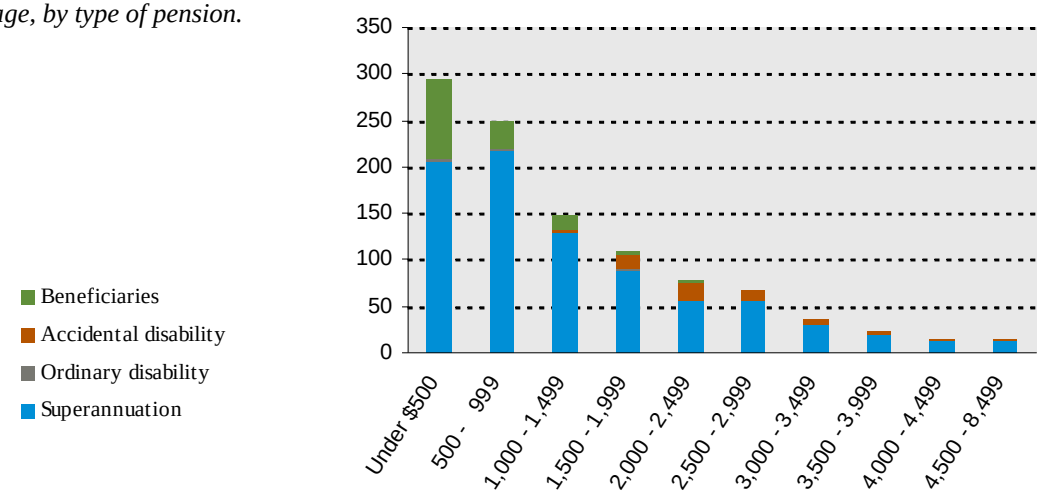
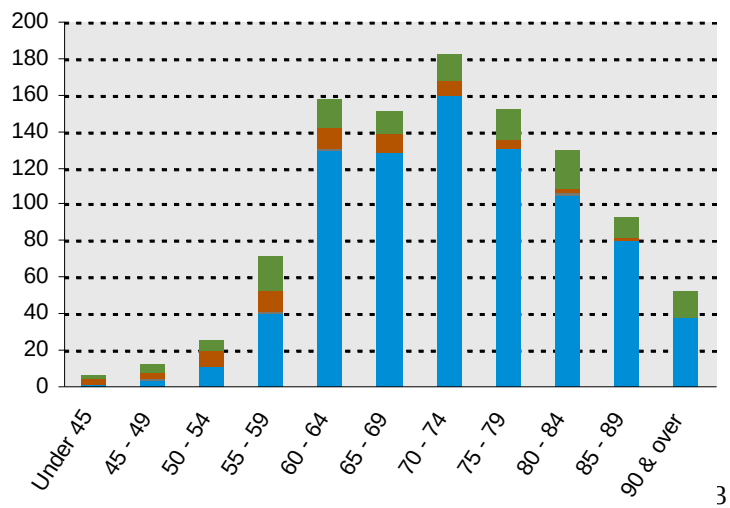


CHART 5

Distribution of Retired Participants and Beneficiaries by Type and by Age as of December 31, 2009



B. FINANCIAL INFORMATION

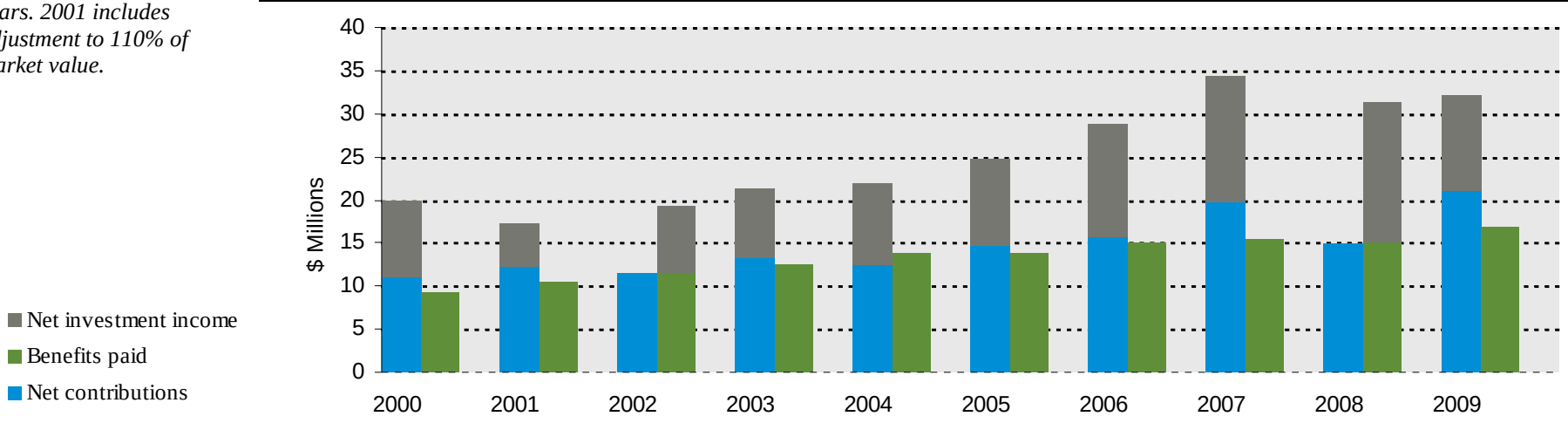
Retirement plan funding anticipates that, over the long term, both net contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits C and D.

The chart depicts the components of changes in the actuarial value of assets over the last ten years. 2001 includes adjustment to 110% of market value.

CHART 6

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2000 – 2009



It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 7

Determination of Actuarial Value of Assets

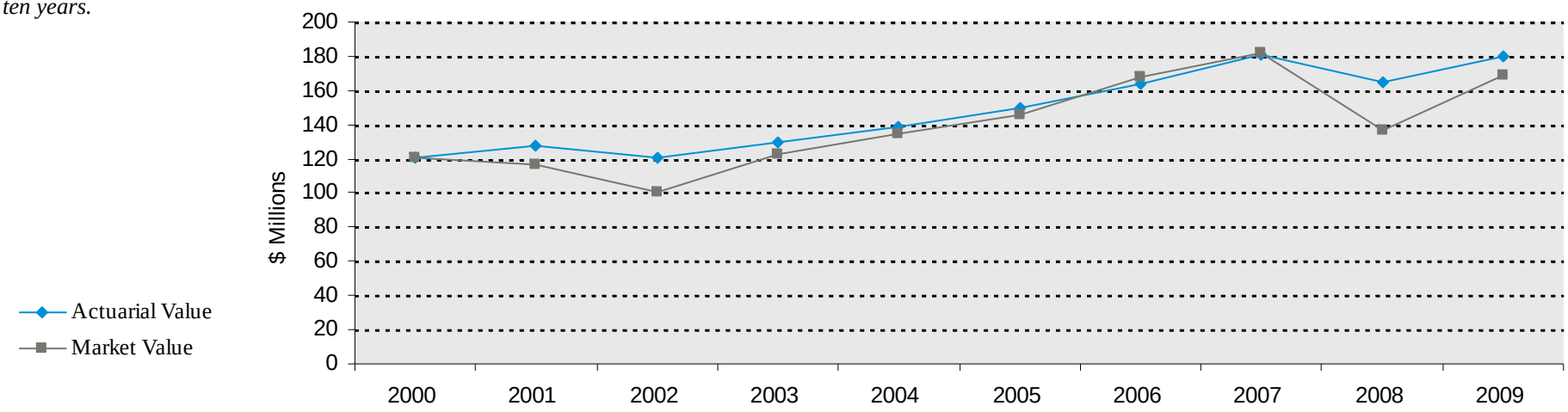
	Year ended December 31,		
	2009	**2008**	**2007**
1. Actuarial value of assets at the beginning of the year	$164,557,322	$181,433,475	$163,497,369
2. Contributions less benefit payments and expenses	4,215,033	-185,639	4,170,834
3. Average actuarial value: (1) + [50% of (2)]	166,664,838	181,340,655	165,582,786
4. Expected investment income: .0825 x (3)	13,749,848	14,960,604	13,660,580
5. Preliminary actuarial value of assets at the end of the year: (1) + (2) + (4)	182,522,204	196,208,440	181,328,783
6. Market value of assets at the end of the year	169,213,772	137,131,102	181,852,245
7. Adjustment toward market value: 20% of [(6) - (5)]	-2,661,687	-11,815,468	104,692
8. Adjustment to be within 20% corridor	0	-19,835,650	0
9. Final actuarial value of assets: (5) + (7) + (8)	$179,860,517	$164,557,322	$181,433,475
10. Actuarial value as a percentage of market value: (9) ÷ (6)	106.3%	120.0%	99.8%

Both the actuarial value and market value of assets are representations of the Hampshire County Retirement System's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Hampshire County Retirement System's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in the actuarial value of assets versus the market value over the past ten years.

CHART 8

Actuarial Value of Assets vs. Market Value of Assets as of December 31, 2000 – 2009



C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total loss over a three-year period is $27,296,680, a $36,801,343 loss from investments and a $9,504,663 gain from all other sources. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

CHART 9

Actuarial Experience for Year Ended December 31, 2009

1.	Net loss from investments*	-$36,801,343
2.	Net gain from administrative expenses	359,473
3.	Net gain from other experience**	9,145,190
4.	Net experience loss: (1) + (2) + (3)	-$27,296,680

* *Details in Chart 10*

** *Details in Chart 13*

Investment Rate of Return
A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Hampshire County Retirement System's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets was 8.25%. The actual rate of return on an actuarial basis for the 2009, 2008 and 2007 plan years were 6.65%, -9.20% and 8.31%, respectively.

Since the actual return for the past three years was less than the assumed return, the Hampshire County Retirement System experienced an actuarial loss during the three-year period ending December 31, 2009 with regard to its investments of $36,801,343 (including an adjustment for interest).

This chart shows the gain/(loss) due to investment experience.

CHART 10

Actuarial Value Investment Experience

	Year ended December 31,		
	2009	**2008**	**2007**
1. Actual return	$11,088,162	-$16,690,514	$13,765,272
2. Average value of assets	166,664,838	181,340,656	165,582,786
3. Actual rate of return: (1) ÷ (2)	6.65%	-9.20%	8.31%
4. Assumed rate of return	8.25%	8.25%	8.25%
5. Expected return: (2) x (4)	$13,749,849	$14,960,604	$13,660,580
6. Actuarial gain/(loss): (1) – (5)	-$2,661,687	-$31,651,118	$104,692

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last ten years, including five-year and ten-year averages.

Based upon this experience and future expectations, we have decreased the assumed rate of return from 8.25% to 8.00%.

CHART 11

Investment Return – Actuarial Value vs. Market Value: 2000 - 2009

	Actuarial Value Investment Return		Market Value Investment Return	
Year Ended December 31	Amount	Percent	Amount	Percent
2000	$8,888,572	8.02%	-$223,340	-0.19%
2001	4,961,589	4.07	-6,755,563	-5.54
2002	-7,846,007	-6.12	-16,290,031	-13.98
2003	8,000,736	6.60	21,306,913	21.08
2004	9,449,558	7.30	12,588,183	10.26
2005	9,999,595	7.18	9,085,093	6.70
2006	13,068,108	8.70	21,839,833	15.00
2007	13,765,272	8.31	9,963,075	5.87
2008	-16,690,514	-9.20	-44,535,504	-24.50
2009	11,088,162	6.65	27,867,636	20.01
Total	$54,685,071		$34,846,295	
	Five-year average return	3.89%		3.14%
	Ten-year average return	3.86%		2.80%

Note: Each year's yield is weighted by the average asset value in that year.

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

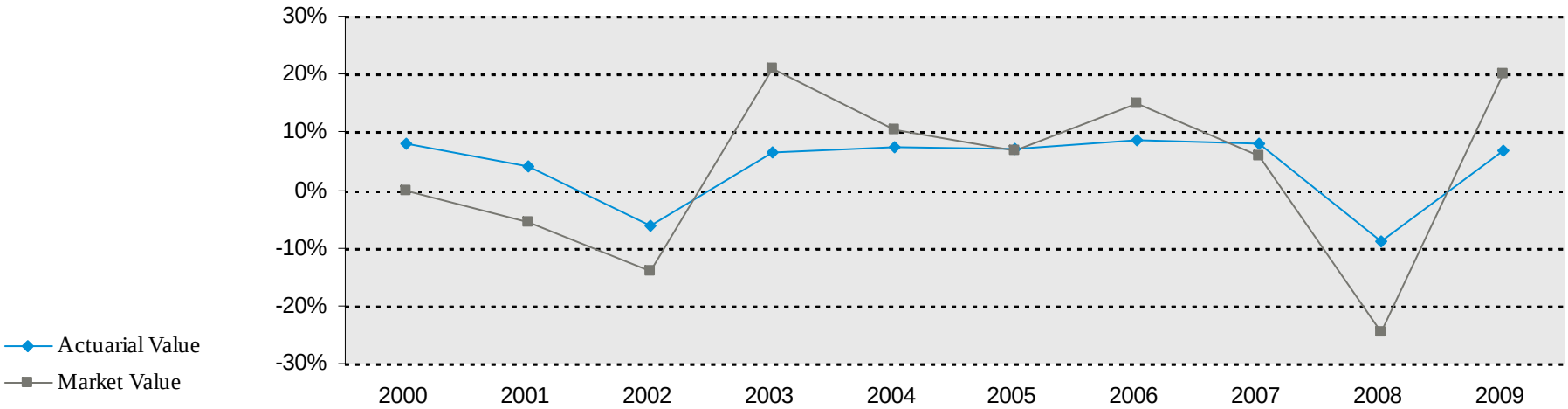
Administrative Expenses

Administrative expenses for the years ended December 31, 2007, 2008 and 2009 were $587,796, $554,225 and $599,106, respectively, compared to the assumption of $650,000 in 2007, $679,250 in 2008 and $709,816 in 2009. This resulted in a gain of $359,473 for the three-year period, including an ajustment for interest. We have maintained the assumption of $650,000 for calendar 2010.

This chart illustrates how this leveling effect has actually worked over the years 2000 - 2009.

CHART 12

Market and Actuarial Rates of Return for Years Ended December 31, 2000 - 2009



Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- the number of disability retirements, and
- salary increases different than assumed.

The net gain from this other experience for the three-year period ended December 31, 2009 amounted to $9,145,190. A brief summary of the demographic gain/(loss) experience of the Hampshire County Retirement System for the year ended December 31, 2009 is shown in the chart below.

This valuation reflects the following:

- The investment return assumption was decreased from 8.25% to 8.00%.
- An estimated liability of future net 3(8)(c) payments has been included.

The assumption changes resulted in an increase in the unfunded liability of $15,106,617 and an increase in the employer normal cost of $448,132.

The chart shows elements of the experience gain/(loss) for the most recent year.

CHART 13

Experience Due to Changes in Demographics for Year Ended December 31, 2009

1.	More deaths than expected amongst retired members and beneficiaries	$953,514
2.	Salary increase less than expected for continuing actives	8,527,779
2.	Miscellaneous loss	-336,103
3.	Total	$9,145,190

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability.

The preliminary recommended contribution of $13,868,543 is based on an 18-year level amortization of the 2002 and 2003 ERI liabilities and a 23-year increasing (3.50% per year) amortization of the remaining unfunded liability. Because the fiscal 2011 appropriation has already been budgeted at $13,310,682, the results of this valuation will first be reflected in the fiscal 2012 appropriation.

In projecting the unfunded actuarial accrued liability for future fiscal years, the deferred investment losses have been reflected in accordance with the asset valuation method approved by the Board. The fiscal 2012 appropriation of $14,201,225 and the fiscal 2013 appropriation of $15,154,105 are set at the prior year's amount increased by 7% (non-ERI components).

Exhibit G in Section 3 shows the recommended contributions through fiscal 2033 based on this funding schedule.

The chart compares this valuation's recommended contribution with the prior valuation.

CHART 14

Recommended Contribution

	Year Beginning January 1			
	2010		2007	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	$9,529,456	13.96%	$9,003,740	13.22%
2. Administrative expenses	650,000	0.95%	650,000	0.95%
3. Expected employee contributions	-6,080,294	-8.91%	-5,888,080	-8.65%
4. Employer normal cost: (1) + (2) + (3)	$4,099,162	6.00%	$3,765,660	5.53%
5. Actuarial accrued liability	312,877,626		257,885,435	
6. Actuarial value of assets	179,860,517		163,497,369	
7. Unfunded actuarial accrued liability: (5) - (6)	$133,017,109		$94,388,066	
8. Employer normal cost projected to July 1, 2010 and 2007, adjusted for timing	4,271,783	6.12%	3,926,506	5.64%
9. Projected unfunded actuarial accrued liability	138,235,435		98,204,421	
10. Payment on projected unfunded actuarial accrued liability, adjusted for timing	9,596,760	13.75%	8,137,708	11.69%
11. Preliminary recommended contribution: (8) + (10), adjusted for timing	13,868,543	19.87%	12,064,214	17.33%
12. Budgeted appropriation	$13,310,682	19,.07%	$11,998,834	17.23%
13. Projected payroll	$69,795,060		$69,623,558	

Note: Recommended contributions are assumed to be paid on July 1 and December 31.

E. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to the GASB is the historical comparison of GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded within the range of GASB reporting requirements. Chart 15 below presents a graphical representation of this information for the Plan.

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under the GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

Although the GASB requires that the actuarial value of assets be used to determine the funded ratio, Chart 16 shows the funded ratio calculated using both the actuarial value of assets (57.49%) and the market value of assets (54.08%).

The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits II, III, and IV.

These graphs show key GASB factors.

CHART 15

Required Versus Actual Contributions

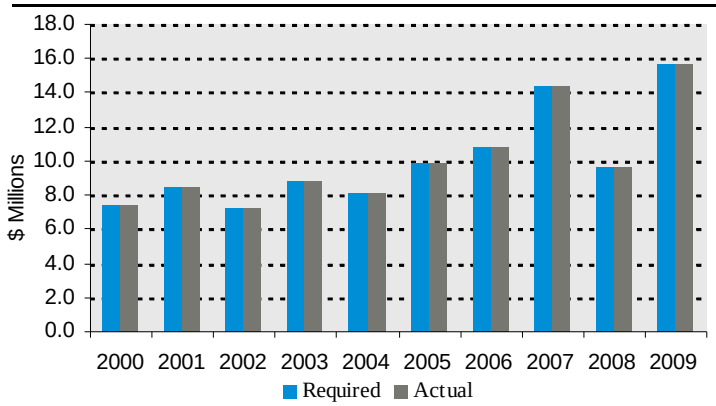


CHART 16

Funded Ratio

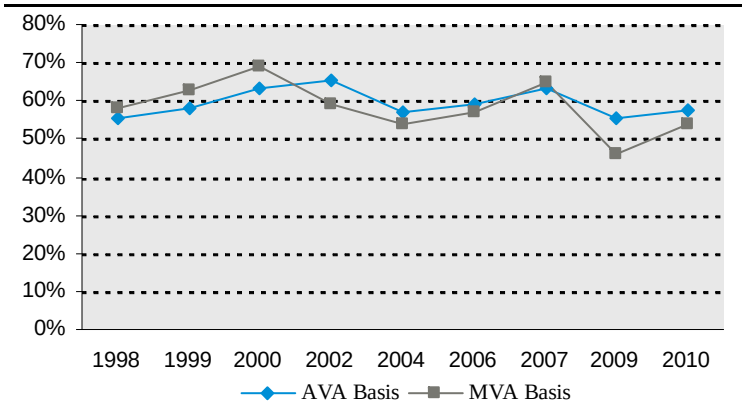


EXHIBIT A

Table of Plan Coverage

Category	Year Ended December 31 2009	Year Ended December 31 2006	Change From Prior Year
Active participants in valuation:			
Number	1,979	2,413	-18.0%
Average age	48.0	46.4	N/A
Average service	11.0	9.8	N/A
Total payroll	$64,850,666	$64,759,080	0.1%
Average payroll	32,769	26,838	22.1%
Member contributions	55,252,550	49,104,787	12.5%
Number with unknown age information	0	7	N/A
Inactive participants with a vested right to a deferred or immediate benefit	99	42	135.7%
Inactive participants entitled to a return of their contributions	941	1,017	-7.5%
Retired participants:			
Number in pay status	828	796	4.0%
Average age	73.0	73.1	N/A
Average monthly benefit	$1,326	$1,160	14.3%
Disabled participants:			
Number in pay status	68	66	3.0%
Average age	61.8	62.2	N/A
Average monthly benefit	$2,264	$2,064	9.7%
Beneficiaries in pay status	137	134	2.2%

Notes: In the year ended December 31, 2009, 278 call firefighters, reserve police officers and part-time EMTs who worked in 2009 are included with the inactive participants entitled to a return of their employee contributions.
In the year ended December 31, 2006, 286 call firefighters, reserve police officers and part-time EMTs who worked in 2006 are included with the inactive participants.

EXHIBIT B

Participants in Active Service as of December 31, 2009
By Age, Years of Service, and Average Payroll

	Years of Service									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	44	44	- -	- -	- -	- -	- -	- -	- -	- -
	$16,298	$16,298	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	126	107	19	- -	- -	- -	- -	- -	- -	- -
	$25,864	$24,961	$30,946	- -	- -	- -	- -	- -	- -	- -
30 - 34	114	53	45	16	- -	- -	- -	- -	- -	- -
	$35,700	$26,724	$42,588	$46,063	- -	- -	- -	- -	- -	- -
35 - 39	195	80	57	39	13	5	1	- -	- -	- -
	$35,412	$23,783	$38,623	$49,293	$45,228	$54,016	$20,701	- -	- -	- -
40 - 44	243	92	56	35	34	24	1	1	- -	- -
	$35,282	$22,267	$28,445	$44,372	$56,065	$56,511	$26,523	$89,981	- -	- -
45 - 49	295	94	70	55	27	33	15	1	- -	- -
	$32,310	$20,332	$28,078	$30,715	$43,846	$54,262	$59,924	$92,213	- -	- -
50 - 54	376	77	94	78	46	44	18	15	4	- -
	$33,510	$23,140	$28,891	$29,738	$34,068	$44,107	$59,834	$67,164	$47,619	- -
55 - 59	317	43	60	63	48	45	28	20	9	1
	$34,697	$19,400	$26,658	$29,927	$37,818	$37,733	$47,512	$61,583	$58,129	$81,557
60 - 64	193	42	31	25	23	39	17	8	7	1
	$32,186	$23,502	$24,364	$32,928	$28,332	$35,567	$42,399	$43,000	$68,240	$65,193
65 - 69	58	4	15	10	5	5	11	6	2	- -
	$27,260	$6,836	$23,057	$20,264	$40,270	$31,667	$30,828	$34,724	$49,056	- -
70 & over	18	4	1	2	4	3	3	- -	- -	1
	$22,364	$6,624	$12,544	$15,053	$44,717	$20,739	$14,060	- -	- -	$50,151
Total	1,979	640	448	323	200	198	94	51	22	3
	$32,769	$22,381	$30,565	$34,559	$40,461	$43,754	$47,399	$58,307	$58,611	$65,633

EXHIBIT C

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended December 31,					
	2009		2008		2007	
Contribution income:						
Employer contributions	$15,683,088		$9,633,622		$14,370,043	
Employee contributions	5,986,897		5,771,712		5,831,499	
Other contributions	4,887		28,072		8,554	
Less administrative expenses	-599,106		-554,255		-587,796	
Net contribution income		$21,075,766		$14,879,151		$19,622,300
Net investment income		11,088,162		-16,690,514		13,765,271
Total income available for benefits		$32,163,928		-$1,811,363		$33,387,571
Less benefit payments:						
Pensions and annuities	-$15,356,337		-$14,393,436		-$13,721,605	
Net (8)c reimbursements	-789,874		-42,113		-590,371	
Refunds to members	-714,522		-629,241		-1,139,490	
Net benefit payments		-$16,860,733		-$15,064,790		-15,451,465
Change in reserve for future benefits		$15,303,195		-$16,876,153		$17,936,106

EXHIBIT D

Development of the Fund Through December 31, 2009

Year Ended December 31	Employer Contributions	Employee Contributions	Other Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2000	$7,380,860	$3,820,204	$18,382	$9,248,220	$359,656	$9,194,732	$120,757,705
2001	8,389,385	4,290,044	66,971	5,386,329	424,740	10,458,332	128,007,362
2002	7,153,492	4,639,030	32,404	-7,390,495	455,512	11,499,938	120,486,343
2003	8,798,943	4,945,171	53,229	8,435,913	435,176	12,408,636	129,875,787
2004	8,068,233	4,906,395	87,736	9,996,853	547,295	13,848,392	138,539,317
2005	9,823,364	5,290,511	11,078	10,479,493	479,898	13,771,482	149,892,383
2006	10,792,026	5,474,913	8,716	13,068,108	566,216	15,172,561	163,497,369
2007	14,370,043	5,831,499	8,554	13,765,271	587,796	15,451,465	181,433,475
2008	9,633,622	5,771,712	28,072	-16,690,514	554,255	15,064,790	164,557,322
2009	15,683,088	5,986,897	4,887	11,088,162	599,106	16,860,733	179,860,517

** Net of investment fees*

EXHIBIT E

Development of Unfunded Actuarial Accrued Liability

	Year Ended December 31,					
		2009		2008		2007
1. Unfunded actuarial accrued liability at beginning of year		$94,014,709		$91,606,755		$94,388,066
2. Normal cost at beginning of year		10,542,125		10,088,158		9,653,740
3. Total contributions		-21,674,872		-15,433,406		-20,210,096
4. Interest - 8.25%						
(a) For whole year on (1) + (2)	$8,625,939		$8,389,830		$8,583,449	
(b) For half year on (3)	-894,089		-636,628		-808,404	
(c) Total interest		7,731,850		7,753,202		7,775,045
5. Expected unfunded actuarial accrued liability		$90,613,812		$94,014,709		$91,606,755
6. Changes due to:						
(a) Investment loss	$36,801,343		N/A		N/A	
(b) Administrative expense gain	-359,473		N/A		N/A	
(c) Continuing active salary gain	-8,527,779		N/A		N/A	
(d) More deaths than expected amongst retired members and beneficiaries	-953,514		N/A		N/A	
(e) Miscellaneous loss	336,103		N/A		N/A	
(f) Assumption changes	15,106,617		N/A		N/A	
(g) Total changes		42,403,297		N/A		N/A
7. Unfunded actuarial accrued liability at end of year		$133,017,109		N/A		N/A

EXHIBIT F

Table of Amortization Bases as of July 1, 2007

Type	Annual Payment	Years Remaining	Outstanding Balance
2002 ERI liability	$285,985	18.00	$2,839,473
2003 ERI liability	302,662	18.00	3,005,056
Remaining unfunded liability	9,008,113	23.00	132,390,906
Total	$9,596,760		$138,235,435

Notes: Level dollar amortization for ERI liabilities and increasing (3.50%) amortization for remaining unfunded liability.
Payments include adjustment for timing.
Does not reflect adjustment to set fiscal 2011 appropriation to budgeted amount.

EXHIBIT G

Funding Schedule

(1) Fiscal Year Ended June 30	(2) Employer Normal Cost	(3) Amortization of 2002 ERI Liability	(4) Amortization of 2003 ERI Liability	(5) Amortization of Remaining Unfunded Liability	(6) Total Plan Cost: (2) + (3) + (4) + (5)	(7) Total Unfunded Accrued Liability
2011	$4,271,783	$285,985	$302,662	$8,450,253	$13,310,682	$138,235,435
2012	4,464,013	285,985	302,662	9,148,565	14,201,225	142,139,017
2013	4,664,894	285,985	302,662	9,900,565	15,154,105	145,252,508
2014	4,874,814	285,985	302,662	10,536,373	15,999,834	147,496,316
2015	5,094,181	285,985	302,662	11,016,355	16,699,183	148,961,809
2016	5,323,419	285,985	302,662	11,497,240	17,409,305	149,785,049
2017	5,562,973	285,985	302,662	11,980,071	18,131,690	149,938,891
2018	5,813,307	285,985	302,662	12,465,618	18,867,571	149,388,682
2019	6,074,906	285,985	302,662	12,901,914	19,565,467	147,509,839
2020	6,348,277	285,985	302,662	13,353,481	20,290,405	145,018,467
2021	6,633,949	285,985	302,662	13,820,853	21,043,449	141,849,387
2022	6,932,477	285,985	302,662	14,304,583	21,825,707	137,931,638
2023	7,244,438	285,985	302,662	14,805,243	22,638,328	133,187,996
2024	7,570,438	285,985	302,662	15,323,427	23,482,511	127,534,455
2025	7,911,108	285,985	302,662	15,859,747	24,359,501	120,879,656
2026	8,267,108	285,985	302,662	16,414,838	25,270,593	113,124,286
2027	8,639,128	285,985	302,662	16,989,357	26,217,132	104,160,411
2028	9,027,889	285,985	302,662	17,583,985	27,200,520	93,870,771
2029	9,434,144	0	0	18,199,424	27,633,568	82,127,999
2030	9,858,680	0	0	18,836,404	28,695,084	69,417,420
2031	10,302,321	0	0	19,495,678	29,797,999	55,015,167
2032	10,765,925	0	0	20,178,027	30,943,952	38,762,285
2033	11,250,392	0	0	20,884,258	32,134,650	20,486,280
2034	11,756,660	0	0	0	11,756,660	0
2035	12,285,710	0	0	0	12,285,710	0

Notes: Reflects deferred investment gains and losses in accordance with the asset valuation method adopted by the Board.
Item (2) increases at 4.50% per year.
Item (5) calculated as a 3.5% increasing amortization payment.
Recommended contributions are assumed to be paid on July 1, and December 31.
Fiscal 2011 appropriation is equal to budgeted amount from prior valuation.

EXHIBIT H

Unit Results

Unit	Number of active employees	Average age	Average years of service	Projected average salary in 2010	Number of inactive vested employees	Number of inactive nonvested employees	Number of retirees	Projected payroll for fiscal 2011	Employer cost for fiscal 2011
Amherst	397	46	12	$45,005	15	147	187	$18,264,500	$3,539,564
Amherst Housing Authority	13	47	11	34,491	0	1	4	458,400	82,633
Amherst Pelham Regional School	143	45.5	9.1	28,854	4	87	81	4,218,000	822,578
Belchertown	261	47.9	11.1	33,842	6	67	65	9,029,300	1,765,851
Belchertown Housing Authority	2	54.0	16.8	54,317	0	1	1	111,100	13,984
Belchertown Water District	2	45.0	20.9	57,465	0	0	1	117,500	26,697
Chesterfield	13	50.3	8.4	19,458	0	5	6	258,600	54,665
Chesterfield/Goshen Regional	9	46.2	10.5	24,861	0	7	2	228,700	45,766
Cummington	5	49.0	9.0	28,786	0	6	7	147,100	20,340
Foothills Health District	1	59.0	4.9	45,529	0	0	0	46,500	7,628
Gateway Regional School	91	50.6	9.6	25,391	4	24	43	2,362,000	425,880
Goshen	10	52.2	12.2	21,065	1	9	4	215,300	33,053
Granby	80	47.3	9.7	34,951	6	82	61	2,858,300	584,020
Granby Housing Authority	2	58.0	9.7	31,902	0	2	2	65,200	11,442
Hadley	107	47.6	9.9	27,714	4	66	42	3,031,300	584,591
Hadley Housing Authority	2	55.0	11.0	23,362	0	0	0	47,800	13,984
Hampshire Council of Government	19	52.5	9.4	38,867	25	54	111	754,900	139,841
Hampshire County Retirement Board	6	55.3	22.6	45,245	1	0	2	277,500	0
Hampshire Regional Housing	1	50.0	0.7	15,427	0	0	1	15,800	3,813

SECTION 3: Supplemental Information for the Hampshire County Retirement System

Unit	Number of active employees	Average age	Average years of service	Projected average salary in 2010	Number of inactive vested employees	Number of inactive nonvested employees	Number of retirees	Projected payroll for fiscal 2011	Employer cost for fiscal 2011
Hampshire Regional School	48	47.6	8.6	32,488	0	9	28	1,594,100	332,957
Hatfield	69	49.1	7.2	22,950	1	57	18	1,618,800	289,852
Hatfield Housing Authority	2	57.0	7.3	18,747	0	0	2	38,300	7,628
Huntington	21	56.2	11.4	22,647	1	18	6	486,200	78,819
Middlefield	6	50.7	6.2	25,674	2	1	0	157,500	27,968
Pelham	29	50.4	10.7	22,310	0	22	8	661,400	122,043
Plainfield	5	51.4	15.2	34,906	1	0	8	178,400	30,511
Quabbin Health District	4	41.3	7.4	40,717	1	0	1	166,500	34,560
South Hadley, Granby, East Hampton Regional Veterans	1	63.0	22.3	47,983	0	0	0	49,100	0
South Hadley	277	48.7	12.1	34,400	8	49	164	9,740,800	1,823,281
South Hadley Fire District #1	33	47.9	15.1	50,711	2	15	23	1,710,700	320,363
South Hadley Fire District #2	12	44.0	11.8	51,315	3	42	8	629,500	139,841
South Hadley Housing Authority	6	56.2	8.3	41,657	0	0	5	255,500	44,495
Southampton	71	47.2	10.6	33,424	3	19	19	2,425,900	451,556
Ware	154	48.8	12.6	36,431	10	70	90	5,735,200	1,076,820
Ware Housing Authority	4	47.3	12.8	40,225	0	0	2	164,500	32,930
Westhampton	27	48.1	10.4	21,856	0	10	11	603,200	113,144
Williamsburg	33	54.6	11.3	26,486	1	43	17	893,500	161,688
Worthington	13	49.6	9.3	13,419	0	28	3	178,300	45,898
Total	1,979				99	941	1,033	$69,795,100	$13,310,682

Note: The cost for Retirement Board staff is allocated to member units in proportion to payroll. South Hadley, Granby, East Hampton Regional Veterans is a new unit which will begin paying appropriations in fiscal 2012.

EXHIBIT I

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or actuarial assumptions: The estimates on which the cost of the Plan is calculated including:

(a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;

(b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;

(c) Retirement rates — the rate or probability of retirement at a given age;

(d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal cost: The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial accrued liability for actives: The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial accrued liability for pensioners: The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded actuarial accrued liability: The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There are many approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the unfunded actuarial accrued liability:	Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.
Investment return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:			
1.	Retired participants as of the valuation date (including 137 beneficiaries in pay status)		1,033
2.	Participants active during the year ended December 31, 2009 with total accumulated contributions of $55,252,550 and projected payroll of $68,275,759		1,979
3.	Participants with a right to a return of their employee contributions as of December 31, 2009		941
4.	Inactive participants with a vested right to a deferred or immediate benefit as of December 31, 2009		99
The actuarial factors as of the January 1, 2010 valuation date are as follows:			
1.	Normal cost		$9,529,456
2.	Administrative expenses		650,000
3.	Expected employee contributions		-6,080,294
4.	Employer normal cost: (1) + (2) + (3)		$4,099,162
5.	Actuarial accrued liability		312,877,626
	Retired participants and beneficiaries	$154,808,044	
	Active participants	150,805,340	
	Inactive participants	7,264,242	
6.	Actuarial value of assets ($169,213,772 at market value)		179,860,517
7.	Unfunded actuarial accrued liability: (5) – (6)		133,017,109
The determination of the recommended contribution is as follows:			
1.	Projected employer normal cost, adjusted for timing		$4,271,783
2.	Projected unfunded actuarial accrued liability		138,235,435
3.	Payment on projected unfunded actuarial accrued liability, adjusted for timing		9,596,760
4.	Preliminary recommended contribution: (1) + (3), adjusted for timing		13,868,543
5.	Budgeted appropriation based on 2007 actuarial valuation		13,310,682
6.	Projected payroll		69,795,060

Note: Recommended contributions are assumed to be paid on July 1 and December 31.

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions	Percentage Contributed
2000	$7,399,242	$7,399,242	100.0%
2001	8,455,272	8,455,272	100.0%
2002	7,185,896	7,185,896	100.0%
2003	8,852,172	8,852,172	100.0%
2004	8,155,969	8,155,969	100.0%
2005	9,834,442	9,834,442	100.0%
2006	10,800,742	10,800,742	100.0%
2007	14,378,596	14,378,596	100.0%
2008	9,661,694	9,661,694	100.0%
2009	15,687,975	15,687,975	100.0%

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
01/01/1994	$50,597,700	$104,565,400	$53,967,700	48.39%	$38,686,000	139.50%
01/01/1996	62,822,500	120,964,500	58,142,000	51.93%	46,895,300	123.98%
01/01/1998	85,351,600	154,164,200	68,812,600	55.36%	52,420,600	131.27%
01/01/1999	96,706,300	166,058,900	69,352,600	58.24%	54,799,500	126.56%
01/01/2000	109,844,400	173,148,000	63,303,600	63.44%	52,500,000	120.58%
01/01/2002	128,007,362	196,323,603	68,316,241	65.20%	58,453,919	116.87%
01/01/2004	129,875,787	228,468,240	98,592,453	56.85%	61,370,678	160.65%
01/01/2006	149,892,383	254,808,289	104,915,906	58.83%	66,219,596	158.44%
01/01/2007	163,497,369	257,885,435	94,388,066	63.40%	68,107,991	138.59%
01/01/2010	179,860,517	312,877,626	133,017,109	57.49%	68,275,759	194.82%

EXHIBIT IV

Supplementary Information Required by the GASB

Valuation date	January 1, 2010
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level dollar amortization for ERI liability and increasing amortization (3.50% per year) for remaining unfunded liability
Remaining amortization period	18 years remaining as of July 1, 2010 for 2002 and 2003 ERI and 23 years remaining for remaining unfunded liability
Asset valuation method	5-year smoothing of investment returns greater (less) than expected
Actuarial assumptions:	
Investment rate of return	8.00% (Previously, 8.25%)
Projected salary increases	Varies by length of service with ultimate rates of 4.75% and 5.25% for Groups 1 and 4, respectively
Cost of living adjustments	3.00% of first $12,000 of retirement income
Plan membership:	
Retired participants and beneficiaries receiving benefits	1,033
Inactive participants entitled to a return of their employee contributions	941
Inactive participants with a vested right to a deferred or immediate benefit	99
Active participants	1,979
Total	4,052

EXHIBIT V

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy: RP-2000 Combined Healthy Mortality Table

Disabled: RP-2000 Combined Healthy Mortality Table set forward 7 years

Termination Rates before Retirement:

	Groups 1 and 2 - Rate (%)			
	Mortality		Disability	Withdrawal
Age	Male	Female		
20	0.03	0.02	0.03	12.00
25	0.04	0.02	0.04	8.78
30	0.04	0.03	0.06	5.55
35	0.08	0.05	0.07	3.93
40	0.11	0.07	0.11	2.31
45	0.15	0.11	0.18	1.89
50	0.21	0.17	0.30	1.46
55	0.36	0.27	- -	- -
60	0.67	0.51	- -	- -

Notes: 55% of the disability rates shown represent accidental disability.
20% of the accidental disabilities will die from the same cause as the disability.
55% of the death rates shown represent accidental death

	Group 4 - Rate (%)			
	Mortality		Disability	Withdrawal
Age	Male	Female		
20	0.03	0.02	0.12	2.10
25	0.04	0.02	0.17	1.88
30	0.04	0.03	0.22	1.65
35	0.08	0.05	0.29	1.11
40	0.11	0.07	0.44	0.56
45	0.15	0.11	0.72	0.28
50	0.21	0.17	1.21	- -
55	0.36	0.27	- -	- -
60	0.67	0.51	- -	- -

Notes: 90% of the disability rates shown represent accidental disability.
60% of the accidental disabilities will die from the same cause as the disability.
90% of the death rates shown represent accidental death.

Retirement Rates:

	Rate per year (%)	
Age	Groups 1 and 2	Group 4
50 – 54	- -	2.0
55	5.0	10.0
56 – 59	3.0	10.0
60 – 61	5.0	30.0
62 – 64	15.0	30.0
65	25.0	100.0
66 – 69	15.0	- -
70 – 71	50.0	- -
72	100.0	- -

Unknown Data for Participants:	Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.
Age of Spouse:	Females 3 years younger than their spouses.
Percent Married:	75%
Net Investment Return:	8.00% (Previously, 8.25%)
Interest on Employee Contributions:	3.5%

Salary Increases:

Years of Service	Group 1	Group 4
0	7.00%	8.00%
1	6.50%	7.50%
2	6.50%	7.00%
3	6.00%	6.50%
4	6.00%	6.00%
5	5.50%	6.00%
6	5.50%	5.50%
7	5.00%	5.50%
8	5.00%	5.25%
9 and later	4.75%	5.25%

Includes allowance for inflation of 4½%.

Administrative Expenses:	$650,000 for calendar year 2010
2009 Salary:	Salary reported in the data
Total Service:	Service as reported in the original data or as revised by the System.
Net 3(8)(c) Reimbursement:	Assumed $800,000 in net annual benefits paid to other municipal retirement systems would result in a liability of $7,367,240.

Actuarial Value of Assets:	A preliminary actuarial value is first determined by taking the actuarial value of assets at the beginning of the year and adding assumed investment earnings (at the assumed actuarial rate of return) and the net new money during the year (contributions less benefit payments). Twenty percent of the difference between the market value of assets and the preliminary actuarial value is added to the preliminary actuarial value. In order that the actuarial value not differ too significantly from the market value of assets, the final actuarial value of assets must be within 20% of the market value of assets.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is attained age minus Service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary.
Changes in Assumptions:	Based on past experience and future expectations, the investment return assumption was decreased from 8.25% to 8.00%. An estimated liability of future net 3(8)(c) payments has been included.

EXHIBIT VI

Summary of Plan Provisions

This exhibit summarizes the major provisions of Chapter 32 of the Laws of Massachusetts.

Plan Year: January 1 – December 31

Retirement Benefits

Employees covered by the Contributory Retirement Law are classified into one of four groups depending on job classification. Group 1 comprises most positions in state and local government. It is the general category of public employees. Group 4 comprises mainly police and firefighters. Group 2 is for other specified hazardous occupations. (Officers and inspectors of the State Police are classified as Group 3.)

The annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by the number of years and full months of creditable service at the time of retirement and multiplied by a percentage according to the following table based on the age of the member at retirement:

	Age Last Birthday at Date of Retirement		
Percent	**Group 1**	**Group 2**	**Group 4**
2.5	65 or over	60 or over	55 or over
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	--	49
1.8	58	--	48
1.7	57	--	47
1.6	56	--	46
1.5	55	--	45

A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average

annual rate of regular compensation received during the last three years of creditable service prior to retirement. The $30,000 cap on salary used in a benefit determination for any employee hired after January 1, 1979 has been removed.

The maximum annual amount of the retirement allowance is 80 percent of the member's final three-year average salary. Any member who is a veteran also receives an additional yearly retirement allowance of $15 per year of creditable service, not exceeding $300. The veteran allowance is paid in addition to the 80 percent maximum.

Employee Contributions

Date of Hire	Contribution Rate
Prior to January 1, 1975	5%
January 1, 1975 – December 31, 1983	7%
January 1, 1984 – June 30, 1996	8%
July 1, 1996 onward	9%

In addition, employees hired after December 31, 1978 contribute an additional 2 percent of salary in excess of $30,000.

Employees hired after 1983 who leave with less than five years of credited service receive no interest on their contributions, and employees who leave with five but less than ten years receive one-half the rate of regular interest otherwise payable.

Retirement Benefits (Superannuation)

Members of Group 1, 2 or 4 may retire upon the attainment of age 55. For retirement at ages below 55, twenty years of creditable service is required.

Members who terminate before age 55 with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (provided they have not withdrawn their accumulated deductions from the Annuity Savings Fund of the System).

Ordinary Disability Benefits

A member who is unable to perform his/her job due to a non-occupational disability will receive a retirement allowance if he/she has ten or more years of creditable service and has not reached age 55. The annual amount of such allowance shall be determined as if the member retired for superannuation at age 55, based on the amount of creditable service at the date of disability. For veterans, there is a minimum benefit of 50 percent of the member's most recent year's pay plus an annuity based on his own contributions.

Accidental Disability Benefit

For a job-connected disability, the benefit is 72 percent of the member's most recent annual pay plus an annuity based on his/her own contributions, plus additional amounts for surviving children. Benefits are capped at 75 percent of annual rate of regular compensation for employees who become members after January 1, 1988.

Death Benefits

In general, the beneficiary of an employee who dies in active service will receive a refund of the employee's own contributions. Alternatively, if the employee were eligible to retire on the date of his/her death, a spouse's benefit will be paid the full amount the employee would have received under Option C (previously, two-thirds of the amount). The surviving spouse of a member who dies with two or more years of credited service has the option of a refund of the employee's contributions or a monthly benefit regardless of eligibility to retire, if they were married for at least one year. There is also a minimum widow's pension of $500 per month, and there are additional amounts for surviving children.

If an employee's death is job-connected, the spouse will receive 72 percent of the member's most recent annual pay, in addition to a refund of the member's accumulated deductions, plus additional amounts for surviving children. However, in accordance with Section 100 of Chapter 32, the surviving spouse of a police officer, firefighter or corrections officer is killed in the line of duty will be eligible to receive an annual benefit equal to the maximum salary held be the member at the time of death.

"Heart And Lung Law" And Cancer Presumption

Any case of hypertension or heart disease resulting in total or partial disability or death to a uniformed fireman, permanent member of a police department, or certain employees of a county correctional facility is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. Any case of disease of the lungs or respiratory tract resulting in total disability or death to a uniformed fireman is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. There is an additional presumption for uniformed firemen that certain types of cancer are job-related if onset occurs while actively employed or within five years of retirement.

Options

Members may elect to receive a full retirement allowance payable for life under Option A. Under Option B a member may elect to receive a lower monthly allowance in exchange for a guarantee that at his death any contributions not expended for annuity payments will be refunded to the beneficiary. Option C allows the member to take a lesser retirement allowance in exchange for providing a survivor with two-thirds of the lesser amount. Option C pensioners will have benefits converted from a reduced to a full retirement if the beneficiary predeceases the retiree.

Post-Retirement Benefits

The Board has adopted the provisions of Section 51 Chapter 127 of the Acts of 1999, which provide that the Retirement Board may approve an annual COLA in excess of the Consumer Price Index but not to exceed a 3% COLA on the first $12,000 of a retirement allowance. Cost-of-living increases granted prior to July 1, 1998 are reimbursed by the Commonwealth and not reflected in this report.