

City of Holyoke Retirement System

*Actuarial Valuation and Review
as of January 1, 2010*

Copyright © 2010

**THE SEGAL GROUP, INC.,
THE PARENT OF THE SEGAL COMPANY
ALL RIGHTS RESERVED**



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

July 12, 2010

*City of Holyoke Retirement System
20 Korean Veterans Plaza, Room 207
Holyoke, MA 01040*

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 future years and analyzes the preceding year's experience.

The census information and financial information on which our calculations were based was prepared by the Holyoke 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*

SECTION 1

VALUATION SUMMARY

Purpose.....	i
Significant Issues in Valuation Year	i
Summary of Key Valuation Results ..	iii

SECTION 2

VALUATION RESULTS

A. Participant Data	1
B. Financial Information	4
C. Actuarial Experience	7
D. Recommended Contribution	12
E. Information Required by the GASB	13

SECTION 3

SUPPLEMENTAL INFORMATION

EXHIBIT A Table of Plan Coverage	14
EXHIBIT B Participants in Active Service as of December 31, 2009	15
EXHIBIT C Summary Statement of Income and Expenses on an Actuarial Value Basis.....	16
EXHIBIT D Development of the Fund Through December 31, 2009	17
EXHIBIT E Development of Unfunded Actuarial Accrued Liability	18
EXHIBIT F Table of Amortization Bases	19
EXHIBIT G Funding Schedule 1 – 2027 Schedule with No Deferred Gains or Losses ..	20
EXHIBIT H Funding Schedule 2 – 2030 Schedule With Deferred Gains and Losses.....	21
EXHIBIT I Funding Schedule 3 - 2030 Schedule With Deferred Gains and Losses and 8% Maximum Increase	22
EXHIBIT J Department Results.....	23
EXHIBIT K Definitions of Pension Terms	24

SECTION 4

REPORTING INFORMATION

EXHIBIT I Summary of Actuarial Valuation Results	26
EXHIBIT II Supplementary Information Required by the GASB – Schedule of Employer Contributions	27
EXHIBIT III Supplementary Information Required by the GASB – Schedule of Funding Progress	28
EXHIBIT IV Supplementary Information Required by the GASB	29
EXHIBIT V Actuarial Assumptions and Actuarial Cost Method	30
EXHIBIT VI Summary of Plan Provisions.....	34

SECTION 1: Valuation Summary for the City of Holyoke Retirement System

Purpose

This report has been prepared by The Segal Company to present a valuation of the City of Holyoke 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, to the extent that they exist, are not reflected.
- During the plan year ended 2009, the market value rate of return was 24.31%. Because the actuarial value of assets gradually recognizes market value fluctuations over a four-year period, the actuarial rate of return for the plan year ended 2009 was 19.16%. The actuarial value of assets as of December 31, 2009 was \$175.5 million, or 115.4% of the market value of assets of \$152.1 million (as reported in the Annual Statement). As of the prior valuation, the actuarial value of assets was 120% of the market value.
- As indicated in Section 2, Subsection B of this report, the total unrecognized investment loss as of December 31, 2009 is \$23,356,692. 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 8.25% (net of expenses) per year on a **market value** basis will result in investment losses on the actuarial value of assets in the next few years. Therefore, if the actual market return is equal to the assumed 8.25% rate and all other actuarial assumptions are met, the contribution requirements will increase in each of the next few years.

SECTION 1: Valuation Summary for the City of Holyoke Retirement System

- The following actuarial assumptions were changed with this valuation:
 - The administrative expense assumption was raised from \$300,000 for calendar 2009 to \$350,000 for calendar 2010.
 - The pre-retirement mortality table was changed from the RP-2000 Employee Mortality Table to the RP-2000 Employee Mortality Table projected 10 years with Scale AA.
 - The healthy retiree mortality table was changed from the RP-2000 Healthy Annuitant Mortality Table to the RP-2000 Healthy Annuitant Mortality Table projected 10 years with Scale AA.
 - The disabled retiree mortality table was changed from the RP-2000 Healthy Annuitant Mortality Table set forward 2 years to the RP-2000 Health Annuitant Mortality Table set forward 3 years for males only.
- The unfunded liability has decreased from \$134.6 million as of January 1, 2009 to \$130.1 million as of January 1, 2010 due to favorable investment experience during 2009 partially offset by an experience loss (refer to page 11) and the additional liability attributable to the changes in the assumptions noted above.
- The fiscal 2011 appropriation has been budgeted at \$13,495,000. Although an actuarial valuation was not submitted to PERAC in 2009, a valuation was performed to measure the impact of the 2008 investment losses. The Board requested that PERAC approve an increase in the fiscal 2011 appropriation to \$13,495,000. This amount was approximately the appropriation that would have fully funded the System by 2028 with 4.5% increasing amortization payments if all assumptions were met in the future. Due to the experience gain measured as of December 31, 2009, the funding schedule can be shortened by one year, and the preliminary recommended contribution for fiscal 2011 is \$13,522,720.

Exhibit G in Section 3 shows the recommended contributions through fiscal 2027 based on this funding schedule. Exhibit H and I show alternative funding schedules for the Board to consider. These alternative funding schedules reflect the emergence of the deferred investments losses in accordance with the asset valuation method used in the valuation. Under this methodology, the unfunded liability increases significantly over the next two years. Accordingly, we have extended the funding schedule to 2030 to lessen the short term impact on the appropriation.

SECTION 1: Valuation Summary for the City of Holyoke Retirement System

Summary of Key Valuation Results

	2010	2009
Contributions:		
Recommended for fiscal 2011 and 2010	\$13,495,000	\$12,168,121
Recommended for fiscal 2012	14,133,655	--
Funding elements for plan year beginning January 1:		
Normal cost, including administrative expenses	\$7,672,998	\$7,317,135
Market value of assets as reported in the Annual Statement	152,105,760	124,695,199
Actuarial value of assets	175,462,452	149,634,238
Actuarial accrued liability	305,560,578	284,186,420
Unfunded actuarial accrued liability	130,098,126	134,552,182
GASB 25/27 for fiscal year beginning July 1:		
Annual required contributions	\$13,495,000	\$12,161,990
Actual contributions	--	12,161,990
Percentage contributed	--	100.00%
Funded ratio	57.42%	52.65%
Demographic data for plan year beginning January 1:		
Number of retired participants and beneficiaries	900	906
Number of inactive participants entitled to a return of their employee contributions	169	198
Number of inactive participants with a vested right to a deferred or immediate benefit	19	23
Number of active participants	1,203	1,231
Total payroll*	\$52,126,558	\$51,223,967
Average payroll*	43,330	41,612

* Calendar year 2008 payroll figures were reduced to reflect retroactive salary payments made in 2008 for waste water department workers and fire department employees.

SECTION 2: Valuation Results for the City of Holyoke Retirement System

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 six valuations can be seen in this chart.

CHART 1
Participant Population: 2000 – 2009

Year Ended December 31	Active Participants	Inactive Participants	Retired Participants and Beneficiaries
2000	1,410	182	860
2002	1,429	234	875
2004	1,319	221	947
2006	1,289	252	915
2008	1,231	221	906
2009	1,203	188	900

SECTION 2: Valuation Results for the City of Holyoke Retirement System

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 1,203 active participants with an average age of 46.6, average years of service of 12.6 years and average payroll of \$43,330. The 1,231 active participants in the prior valuation had an average age of 45.8, average service of 12.0 years and average payroll of \$41,612.

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

Inactive Participants

In this year's valuation, there were 19 participants with a vested right to a deferred or immediate vested benefit and 169 participants entitled to a return of their employee contributions.

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

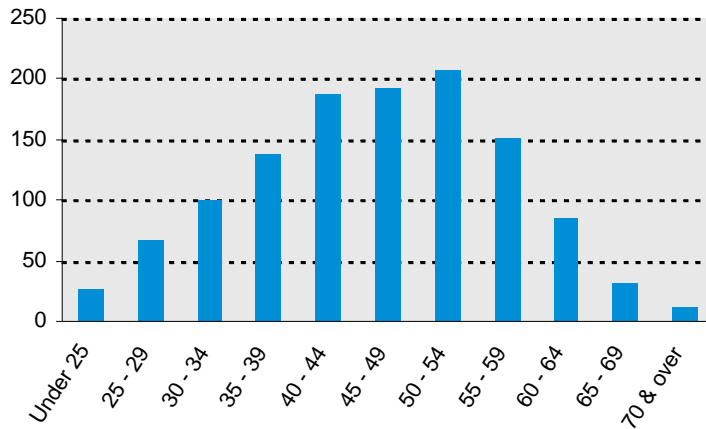
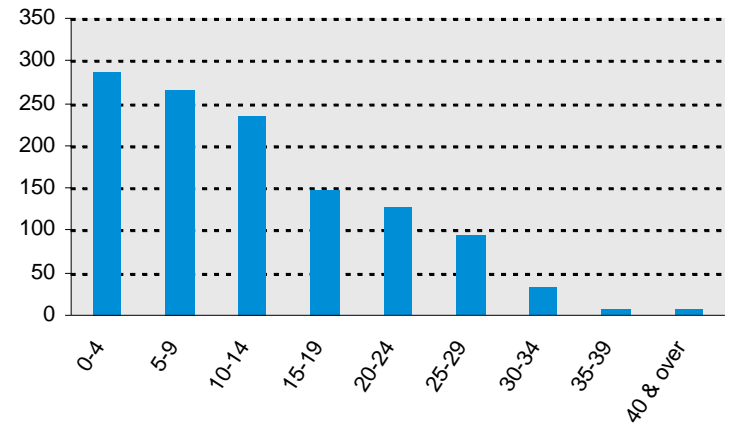


CHART 3
Distribution of Active Participants by Years of Service as of December 31, 2009



SECTION 2: Valuation Results for the City of Holyoke Retirement System

Retired Participants and Beneficiaries

As of December 31, 2009, 728 retired participants and 172 beneficiaries were receiving total monthly benefits of \$1,544,309 excluding COLAs reimbursed by the Commonwealth. For comparison, in the previous valuation, there were 731 retired participants and 175 beneficiaries receiving monthly benefits of \$1,472,306 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

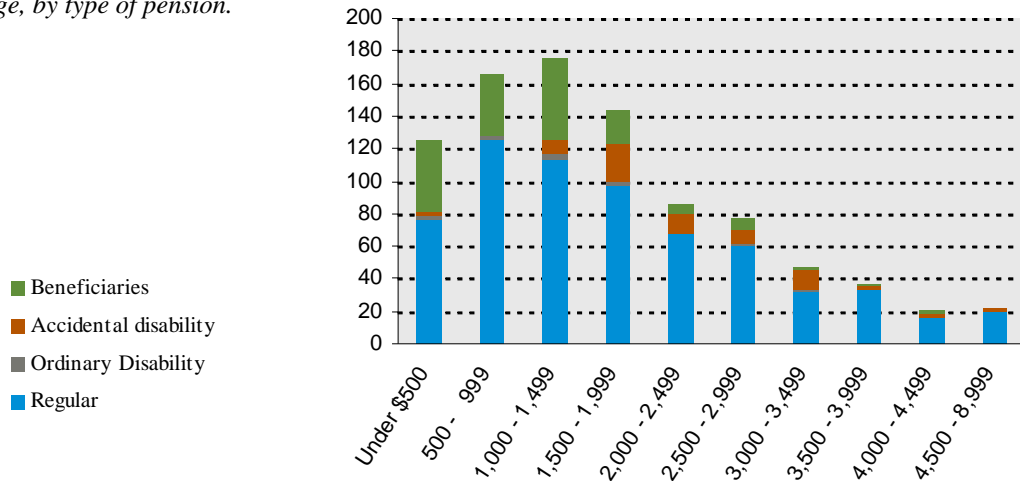
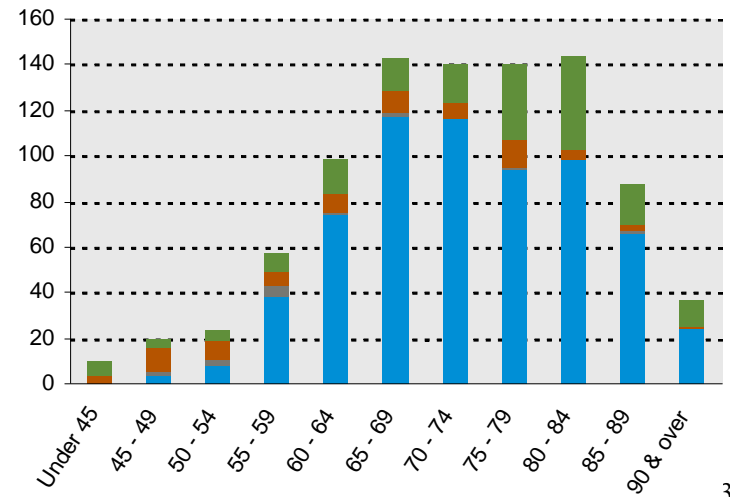


CHART 5
Distribution of Retired Participants and Beneficiaries by Type and by Age as of December 31, 2009



SECTION 2: Valuation Results for the City of Holyoke Retirement System

B. FINANCIAL INFORMATION

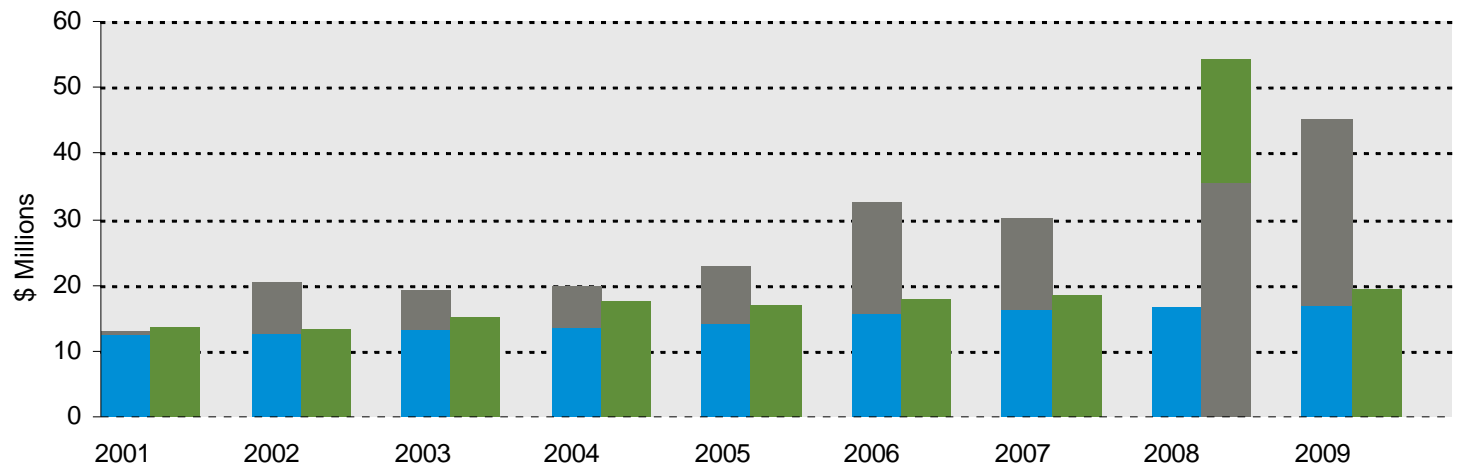
Retirement plan funding anticipates that, over the long term, both net contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

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 nine years. Prior to 2002 the actuarial value of assets was equal to market value of assets. Prior to 2009, administrative expenses are subtracted from investment income. In 2009 administrative expenses are subtracted from contributions. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

CHART 6
Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2001 – 2009*

- Benefits paid
- Net investment income
- Net contributions



SECTION 2: Valuation Results for the City of Holyoke Retirement System

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 For Year Ended December 31, 2009

1. Market value of assets		\$152,105,760
	Original	Unrecognized
2. Calculation of unrecognized return*	<u>Amount</u>	<u>Return</u>
(a) Year ended December 31, 2009	\$19,821,854	\$14,866,391
(b) Year ended December 31, 2008	-75,721,922	-37,860,961
(c) Year ended December 31, 2007	-1,448,488	-362,122
(d) Year ended December 31, 2006	<u>4,156,119</u>	<u>0</u>
(e) Total unrecognized return		-23,356,692
3. Preliminary actuarial value: (1) - (2e)		175,462,452
4. Adjustment to be within 20% corridor		0
5. Final actuarial value of assets: (3) + (4)		<u>\$175,462,452</u>
6. Actuarial value as a percentage of market value: (5) ÷ (1)		115.4%

* Unrecognized return is the difference between the total return and the expected return on a market value basis and is recognized over a four-year period.

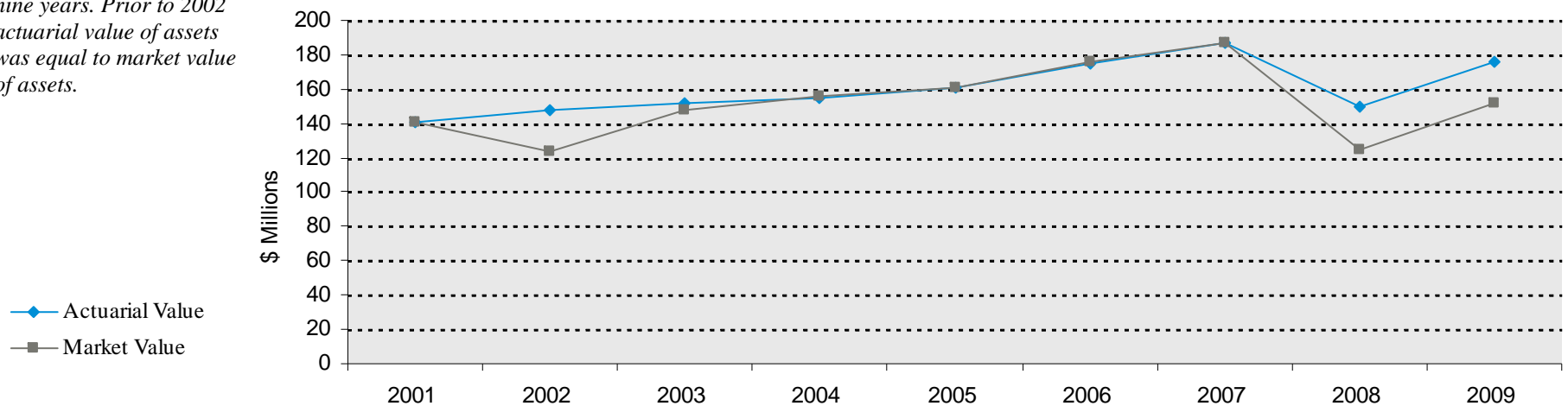
SECTION 2: Valuation Results for the City of Holyoke Retirement System

Both the actuarial value and market value of assets are representations of the Holyoke 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 Holyoke 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 nine years. Prior to 2002 actuarial value of assets was equal to market value of assets.

CHART 8

Actuarial Value of Assets vs. Market Value of Assets as of December 31, 2001 – 2009



SECTION 2: Valuation Results for the City of Holyoke Retirement System

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 net gain in 2009 is \$10,672,424. 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 gain from investments*	\$16,182,036
2. Net loss from administrative expenses	-50,675
3. Net loss from other experience**	<u>-5,458,937</u>
4. Net experience gain: (1) + (2) + (3)	\$10,672,424

* Details in Chart 10

** Details in Chart 13

SECTION 2: Valuation Results for the City of Holyoke Retirement System

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 Holyoke Retirement System’s investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets is 8.25%. The actual rate of return on an actuarial basis for the 2009 plan year was 19.16%.

Since the actual return for the year was greater than the assumed return, the Holyoke Retirement System experienced an actuarial gain during the year ended December 31, 2009 with regard to its investments.

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

CHART 10
Actuarial Value Investment Experience for Year Ended December 31, 2009

	Year Ended December 31, 2009
1. Actual return	\$28,419,952
2. Average value of assets	148,338,369
3. Actual rate of return: (1) ÷ (2)	19.16%
4. Assumed rate of return	8.25%
5. Expected return: (2) x (4)	\$12,237,916
6. Actuarial gain: (1) – (5)	<u>\$16,182,036</u>

SECTION 2: Valuation Results for the City of Holyoke Retirement System

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 nine-year averages.

Based upon this experience and future expectations, we have maintained the assumed rate of return of 8.25%.

CHART 11

Investment Return – Actuarial Value vs. Market Value: 2001 - 2009

Year Ended December 31	Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent
2001	\$686,076	0.49%	\$686,076	0.49%
2002	7,776,013	5.54	-16,863,029	-12.02
2003	5,800,431	3.94	25,615,406	20.92
2004	6,363,023	4.24	12,004,310	8.26
2005	8,501,495	5.55	8,130,511	5.28
2006	16,963,829	10.64	17,345,131	10.85
2007	13,980,683	8.02	12,998,521	7.42
2008	-35,586,664	-19.11	-60,371,080	-32.45
2009	<u>28,419,952</u>	19.16	<u>30,002,300</u>	24.31
Total	\$52,904,838		\$29,548,146	
	Five-year average return	3.93%		1.01%
	Nine-year average return	3.78%		2.19%

*Notes: Each year's yield is weighted by the average asset value in that year.
An asset smoothing method was adopted in 2002.*

SECTION 2: Valuation Results for the City of Holyoke Retirement System

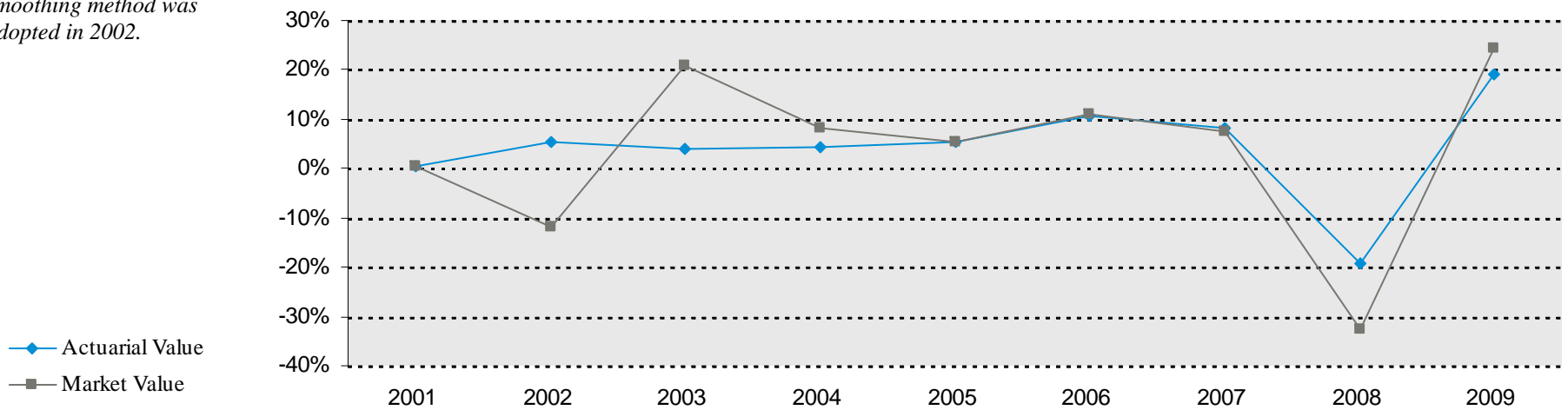
Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

Administrative Expenses

Administrative expenses for the year ended December 31, 2009 totaled \$353,755 compared to the assumption of \$300,000. This resulted in a loss of \$50,675 for the year. We have changed the assumption from \$300,000 to \$350,000 for the current year.

This chart illustrates how this leveling effect has actually worked over the years 2001-2009. An asset smoothing method was adopted in 2002.

CHART 12
Market and Actuarial Rates of Return for Years Ended December 31, 2001 - 2009



SECTION 2: Valuation Results for the City of Holyoke Retirement System

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 loss from this other experience for the year ended December 31, 2009 amounted to \$5,458,937 which is 1.8% of the actuarial accrued liability. Detail is shown in the chart below.

The following actuarial assumptions were changed with this valuation:

- The pre-retirement mortality table was changed from the RP-2000 Employee Mortality Table to the RP-2000 Employee Mortality Table projected 10 years with Scale AA.
- The healthy retiree mortality table was changed from the RP-2000 Healthy Annuitant Mortality Table to the RP-2000 Healthy Annuitant Mortality Table projected 10 years with Scale AA.
- The disabled retiree mortality table was changed from the RP-2000 Healthy Annuitant Mortality Table set forward 2 years to the RP-2000 Health Annuitant Mortality Table set forward 3 years for males only.

These changes resulted in an increase of \$4,931,743 in the unfunded actuarial accrued liability.

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. Fewer deaths than expected among retired members and beneficiaries	-\$928,366
2. Adjustment to 3(8)(c) liability to reflect anticipated higher payments	-1,808,982
3. Miscellaneous experience loss	<u>-2,721,589</u>
4. Total	-\$5,458,937

SECTION 2: Valuation Results for the City of Holyoke Retirement System

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 fiscal 2011 appropriation has been budgeted at \$13,495,000. Although an actuarial valuation was not submitted to PERAC in 2009, a valuation was performed to measure the impact of the 2008 investment losses. The Board requested that PERAC approve an increase in the fiscal 2011 appropriation to \$13,495,000. This amount was approximately the appropriation that would have fully funded the System by 2028 with 4.5% increasing amortization payments if all assumptions were met in the future. Due to the experience gain measured as of December 31, 2009, the funding schedule can be shortened

by one year, and the preliminary recommended contribution for fiscal 2011 is \$13,522,720.

Exhibit G in Section 3 shows the recommended contributions through fiscal 2027 based on this funding schedule. Exhibit H and I show alternative funding schedules for the Board to consider. These alternative funding schedules reflect the emergence of the deferred investments losses in accordance with the asset valuation method used in the valuation. Under this methodology, the unfunded liability increases significantly over the next two years. Accordingly, we have extended the funding schedule to 2030 to lessen the short term impact on the appropriation.

CHART 14

Recommended Contribution

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

	Year Beginning January 1			
	2010		2009	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	\$7,322,998	13.52%	\$7,017,135	13.19%
2. Administrative expenses	350,000	0.65%	300,000	0.56%
3. Expected employee contributions	<u>-4,871,995</u>	<u>-8.99%</u>	<u>-4,732,257</u>	<u>-8.89%</u>
4. Employer normal cost: (1) + (2) + (3)	\$2,801,003	5.17%	\$2,584,878	4.86%
5. Actuarial accrued liability	305,560,578		284,186,420	
6. Actuarial value of assets	<u>175,462,452</u>		<u>149,634,238</u>	
7. Unfunded actuarial accrued liability: (5) - (6)	\$130,098,126		\$134,552,182	
8. Employer normal cost projected to July 1, 2009 and 2010, adjusted for timing*	2,913,649	5.27%	2,688,832	4.96%
9. Projected unfunded actuarial accrued liability	135,358,333		139,992,478	
10. Payment on projected unfunded actuarial accrued liability, adjusted for timing*	\$10,609,071	19.21%	13,983,642	25.77%
11. Preliminary recommended contribution: (8) + (10), adjusted for timing*	<u>\$13,522,720</u>	<u>24.48%</u>	<u>\$16,672,474</u>	<u>30.73%</u>
12. Budgeted appropriation	<u>\$13,495,000</u>	<u>24.43%</u>	<u>\$12,168,121</u>	<u>22.42%</u>
13. Projected payroll	\$55,244,482		\$54,262,712	

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

SECTION 2: Valuation Results for the City of Holyoke Retirement System

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 (57.42%) and the market value of assets (49.78%).

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

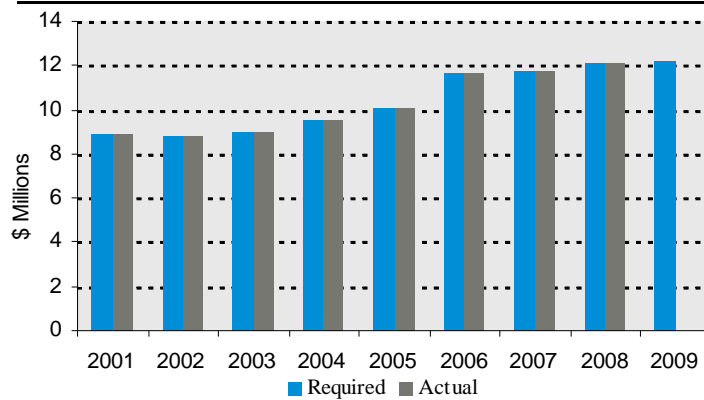
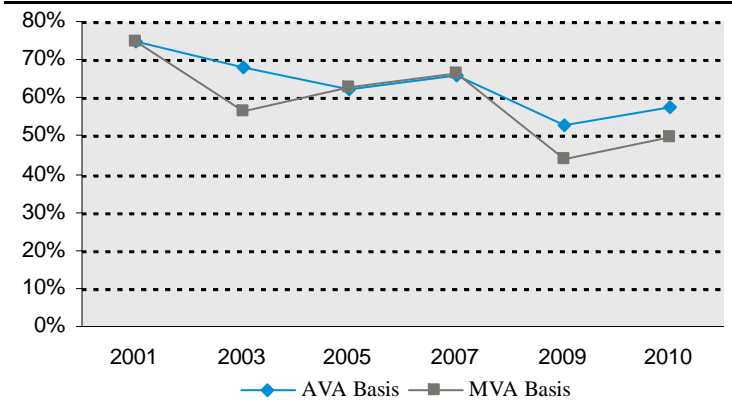


CHART 16
Funded Ratio



SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT A

Table of Plan Coverage

Category	Year Ended December 31		Change From Prior Year
	2009	2008	
Active participants in valuation:			
Number	1,203	1,231	-2.3%
Average age	46.6	45.8	N/A
Average service	12.6	12.0	N/A
Total payroll*	\$52,126,555	\$51,223,967	1.8%
Average payroll*	43,330	41,612	4.1%
Member contributions	46,291,267	43,873,956	5.5%
Inactive participants entitled to a return of their employee contributions	169	198	-14.6%
Inactive participants with a vested right to a deferred or immediate vested benefit	19	23	-17.4%
Retired participants:			
Number in pay status	639	642	-0.5%
Average age	73.3	73.2	N/A
Average monthly benefit	\$1,807	\$1,704	6.0%
Disabled participants:			
Number in pay status	89	89	0.0%
Average age	63.7	64.0	N/A
Average monthly benefit	\$2,186	\$2,125	2.9%
Beneficiaries in pay status	172	175	-1.7%

* Calendar year 2008 payroll figures were reduced to reflect retroactive salary payments made in 2008 for waste water department workers and fire department employees.

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT B

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

Age	Years of Service									
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	27	25	2	--	--	--	--	--	--	--
	\$25,998	\$25,447	\$32,894	--	--	--	--	--	--	--
25 - 29	68	45	21	2	--	--	--	--	--	--
	\$35,046	\$32,383	\$39,374	\$49,530	--	--	--	--	--	--
30 - 34	100	48	39	13	--	--	--	--	--	--
	\$37,930	\$34,734	\$41,329	\$39,534	--	--	--	--	--	--
35 - 39	138	41	47	37	12	1	--	--	--	--
	\$42,784	\$35,543	\$43,675	\$44,066	\$61,416	\$26,839	--	--	--	--
40 - 44	187	42	42	52	31	19	1	--	--	--
	\$43,696	\$32,540	\$41,992	\$42,240	\$60,469	\$49,266	\$33,768	--	--	--
45 - 49	193	31	29	43	38	36	16	--	--	--
	\$47,273	\$36,416	\$34,430	\$42,572	\$51,729	\$57,068	\$71,595	--	--	--
50 - 54	208	23	37	41	28	30	38	11	--	--
	\$45,933	\$29,928	\$44,872	\$39,155	\$42,652	\$50,726	\$59,858	\$55,395	--	--
55 - 59	152	23	29	23	17	22	17	15	6	--
	\$45,994	\$42,205	\$36,132	\$39,591	\$38,780	\$38,838	\$59,876	\$75,884	\$65,345	--
60 - 64	86	7	14	14	16	13	16	3	1	2
	\$45,843	\$46,118	\$44,263	\$36,890	\$38,761	\$40,632	\$54,979	\$45,941	\$79,310	\$119,172
65 - 69	32	2	5	7	6	4	5	1	--	2
	\$36,313	\$18,234	\$31,636	\$37,720	\$25,839	\$37,111	\$45,734	\$41,769	--	\$64,709
70 & over	12	--	1	3	1	1	2	2	--	2
	\$33,313	--	\$17,850	\$29,215	\$34,592	\$75,893	\$27,319	\$19,804	--	\$44,763
Total	1,203	287	266	235	149	126	95	32	7	6
	\$43,330	\$33,909	\$40,688	\$41,083	\$48,595	\$48,779	\$59,313	\$61,463	\$67,340	\$76,215

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT C

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended December 31, 2009	Year Ended December 31, 2008
Contribution income:		
Employer contributions	\$12,161,990	\$12,073,533
Employee contributions	4,833,442	4,483,149
Federal Grant Reimbursement and other contributions	102,049	94,334
Less administrative expenses*	<u>-353,755</u>	<u>0</u>
Net contribution income	\$16,743,726	\$16,651,016
Net investment income	<u>28,419,952</u>	<u>-35,586,665</u>
Total income available for benefits	\$45,163,678	-\$18,935,649
Less benefit payments:		
Pensions	-\$18,288,804	-\$17,604,371
Net 3(8)(c) reimbursements	-404,462	-123,027
Refunds, annuities, and Option B refunds	<u>-642,198</u>	<u>-932,685</u>
Net benefit payments	-\$19,335,464	-\$18,660,083
Change in reserve for future benefits	\$25,828,214	-\$37,595,732

* For 2008, administrative expenses of \$317,202 are included in net investment income.

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

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	N/A	N/A	N/A	N/A	N/A	N/A	\$140,947,847
2001	\$8,905,623	\$3,496,860	\$12,386	\$686,076	\$0	\$13,453,568	140,595,224
2002	8,770,675	3,850,576	95,540	7,776,013	0	13,253,769	147,834,259
2003	8,972,351	4,315,286	86,547	5,800,431	0	14,932,704	152,076,171
2004	9,473,610	3,974,742	163,739	6,363,022	0	17,401,652	154,649,632
2005	10,061,673	4,118,962	118,553	8,501,495	0	16,971,520	160,478,795
2006	11,704,521	3,956,419	70,551	16,963,828	0	17,847,941	175,326,173
2007	11,783,144	4,363,648	20,192	13,980,683	0	18,243,870	187,229,970
2008	12,073,533	4,483,149	94,334	-35,586,665	0	18,660,083	149,634,238
2009	12,161,990	4,833,442	102,049	28,419,952	353,755	19,335,464	175,462,452

* Net of investment fees and administrative expenses prior to 2009, net of investment fees only in 2009.

** Reflects change in asset method in 2002.

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT E

Development of Unfunded Actuarial Accrued Liability

1. Unfunded actuarial accrued liability at beginning of year		\$134,552,182
2. Normal cost at beginning of year		7,317,135
3. Total contributions		-17,097,481
4. Interest		
(a) For whole year on (1) + (2)	\$11,704,219	
(b) For half year on (3)	<u>-637,248</u>	
(c) Total interest		<u>11,066,971</u>
5. Expected unfunded actuarial accrued liability		\$135,838,807
6. Changes due to:		
(a) Experience gain	-\$10,672,424	
(b) Change in assumptions	<u>4,931,743</u>	
(c) Total changes		<u>-5,740,681</u>
7. Unfunded actuarial accrued liability at end of year		<u>\$130,098,126</u>

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT F

Table of Amortization Bases

Type*	Annual Payment*	Years Remaining	Outstanding Balance as of July 1, 2010
2002 ERI	\$29,481	17.00	\$376,137
2003 ERI	275,360	17.00	3,513,245
FY04-07 Section 90 ACD	93,835	17.00	1,197,220
FY08 Section 90 ACD	34,692	17.00	442,626
Remaining unfunded liability	<u>10,175,703</u>	17.00	<u>129,829,105</u>
Total	\$10,609,071		\$135,358,333

*Notes: Recommended contributions are assumed to be paid on July 1 and December 31.
 Amortization payments increase at 4.5% per year.
 Does not reflect adjustment to set fiscal 2011 appropriation to budgeted amount.
 Refer to Exhibit G for information on payments in fiscal year 2012 and later.*

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT G

Funding Schedule 1 – 2027 Schedule with No Deferred Gains or Losses

(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 FY06-07 Section 90 ACD Liability	(6) Amortization of FY08-09 Section 90 ACD Liability	(7) Amortization of Remaining Unfunded Liability	(8) Total Plan Cost: (2) + (3) + (4) + (5) + (6) + (7)	(9) Total Unfunded Actuarial Accrued Liability at the Beginning of the Year
2011	\$2,913,649	\$29,481	\$275,360	\$93,835	\$34,692	\$10,147,983	\$13,495,000	\$135,358,333
2012	3,044,763	30,808	287,752	98,058	36,253	10,636,021	14,133,655	135,295,853
2013	3,181,777	32,194	300,701	102,471	37,884	11,114,642	14,769,669	134,689,587
2014	3,324,957	33,642	314,232	107,082	39,589	11,614,801	15,434,303	133,503,736
2015	3,474,580	35,156	328,373	111,901	41,371	12,137,467	16,128,848	131,666,655
2016	3,630,936	36,738	343,150	116,937	43,232	12,683,653	16,854,646	129,099,712
2017	3,794,328	38,391	358,592	122,199	45,178	13,254,417	17,613,105	125,716,672
2018	3,965,073	40,119	374,728	127,698	47,210	13,850,866	18,405,694	121,423,011
2019	4,143,501	41,925	391,591	133,445	49,335	14,474,155	19,233,952	116,115,187
2020	4,329,959	43,812	409,213	139,449	51,556	15,125,493	20,099,482	109,679,830
2021	4,524,807	45,783	427,627	145,725	53,875	15,806,140	21,003,957	101,992,885
2022	4,728,423	47,844	446,871	152,282	56,300	16,517,417	21,949,137	92,918,670
2023	4,941,202	49,997	466,981	159,135	58,834	17,260,700	22,936,849	82,308,842
2024	5,163,556	52,247	487,995	166,296	61,481	18,037,432	23,969,007	70,001,299
2025	5,395,916	54,598	509,955	173,779	64,248	18,849,117	25,047,613	55,818,973
2026	5,638,732	57,056	532,903	181,600	67,138	19,697,328	26,174,757	39,568,520
2027	5,892,475	59,623	556,884	189,772	70,160	20,583,707	27,352,621	21,038,905

*Notes: Recommended contributions are assumed to be paid on July 1 and December 31.
Amortization payments increase at 4.50% per year.
Assumes contribution of budgeted amount for fiscal year 2011.*

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT H

Funding Schedule 2 – 2030 Schedule With Deferred Gains and Losses

(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 FY06-07 Section 90 ACD Liability	(6) Amortization of FY08-09 Section 90 ACD Liability	(7) Amortization of Remaining Unfunded Liability	(8) Total Plan Cost: (2) + (3) + (4) + (5) + (6) + (7)	(9) Total Unfunded Actuarial Accrued Liability at the Beginning of the Year
2011	\$2,913,649	\$26,269	\$245,363	\$83,613	\$30,913	\$10,195,193	\$13,495,000	\$135,358,332
2012	3,044,763	27,452	256,404	87,376	32,304	10,611,932	14,060,231	152,199,178
2013	3,181,777	28,687	267,943	91,308	33,757	12,246,827	15,850,299	168,454,885
2014	3,324,957	29,978	280,001	95,416	35,276	12,371,994	16,137,622	163,473,384
2015	3,474,580	31,328	292,601	99,710	36,863	12,949,168	16,884,250	163,611,715
2016	3,630,936	32,737	305,768	104,197	38,522	13,554,631	17,666,791	163,143,007
2017	3,794,328	34,210	319,528	108,886	40,255	14,190,011	18,487,218	161,986,906
2018	3,965,073	35,750	333,907	113,786	42,066	14,828,561	19,319,143	159,757,881
2019	4,143,501	37,358	348,933	118,906	43,960	15,495,846	20,188,504	156,643,278
2020	4,329,959	39,039	364,635	124,257	45,937	16,193,159	21,096,986	152,538,463
2021	4,524,807	40,796	381,044	129,849	48,005	16,921,851	22,046,352	147,328,747
2022	4,728,423	42,632	398,192	135,693	50,165	17,683,334	23,038,439	140,888,491
2023	4,941,202	44,550	416,110	141,799	52,423	18,479,084	24,075,168	133,080,143
2024	5,163,556	46,555	434,836	148,180	54,782	19,310,643	25,158,552	123,753,183
2025	5,395,916	48,650	454,404	154,848	57,247	20,179,622	26,290,687	112,742,973
2026	5,638,732	50,839	474,852	161,815	59,824	21,087,705	27,473,767	99,869,528
2027	5,892,475	53,127	496,220	169,097	62,516	22,036,652	28,710,087	84,936,161
2028	6,157,636	55,517	518,551	176,707	65,329	23,028,301	30,002,041	67,728,024
2029	6,434,730	58,015	541,886	184,659	68,269	24,064,575	31,352,134	48,010,523
2030	6,724,293	60,626	566,270	192,969	71,341	25,147,481	32,762,980	25,527,600

Notes: Recommended contributions are assumed to be paid on July 1 and December 31.
 Amortization payments increase at 4.50% per year.
 Assumes contribution of budgeted amount for fiscal year 2011.

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT I

Funding Schedule 3 - 2030 Schedule With Deferred Gains and Losses and 8% Maximum Increase

(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 FY06-07 Section 90 ACD Liability	(6) Amortization of FY08-09 Section 90 ACD Liability	(7) Amortization of Remaining Unfunded Liability	(8) Total Plan Cost: (2) + (3) + (4) + (5) + (6) + (7)	(9) Total Unfunded Actuarial Accrued Liability at the Beginning of the Year
2011	\$2,913,649	\$26,269	\$245,363	\$83,613	\$30,913	\$10,195,193	\$13,495,000	\$135,358,332
2012	3,044,763	27,452	256,404	87,376	32,304	10,611,932	14,060,231	152,199,178
2013	3,181,777	28,687	267,943	91,308	33,757	11,581,578	15,185,050	168,454,885
2014	3,324,957	29,978	280,001	95,416	35,276	12,428,192	16,193,820	164,190,408
2015	3,474,580	31,328	292,601	99,710	36,863	13,007,443	16,942,525	164,322,737
2016	3,630,936	32,737	305,768	104,197	38,522	13,615,111	17,727,271	163,845,983
2017	3,794,328	34,210	319,528	108,886	40,255	14,252,830	18,550,037	162,679,477
2018	3,965,073	35,750	333,907	113,786	42,066	14,894,207	19,384,789	160,440,922
2019	4,143,501	37,358	348,933	118,906	43,960	15,564,446	20,257,104	157,313,003
2020	4,329,959	39,039	364,635	124,257	45,937	16,264,846	21,168,673	153,190,638
2021	4,524,807	40,796	381,044	129,849	48,005	16,996,764	22,121,265	147,958,648
2022	4,728,423	42,632	398,192	135,693	50,165	17,761,618	23,116,723	141,490,857
2023	4,941,202	44,550	416,110	141,799	52,423	18,560,891	24,156,975	133,649,124
2024	5,163,556	46,555	434,836	148,180	54,782	19,396,131	25,244,040	124,282,286
2025	5,395,916	48,650	454,404	154,848	57,247	20,268,957	26,380,022	113,225,003
2026	5,638,732	50,839	474,852	161,815	59,824	21,181,060	27,567,122	100,296,518
2027	5,892,475	53,127	496,220	169,097	62,516	22,134,208	28,807,643	85,299,304
2028	6,157,636	55,517	518,551	176,707	65,329	23,130,247	30,103,987	68,017,594
2029	6,434,730	58,015	541,886	184,659	68,269	24,171,108	31,458,667	48,215,792
2030	6,724,293	60,626	566,270	192,969	71,341	25,258,808	32,874,307	25,636,744

*Notes: Recommended contributions are assumed to be paid on July 1 and December 31.
 Amortization payments increase at 4.50% per year.
 Assumes contribution of budgeted amount for fiscal year 2011.*

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT J

Department Results

	Geriatric Authority	Water	Waste Water	Gas & Electric	Housing	All Other	Total
Active Participants							
Number	99	36	55	145	47	821	1,203
Projected annual payroll	\$3,107,487	\$1,563,581	\$2,135,905	\$10,142,980	\$2,582,180	\$34,639,538	454,171,671
Average age	45.7	47.9	50.2	48.1	44.4	46.3	46.6
Average service	7.7	16.4	12.1	13.2	11.5	13.0	12.6
Normal cost	\$362,667	\$144,699	\$242,842	\$1,735,016	\$250,317	\$4,587,457	\$7,322,998
Expected employee contributions	280,755	132,814	190,953	943,487	239,678	3,084,308	4,871,995
Employer normal cost	81,912	11,885	51,889	791,529	10,639	1,503,149	2,451,003
Accrued liability	4,770,243	4,316,328	4,679,894	25,035,722	4,787,110	90,940,710	134,530,007
Retired Participants							
Number	70	31	65	144	45	545	900
Total benefits	\$863,934	\$679,734	\$886,240	\$4,244,111	\$927,285	\$10,930,400	\$18,531,704
Average benefits	12,342	21,927	13,634	29,473	20,606	20,056	20,591
Accrued liability	8,342,568	6,149,234	7,967,976	37,079,104	8,934,919	97,509,512	165,983,313
Net 3(8)c liability							2,849,761
Vested Participants							
Number	3	-	3	1	1	11	19
Total expected benefits	\$20,575	-	\$16,991	\$24,895	\$5,122	\$122,147	\$189,730
Average expected benefits	6,858	-	5,664	24,895	5,122	11,104	9,986
Accrued liability	270,007	-	214,895	211,027	65,682	1,008,625	1,770,236
Inactive Participants							
Number	100	-	5	1	1	62	169
Accumulated contributions	\$97,494	-	\$28,202	\$11,157	\$110	\$290,298	\$427,261

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

EXHIBIT K

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.

SECTION 3: Supplemental Information for the City of Holyoke Retirement System

**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.

SECTION 4: Reporting Information for the City of Holyoke Retirement System

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 172 beneficiaries in pay status)	900
2. Inactive participants with a right to a return of their contributions	169
3. Inactive participants with a vested right to a deferred or immediate benefit as of December 31, 2009	19
4. Participants active during the year ended December 31, 2009 with total accumulated contributions of \$46,291,267 and projected payroll of \$54,171,161	1,203

The actuarial factors as of the January 1, 2010 are as follows:

1. Normal cost		\$7,322,998
2. Administrative expenses		350,000
3. Expected employee contributions		<u>-4,871,995</u>
4. Employer normal cost: (1) + (2) + (3)		\$2,801,003
5. Actuarial accrued liability		305,560,578
Retired participants and beneficiaries	\$168,833,074 ¹	
Active participants	134,530,007	
Inactive participants	2,197,497	
6. Actuarial value of assets (\$152,105,760 at market value as reported on the Annual Statement)		175,462,452
7. Unfunded actuarial accrued liability: (5) – (6)		130,098,126

The actuarial factors projected to July 1, 2010 are as follows:

1. Employer normal cost projected to July 1, 2010, adjusted for timing ²		\$2,913,649
2. Projected unfunded actuarial accrued liability		135,358,333
3. Payment on projected unfunded actuarial accrued liability (increasing 4.5% per year), adjusted for timing ²		10,609,071
4. Preliminary recommended contribution: (1) + (3), adjusted for timing ²		<u>\$13,522,720</u>
5. Budgeted appropriation		<u>\$13,495,000</u>
6. Projected payroll		\$55,244,482

¹ Includes net 3(8)(c) liability of \$2,849,761.

² Recommended contributions are assumed to be paid on July 1 and December 31.

SECTION 4: Reporting Information for the City of Holyoke Retirement System

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions	Percentage Contributed
2001	\$8,905,623	\$8,905,623	100.0%
2002	8,770,675	8,770,675	100.0%
2003	8,972,351	8,972,351	100.0%
2004	9,473,610	9,473,610	100.0%
2005	10,061,673	10,061,673	100.0%
2006	11,704,521	11,704,521	100.0%
2007	11,783,144	11,783,144	100.0%
2008	12,073,533	12,073,533	100.0%
2009	12,161,990	12,161,990	100.0%

SECTION 4: Reporting Information for the City of Holyoke Retirement System

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)
01/01/1993	\$56,070,637	\$120,256,243	\$64,185,606	46.63%	\$31,545,779	203.47%
01/01/1996	77,942,408	125,981,224	48,038,816	61.87%	33,425,533	143.72%
01/01/1998	103,682,801	161,786,384	58,103,583	64.09%	40,572,345	143.21%
01/01/1999	124,672,189	180,215,921	55,543,732	69.18%	41,606,346	133.50%
01/01/2001	140,947,847	188,431,479	47,483,632	74.80%	41,123,979	115.46%
01/01/2003	147,834,259	218,195,543	70,361,284	67.75%	45,373,511	155.07%
01/01/2005	154,649,632	248,324,816	93,675,184	62.28%	47,514,976	197.15%
01/01/2007	175,326,173	265,688,005	90,361,832	65.99%	49,762,976	181.58%
01/01/2009	149,634,238	284,186,420	134,552,182	52.65%	53,208,967	252.88%
01/01/2010	175,462,452	305,560,578	130,098,126	57.42%	54,171,671	240.16%

SECTION 4: Reporting Information for the City of Holyoke Retirement System

EXHIBIT IV

Supplementary Information Required by the GASB

Valuation date	January 1, 2010		
Actuarial cost method	Entry Age Normal Cost Method		
Amortization method	Payments increase 4.5% per year		
Remaining amortization period	17 years		
Asset valuation method	The difference between the expected return and the actual investment return on a market value basis is recognized over a four-year period as described by Revenue Procedure 2000-40.		
Investment rate of return	8.25%		
Projected salary increases		<u>General Employees</u>	<u>Police and Fire Employees</u>
	2010	4.00%	4.00%
	2011+	4.75%	5.25%
Cost of living adjustments	3.00% of first \$12,000 of retirement income		
Plan membership:			
Retired participants and beneficiaries receiving benefits	900		
Inactive participants entitled to a return of their employee contributions	169		
Inactive participants with a vested right to a deferred or immediate benefit	19		
Active participants	<u>1,203</u>		
Total	2,291		

SECTION 4: Reporting Information for the City of Holyoke Retirement System

EXHIBIT V

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

<i>Pre-Retirement:</i>	RP-2000 Employee Mortality Table projected 10 years with Scale AA (gender distinct) (previously, RP-2000 Employee Mortality Table)
<i>Healthy Retiree:</i>	RP-2000 Healthy Annuitant Mortality Table projected 10 years with Scale AA (gender distinct) (previously, RP-2000 Healthy Annuitant Mortality Table)
<i>Disabled Retiree:</i>	RP-2000 Health Annuitant Mortality Table set forward 3 years for males only (gender distinct) (previously, RP-2000 Healthy Annuitant Mortality Table set forward 2 years)

Termination Rates before Retirement:

Groups 1 and 2 - Rate (%)

Age	Mortality		Disability
	Male	Female	
20	0.03	0.02	0.02
25	0.03	0.02	0.02
30	0.04	0.02	0.03
35	0.07	0.04	0.06
40	0.10	0.06	0.10
45	0.13	0.10	0.15
50	0.18	0.14	0.19
55	0.25	0.23	0.24
60	0.42	0.37	0.28

*Notes: 55% of the disability rates shown represent accidental disability.
 40% of the accidental disabilities will die from the same cause as the disability.
 55% of the death rates shown represent accidental death.*

SECTION 4: Reporting Information for the City of Holyoke Retirement System

Termination Rates before Retirement (continued):

Age	Group 4 – Rate (%)		
	Mortality		Disability
	Male	Female	
20	0.03	0.02	0.20
25	0.03	0.02	0.20
30	0.04	0.02	0.30
35	0.07	0.04	0.30
40	0.10	0.06	0.30
45	0.13	0.10	1.00
50	0.18	0.14	1.25
55	0.25	0.23	1.20
60	0.42	0.37	0.85

*Notes: 90% of the disability rates shown represent accidental disability.
 40% of the accidental disabilities will die from the same cause as the disability.
 90% of the death rates shown represent accidental death.*

Withdrawal Rates:

Years of Service	Rate per year (%)		
	Groups 1 and 2	Years of Service	Group 4
0	15.0	0 – 10	1.5
1	12.0	11+	0.0
2	10.0		
3	9.0		
4	8.0		
5 – 9	7.6		
10 – 14	5.4		
15 – 19	3.3		
20 – 24	2.0		
25 – 29	1.0		
30+	0.0		

SECTION 4: Reporting Information for the City of Holyoke Retirement System

Retirement Rates:	Rate per year (%)			
	Groups 1 and 2			
	Age	Male	Female	Group 4
	45 – 49	--	--	1.0
	50 – 54	1.0	1.5	2.0
	55 – 59	2.0	5.5	15.0
	60 – 61	12.0	5.0	20.0
	62 – 64	30.0	15.0	25.0
	65 – 68	40.0	15.0	100.0
	69	30.0	20.0	--
	70	100.0	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 three years younger than their spouses.

Percent Married: 75%

Net Investment Return: 8.25%, net of investment expenses

Administrative Expenses: \$350,000, payable at the beginning of the year (previously, \$300,000).

Interest on Employee Contributions: 3.5%

Salary Increases:	Year	Groups 1 and 2	Group 4
	2010	4.00%	4.00%
	2011 and later	4.75%	5.25%

Includes allowance for inflation.

2009 Salary: 2009 salary equal to salary reported in the data.

Total Service: Total creditable service reported in the data.

Net 3(8)(c) Liability: Assumed \$324,570 in net annual benefits paid to other municipal retirement systems would result in a liability of \$2,849,761.

SECTION 4: Reporting Information for the City of Holyoke Retirement System

Actuarial Value of Assets: Market value of assets as reported in the System’s Annual Statement less unrecognized return in each of the last four years. Unrecognized return is equal to the difference between the actual market value return and the expected market value return and is recognized over a four-year period, further adjusted, if necessary, to be within 20% of the market value.

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method. Entry Age is the age of the participant less 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 following actuarial assumptions were changed:

- The administrative expense assumption was increased from \$300,000 for calendar 2009 to \$350,000 for calendar 2010.
- The pre-retirement mortality table was changed from the RP-2000 Employee Mortality Table to the RP-2000 Employee Mortality Table projected 10 years with Scale AA.
- The healthy retiree mortality table was changed from the RP-2000 Healthy Annuitant Mortality Table to the RP-2000 Healthy Annuitant Mortality Table projected 10 years with Scale AA.
- The disabled retiree mortality table was changed from the RP-2000 Healthy Annuitant Mortality Table set forward 2 years to the RP-2000 Health Annuitant Mortality Table set forward 3 years for males only.

SECTION 4: Reporting Information for the City of Holyoke Retirement System

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

SECTION 4: Reporting Information for the City of Holyoke Retirement System

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

<u>Date of Hire</u>	<u>Contribution Rate</u>
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).

SECTION 4: Reporting Information for the City of Holyoke Retirement System

Ordinary Disability Benefits

A member who is unable to perform his or her job due to a non-occupational disability will receive a retirement allowance if he or 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 or her 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 or 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 death, a spouse's benefit will be paid equal to the amount the employee would have received under Option C. 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 by the member at the time of death.

SECTION 4: Reporting Information for the City of Holyoke Retirement System

"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 the time of 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.

Changes in Plan Provisions

There have been no changes in plan provisions since the last valuation.
