City of Birmingham
Retirement and Relief System

Actuarial Valuation and Review as of
July 1, 2012

SEGAL

SEGAL

The Segal Company
2018 Powers Ferry Road, Suite 850 Atlanta, GA 30339-7200
T 678.306.3100 F 678.306.3190 www.segalco.com

June 12, 2013

Board of Managers
City of Birmingham Retirement and Relief System
710 North 20th Street, GA 100 City Hall
Birmingham, Alabama 35203

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2012. It summarizes the actuarial data used in the valuation, establishes the funding requirements for the 2012-2013 fiscal year and analyzes the preceding year's experience.

The census information on which our calculations were based was prepared by the City and the financial information was provided by the City's Finance Department. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Deborah K. Brigham, FCA, ASA, MAAA, Enrolled Actuary. Ms. Brigham meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

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 of Managers are reasonably related to the experience of and the expectations for the Plan.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the smoothing of investment gains and losses); and changes in plan provisions or applicable law.

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

Sincerely,

THE SEGAL COMPANY

By: ______________________________	*Deborah K. Brigham* ______________________________
Leon F. (Rocky) Joyner, Jr., FCA, ASA, MAAA, EA	*Deborah K. Brigham, FCA, ASA, MAAA, EA*
Vice President and Consulting Actuary	*Vice President and Actuary*

SECTION 1

VALUATION SUMMARY

SECTION 2

VALUATION RESULTS

SECTION 3

SUPPLEMENTAL INFORMATION

SECTION 4

REPORTING INFORMATION

Purpose

This report has been prepared by The Segal Company to present a valuation of the City of Birmingham Retirement and Relief System as of July 1, 2012. 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 the Pension Plan, as administered by the Board of Managers;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of July 1, 2012, provided by the City;
- The assets of the Plan as of June 30, 2012, provided by the City’s Finance Department;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

The assumptions and methods used to value the Plan were approved by the Pension Board based on the five-year experience study for the period ended June 30, 2010.

Significant Issues in Valuation Year

1. The recommended contribution for the upcoming year is $41,033,875, or 22.62% of payroll. This is an increase of 1.38% of pay from the 21.24% recommended amount last year. The increase is primarily due to an actuarial investment loss and actual contributions less than the recommended amount.
2. The City is expected to continue to contribute 6.50% of pay, and members are expected to contribute 6.50%. **City and employee contributions combined are thus 13.00% of payroll, producing an expected deficit of 9.62% when compared to the recommended contribution of 22.62%.** It is presumed throughout this report that the employees are responsible for an equal share of the cost of the Plan. However, the City is ultimately responsible for Plan funding. If employee contributions remain at their current level, the City’s share is 16.12% of pay.
3. The calculated rate of 22.62% is based on a 30-year level percent-of-pay amortization of the unfunded actuarial accrued liability. The normal cost, for benefits allocated to the current year, is 12.50% of pay, less than the 13.00% statutory contribution rate. However, the unfunded liability is not being amortized by the remaining 0.50% of pay. To be in compliance with Governmental Accounting Standards Board (GASB) standards, contributions should be at a level sufficient to amortize the unfunded liability in 30 years or less.

4. The GASB Schedule of Funding Progress, provided in Exhibit III of Section 4, shows that the funded ratio has declined from 77.03% as of July 1, 2011 to 74.34% as of July 1, 2012.

5. As shown in Exhibit V of Section 4, the Net Pension Obligation is $14,828,838 as of June 30, 2012. This is the third year the System has had a Net Pension Obligation rather than a Net Pension Asset. The Net Pension Obligation was $9,457,756 in the prior valuation. The balance increased by $5,371,082 due to employer contributions less than the recommended contribution.

6. GASB has approved two new statements, Statement No. 67, *Financial Reporting for Pension Plans*, and Statement No. 68, *Accounting and Financial Reporting for Pensions*. These statements will replace Statements 25 and 27. The new statements do not change how liabilities have to be calculated for purposes of determining funding requirements, but they do change how the System and the City have to calculate their liabilities for financial disclosures. GASB No. 67 is effective for fiscal years beginning after June 15, 2013, and GASB No. 68 is effective for fiscal years beginning after June 15, 2014.

7. The investment rate of return on an actuarial basis for the year ended June 30, 2012 was 3.22%. (Actuarial returns for recent years have been lower than market returns due to the smoothing of significant market losses for the years ended June 30, 2008 and 2009. The 2008 loss has now been fully reflected, and 20% of the 2009 loss remains to be recognized.) Since the rate of return was less than the assumed rate of 7.00% per year, there was an actuarial investment loss amounting to $33,034,851. As of the valuation date, the smoothed actuarial value of assets is equal to 99.0% of market value.

8. The actuarial valuation report as of July 1, 2012 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected. Unfavorable asset experience will increase the actuarial cost of the Plan, while favorable experience will decrease the actuarial cost of the Plan. For example, a 10% change in the current year's actuarial value of assets would produce a $4,997,972 change in the recommended contribution level. Because the actuarial value of assets involves a smoothing method, a 10% change in market value would not be fully reflected immediately in the actuarial value of assets. Rather, that effect would be spread over a period of years. We have shown the full impact immediately so as to indicate the sensitivity of costs to market fluctuations.

9. There have been no assumption or plan changes since the prior valuation.

10. The audited financial information received states all results rounded to the nearest thousand. The results in this valuation are shown to the dollar. Therefore, occasionally rounded numbers are combined with unrounded ones.

Summary of Key Valuation Results

	2012	2011
Contributions for plan year beginning July 1:		
Recommended contribution	$41,033,875	$37,809,335
Recommended contribution as a percentage of payroll	22.62%	21.24%
Actual contributions (employer and employee)	--	25,704,375
Funding elements for plan year beginning July 1:		
Normal cost, including administrative expenses	$22,932,786	$21,858,098
Market value of assets	886,902,991	899,471,222
Actuarial value of assets	878,048,507	892,096,375
Actuarial accrued liability	1,181,090,260	1,158,070,396
Unfunded actuarial accrued liability	303,041,753	265,974,021
GASB 25/27 for plan year beginning July 1:		
Annual required employer contributions (ARC)*	$20,516,938	$18,904,668
Actual employer contributions	--	13,676,554
Percentage of ARC contributed	--	72.34%
Funded ratio	74.34%	77.03%
Covered payroll	$181,406,586	$177,977,161
Demographic data for plan year beginning July 1:		
Number of retired participants and beneficiaries	2,802	2,803
Number of vested former participants**	250	246
Number of active participants	3,907	3,807
Total payroll	$181,406,586	$177,977,161
Average payroll	46,431	46,750

* *Presumes that the employees are responsible for an equal share of the cost of the System. If employee contribution rates are not increased, the City is ultimately responsible for the funding of the System.*

** *Includes future pensioners currently receiving benefits from the Supplemental System.*

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, vested terminated 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, B, and C.

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

CHART 1

Participant Population: 2003 – 2012

Year Ended June 30	Active Participants	Vested Terminated Participants*	Retired Participants and Beneficiaries	Ratio of Non-Actives to Actives
2003	3,867	196	2,095	0.59
2004	3,915	177	2,158	0.60
2005	3,802	231	2,239	0.65
2006	3,782	204	2,255	0.65
2007	3,760	211	2,352	0.68
2008	3,782	205	2,464	0.71
2009	4,017	211	2,516	0.68
2010	4,073	232	2,555	0.68
2011	3,807	246	2,803	0.80
2012	3,907	250	2,802	0.78

** Includes future pensioners currently receiving benefits from the Supplemental 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 3,907 active participants with an average age of 44.5, average years of service of 11.7 years and average payroll of $46,431. The 3,807 active participants in the prior valuation had an average age of 44.2, average service of 11.6 years and average payroll of $46,750.

Inactive Participants

In this year's valuation, there were 250 participants with a vested right to a deferred or immediate vested benefit. This includes 227 individuals currently receiving benefits from the Firemen's and Policemen's Supplemental Pension System.

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 June 30, 2012

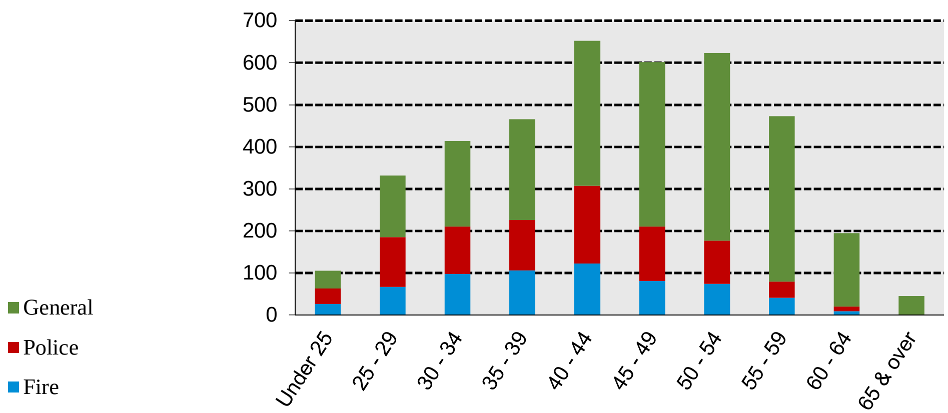
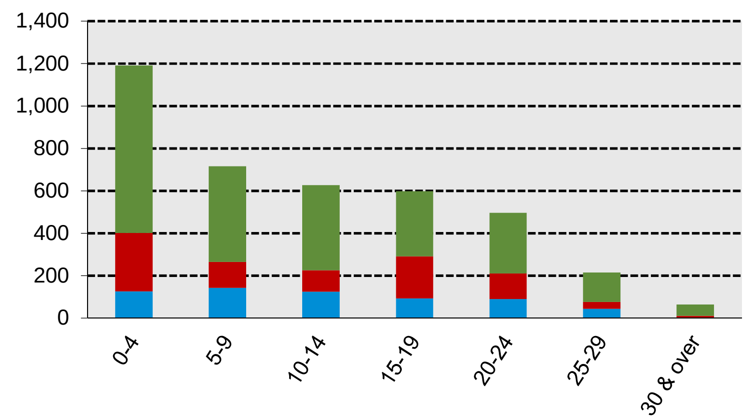


CHART 3

Distribution of Active Participants by Years of Service as of June 30, 2012



Retired Participants and Beneficiaries
As of June 30, 2012, 2,319 retired participants and 483 beneficiaries were receiving total monthly benefits of $5,472,131. For comparison, in the previous valuation, there were 2,318 retired participants and 485 beneficiaries receiving monthly benefits of $5,383,837.

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 June 30, 2012

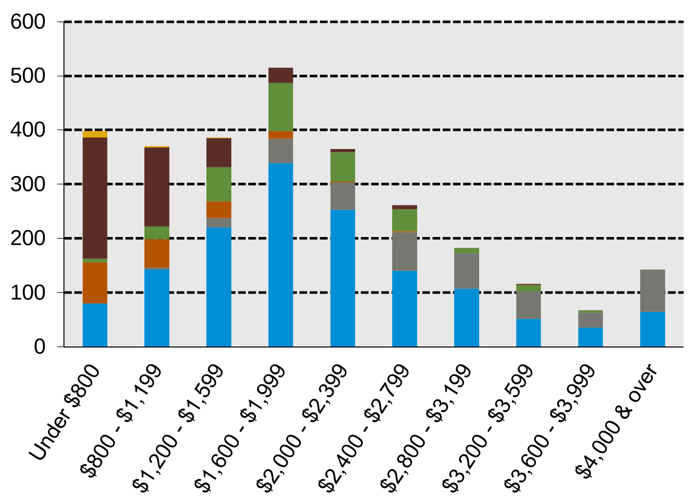
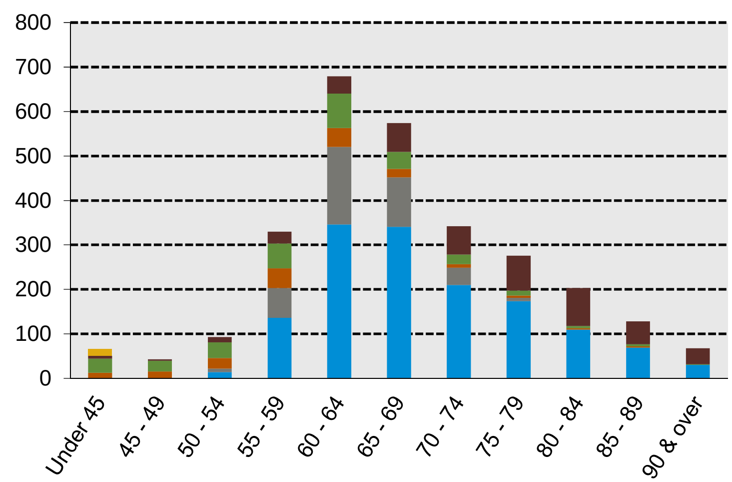


CHART 5

Distribution of Retired Participants and Beneficiaries by Type and by Age as of June 30, 2012



B. FINANCIAL INFORMATION

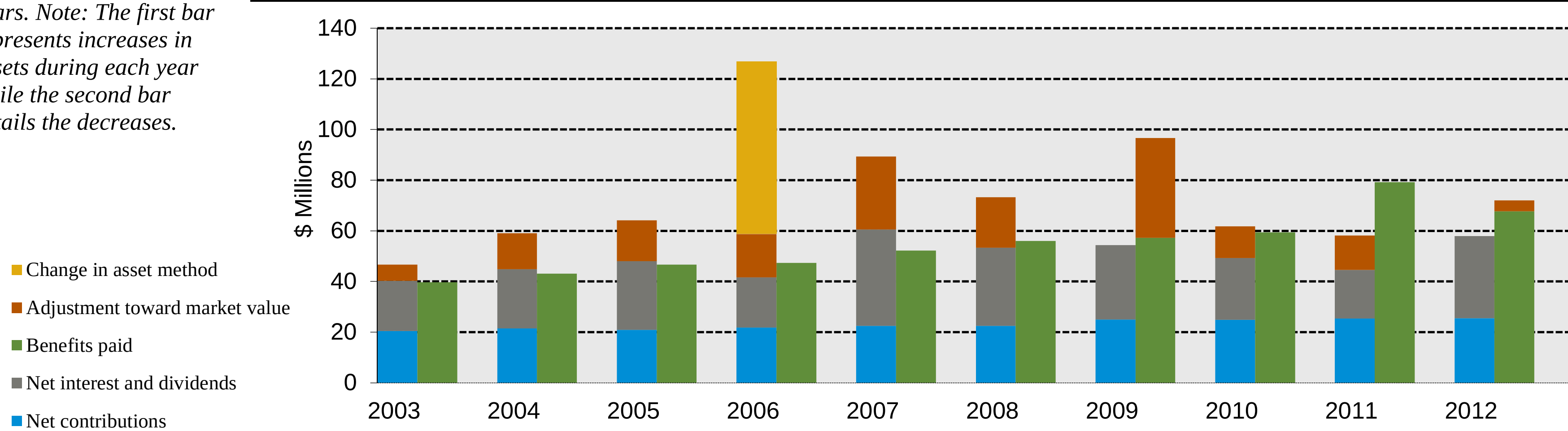
Retirement plan funding anticipates that, over the long term, both net contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

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 D, E and F.

The chart depicts the components of changes in the actuarial value of assets over the last ten years. 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 June 30, 2003 – 2012



It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Managers 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 June 30, 2012

1. Market value of assets, June 30, 2012			$886,902,991
2. Calculation of unrecognized return	Original Amount*	Unrecognized Return**	
(a) Year ended June 30, 2012	-$32,071,454	-$25,657,163	
(b) Year ended June 30, 2011	87,006,584	52,203,950	
(c) Year ended June 30, 2010	34,773,881	13,909,552	
(d) Year ended June 30, 2009	-158,009,276	-31,601,855	
(e) Year ended June 30, 2008	-99,455,194	0	
(f) Total unrecognized return			8,854,484
3. Preliminary actuarial value: (1) - (2f)			878,048,507
4. Adjustment to be within 20% corridor			0
5. Final actuarial value of assets as of June 30, 2012: (3) + (4)			$878,048,507
6. Actuarial value as a percentage of market value: (5) ÷ (1)			99.0%
7. Amount deferred for future recognition: (1) - (5)			$8,854,484

**Total return minus expected return on a market value basis*

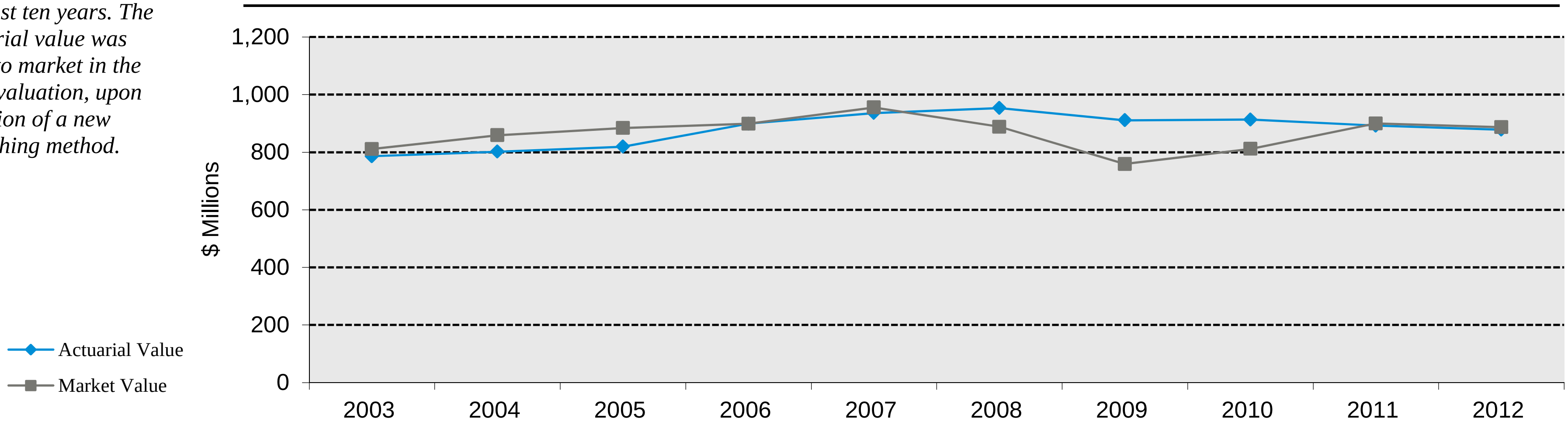
***Recognition at 20% per year over five years*

Both the actuarial value and market value of assets are representations of the 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 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. The actuarial value was reset to market in the 2006 valuation, upon adoption of a new smoothing method.

CHART 8

Actuarial Value of Assets vs. Market Value of Assets as of June 30, 2003 – 2012



C. ACTUARIAL EXPERIENCE

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

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 is $21,590,443, including a loss of $33,034,852 from investments that was partially offset by a net gain of $11,444,408 from all other sources. The net experience variation from individual sources other than investments was 1.0% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

CHART 9

Actuarial Experience for Year Ended June 30, 2012

1.	Net loss from investments*	-$33,034,851
2.	Net gain from administrative expenses	128,323
3.	Net gain from other experience	11,316,085
4.	Net experience loss: (1) + (2) + (3)	-$21,590,443

** Details in Chart 10*

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 System's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets is 7.00%. The actual rate of return on an actuarial basis for the 2011-2012 plan year was 3.22%.

Since the actual return for the year was less than the assumed return, the System experienced an actuarial loss during the year ended June 30, 2012 with regard to its investments.

This chart shows the loss due to investment experience.

CHART 10

Actuarial Value Investment Experience for Year Ended June 30, 2012

1.	Actual return	$28,060,905
2.	Average value of assets	872,796,521
3.	Actual rate of return: (1) ÷ (2)	3.22%
4.	Assumed rate of return	7.00%
5.	Expected return: (2) x (4)	$61,095,756
6.	Actuarial loss: (1) – (5)	-$33,034,851

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.

The investment portfolio has been rebalanced in the last two years to include more stock holdings, moving from a balanced 50/50 mix of equity and fixed income to a 60/40 mix. Based upon future expectations, we have maintained the assumed rate of return of 7.00%.

CHART 11

Investment Return – Actuarial Value vs. Market Value: 2003 - 2012

	Net Interest and Dividend Income		Recognition of Capital Appreciation		Change in Asset Method		Actuarial Value Investment Return		Market Value Investment Return	
Year Ended June 30	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
2003	$19,852,229	2.58%	$6,370,511	0.83%	- -	- -	$26,222,740	3.41%	$42,649,330	5.48%
2004	23,403,588	3.02	14,220,308	1.83	- -	- -	37,623,896	4.85	69,023,086	8.61
2005	27,114,712	3.43	16,148,066	2.04	- -	- -	43,262,778	5.48	50,973,808	6.02
2006	19,901,991	2.46	17,031,771	2.11	$68,127,085	8.44%	105,060,847	13.01	40,468,583	4.64
2007	38,017,026	4.30	28,826,146	3.25	- -	- -	66,843,172	7.55	86,398,586	9.76
2008	30,863,174	3.35	19,934,937	2.17	- -	- -	50,798,110	5.52	-33,654,898	-3.58
2009	29,426,568	3.14	-39,403,205	-4.20	- -	- -	-9,976,637	-1.06	-96,873,908	-11.09
2010	24,452,410	2.73	12,425,399	1.39	- -	- -	36,877,809	4.12	86,792,989	11.68
2011	19,155,247	2.16	13,654,863	1.54	- -	- -	32,810,110	3.69	142,064,641	18.06
2012	32,400,056	3.71	-4,339,151	-0.49	- -	- -	28,060,905	3.22	29,540,542	3.36
Total	$264,587,001		$84,869,645		$68,127,085		$417,583,731		$417,382,759	
							Five-year average return	3.07%		3.03%
							Ten-year average return	4.89%		4.96%

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

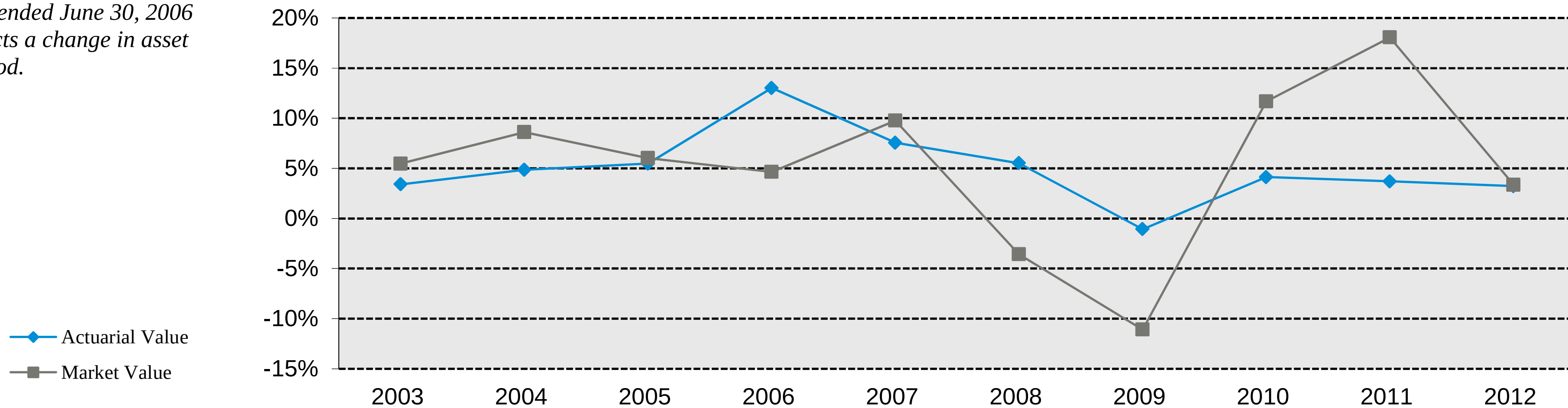
Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

Administrative Expenses
Administrative expenses for the year ended June 30, 2012 totaled $145,619 compared to the assumption of $270,000. This resulted in a gain of $128,323 for the year when adjusted for timing. The administrative expenses were quite a bit lower than they have been in recent years. We have maintained the assumption of $270,000 for the current year, pending an observable trend.

This chart illustrates how this leveling effect has actually worked over the years 2003 - 2012. The actuarial return for the year ended June 30, 2006 reflects a change in asset method.

CHART 12

Market and Actuarial Rates of Return for Years Ended June 30, 2003 - 2012



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 year ended June 30, 2012 amounted to $11,316,085, which is 1.0% of the actuarial accrued liability. Salary increases less than expected contributed to this gain.

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the System is comprised of a normal cost payment and a payment on the unfunded actuarial accrued liability. This total amount is then divided by the total payroll for active members to determine the funding rate of 22.62% of payroll.

The recommended contribution is based on a rolling 30-year amortization of the unfunded actuarial accrued liability as a level percent of pay, assuming a payroll growth of 3.00%. Expected contributions for the year are $23,582,856, or 13.00% of payroll, which leaves a deficit of 9.62% of payroll. A higher contribution will be required to fund this System on an ongoing basis and meet accepted principles and practices. The unfunded actuarial accrued liability is not being amortized by the current contribution levels.

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

CHART 13

Recommended Contribution

	Year Beginning July 1			
	2012		2011	
	Amount	% of Payroll	Amount	% of Payroll
1. Normal cost*	$22,672,453	12.50%	$21,597,765	12.14%
2. Administrative expenses	260,333	0.14%	260,333	0.14%
3. Employer normal cost: (1) + (2)	$22,932,786	12.64%	$21,858,098	12.28%
4. Actuarial accrued liability	1,181,090,260		1,158,070,396	
5. Actuarial value of assets	878,048,507		892,096,375	
6. Unfunded actuarial accrued liability: (4) - (5)	$303,041,753		$265,974,021	
7. Payment on unfunded actuarial accrued liability	16,631,977	9.17%	14,597,572	8.20%
8. Total recommended contribution: (3) + (7), adjusted for timing**	$41,033,875	22.62%	$37,809,335	21.24%
9. Total payroll	$181,406,586		$177,977,161	

* *Including net obligations from the Supplemental System of -$1,911,715 for July 1, 2012 and -$1,771,424 for July 1, 2011 (-$1,982,700 and -$1,837,200 adjusted for timing).*

** *Recommended contributions are assumed to be paid at the beginning of every month.*

The recommended contribution requirements as of July 1, 2012 is based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Contribution
The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation.

The chart reconciles the contribution from the prior valuation to the amount determined in this valuation.

CHART 14

Reconciliation of Recommended Contribution from July 1, 2011 to July 1, 2012

Recommended Contribution as of July 1, 2011	$37,809,335
Effect of investment loss	1,915,207
Effect of other gains and losses on accrued liability	-663,494
Effect of contributions less than recommended contribution	723,446
Effect of expected change in amortization payment due to payroll growth	454,188
Effect of maintaining a 30-year rolling amortization period	-319,401
Net effect of other changes	1,114,594
Total change	$3,224,540
Recommended Contribution as of July 1, 2012	$41,033,875

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 the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded within the range of the 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 Standards. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. 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 and the market value of assets.

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*

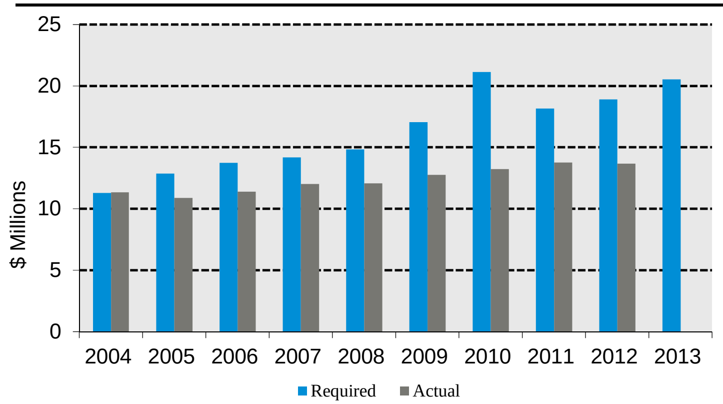
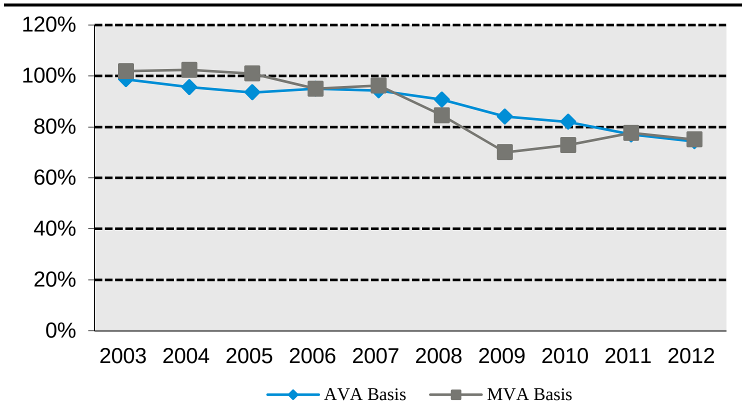


CHART 16

Funded Ratio



* *The annual required contributions shown were calculated presuming that the employees would be responsible for an equal share of the cost of the System. However, if employee contribution rates are insufficient to cover half of the cost, as has been the case in recent years, the City is ultimately responsible for the funding of the Plan.*

EXHIBIT A

Table of Plan Coverage

Category	Year Ended June 30 2012	Year Ended June 30 2011	Change From Prior Year
Active participants in valuation:			
Number	3,907	3,807	2.6%
Average age	44.5	44.2	N/A
Average years of service	11.7	11.6	N/A
Total payroll	$181,406,586	$177,977,161	1.9%
Average payroll	46,431	46,750	-0.7%
Account balances	111,724,219	105,357,055	6.0%
Total active vested participants	2,716	2,638	3.0%
Vested terminated participants*	250	246	1.6%
Retired participants:			
Number in pay status	1,838	1,830	0.4%
Average age	68.5	68.1	N/A
Average monthly benefit	$2,317	$2,282	1.5%
Disabled participants:			
Number in pay status	481	488	-1.4%
Average age	59.6	58.9	N/A
Average monthly benefit	$1,602	$1,590	0.8%
Beneficiaries in pay status:			
Number in pay status	483	485	-0.4%
Average age (including minors)	73.1	73.4	N/A
Average monthly benefit	$918	$890	3.1%

** Includes future pensioners currently receiving benefits from the Supplemental System.*

EXHIBIT B

Participants in Active Service as of June 30, 2012
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 & over**
Under 25	105	102	2	1	- -	- -	- -	- -	- -
	$33,249	$33,360	$33,232	$21,949	- -	- -	- -	- -	- -
25 - 29	332	267	65	- -	- -	- -	- -	- -	- -
	35,459	34,588	39,036	- -	- -	- -	- -	- -	- -
30 - 34	414	226	144	44	- -	- -	- -	- -	- -
	38,719	35,869	40,763	46,664	- -	- -	- -	- -	- -
35 - 39	466	131	153	136	45	1	- -	- -	- -
	43,004	34,850	40,668	50,006	$53,707	$34,632	- -	- -	- -
40 - 44	652	150	130	139	188	45	- -	- -	- -
	48,503	38,055	40,700	52,873	57,061	56,626	- -	- -	- -
45 - 49	602	115	74	105	138	145	25	- -	- -
	49,875	38,070	41,072	47,892	53,850	58,940	$64,037	- -	- -
50 - 54	623	96	68	83	123	162	81	10	- -
	50,916	39,424	40,619	50,241	51,911	55,053	62,108	$66,908	- -
55 - 59	473	54	55	75	83	100	79	24	3
	49,780	37,171	39,591	46,297	49,753	50,364	62,578	67,524	$52,979
60 - 64	195	35	18	39	18	34	27	15	9
	56,037	43,277	53,147	48,336	49,058	55,467	65,886	68,796	110,105
65 - 69	38	11	7	5	3	6	3	2	1
	50,435	39,065	43,438	60,976	52,414	52,971	68,276	62,982	72,023
70 & over	7	4	- -	- -	- -	3	- -	- -	- -
	45,011	36,133	- -	- -	- -	56,849	- -	- -	- -
Total	3,907	1,191	716	627	598	496	215	51	13
	$46,431	$36,336	$40,819	$49,579	$53,730	$55,360	$63,066	$67,599	$93,993

EXHIBIT C

Reconciliation of Participant Data

	Active Participants	Vested Former Participants	Fire and Police Retirees	Disableds	Retired Participants	Beneficiaries	Total
Number as of July 1, 2011	3,807	24	222	488	1,830	485	6,856
New participants	306	N/A	0	N/A	N/A	N/A	306
Terminations with vested rights	-1	1	0	0	0	0	0
Retirements	-67	-3	36	N/A	34	N/A	0
New disabilities	-13	0	0	13	N/A	N/A	0
Return to work	6	0	0	-6	0	N/A	0
Died with beneficiary	-10	-1	-5	-13	-54	-35	-118
Died without beneficiary	0	0	0	0	0	34	34
Lump sum payoffs	-124	-2	0	-1	0	0	-127
Rehire	4	0	0	N/A	0	N/A	4
Certain period expired	N/A	N/A	0	0	0	-1	-1
Data adjustments	-1	4	0	0	2	0	5
Retirees transferring from Supplemental Plan	0	0	-26	0	26	0	0
Number as of July 1, 2012	3,907	23	227	481	1,838	483	6,959

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended June 30, 2012		Year Ended June 30, 2011	
Net assets at actuarial value at the beginning of the year:		$892,096,375		$913,077,824
Contribution income:				
Employer contributions	$13,676,554		$13,772,490	
Employee contributions	12,027,821		11,881,396	
Less administrative expenses	-145,619		-273,817	
Net contribution income		$25,558,756		$25,380,069
Other income		12,000		8,000
Investment income:				
Interest and dividends	$35,621,548		$22,443,800	
Recognition of capital appreciation	-4,339,151		13,654,863	
Less investment fees	-3,221,492		-3,288,553	
Net investment income		28,060,905		32,810,110
Total income available for benefits		$53,631,661		$58,198,179
Less benefit payments:				
Benefits	-$65,684,712		-$61,778,841	
Refunds	-1,415,318		-1,360,711	
DROP payments	-580,599		-16,042,885	
Pension reimbursements	1,100		2,810	
Net benefit payments		-$67,679,529		-$79,179,627
Change in reserve for future benefits		-$14,047,868		-$20,981,448
Net assets at actuarial value at the end of the year:		$878,048,507		$892,096,375

Note: A portion of the Retirement and Relief System's assets is allocated to the Health Department. The above summary excludes the Health Department portion.

EXHIBIT E
Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended June 30, 2012		Year Ended June 30, 2011	
Net assets at market value at the beginning of the year:		$899,471,222		$811,198,139
Contribution income:				
Employer contributions	$13,676,554		$13,772,490	
Employee contributions	12,027,821		11,881,396	
Less administrative expenses	-145,619		-273,817	
Net contribution income		$25,558,756		$25,380,069
Other income		12,000		8,000
Investment income:				
Interest and dividends	$35,621,548		$22,443,800	
Asset appreciation	-2,859,514		122,909,394	
Less investment and administrative fees	-3,221,492		-3,288,553	
Net investment income		29,540,542		142,064,641
Total income available for benefits		$55,111,298		$167,452,710
Less benefit payments:				
Benefits	-$65,684,712		-$61,778,841	
Refunds	-1,415,318		-1,360,711	
DROP payments	-580,599		-16,042,885	
Pension reimbursements	1,100		2,810	
Net benefit payments		-$67,679,529		-$79,179,627
Change in reserve for future benefits		-$12,568,231		$88,273,083
Net assets at market value at the end of the year:		$886,902,991		$899,471,222

Note: A portion of the Retirement and Relief System's assets is allocated to the Health Department. The above summary excludes the Health Department portion.

EXHIBIT F

Summary Statement of Plan Assets

	Year Ended June 30, 2012		Year Ended June 30, 2011	
Cash equivalents		$18,520,313		$21,061,624
Accounts receivable:				
Employee loans	$11,096,825		$11,413,672	
Accrued interest and dividends	10,597,527		768,133	
Total accounts receivable		21,694,352		12,181,805
Investments:				
Corporate stock	$504,091,093		$516,553,847	
U.S. Government obligations	173,755,714		164,045,686	
Domestic corporate bonds	169,662,849		186,481,085	
Total investments at market value		847,509,656		867,080,618
Total assets		$887,724,321		$900,324,047
Less accounts payable		-$821,330		-$852,825
Net assets at market value		$886,902,991		$899,471,222
Net assets at actuarial value		$878,048,507		$892,096,375

EXHIBIT G

Development of the Fund Through June 30, 2012

Year Ended June 30	Employer Contributions	Employee Contributions	Other Income	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2003	$10,697,621	$9,845,626	$59,000	$26,222,740	$105,000	$39,678,777	$785,646,456
2004	11,347,715	10,373,268	24,000	37,623,896	292,000	43,111,069	801,612,266
2005	10,881,632	10,210,996	79,000	43,262,778	211,000	46,668,936	819,166,736
2006	11,398,732	10,522,586	36,000	105,060,847**	160,000	47,353,888	898,671,013
2007	12,006,508	10,707,106	16,000	66,843,172	180,000	52,242,705	935,821,094
2008	12,061,584	10,604,722	1,000	50,798,110	183,375	56,023,465	953,079,670
2009	12,770,110	12,433,019	11,000	-9,976,637	245,261	57,302,709	910,769,192
2010	13,224,808	11,896,839	17,000	36,877,809	263,250	59,444,574	913,077,824
2011	13,772,490	11,881,396	8,000	32,810,110	273,817	79,179,627	892,096,375
2012	13,676,554	12,027,821	12,000	28,060,904	145,619	67,679,529	878,048,507

* *Net of investment fees.*
** *Includes effect of change in asset method.*

EXHIBIT H

Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2012

1. Unfunded actuarial accrued liability at beginning of year		$265,974,021
2. Normal cost at beginning of year		21,858,098
3. Total contributions		-25,704,375
4. Interest		
(a) For whole year on (1) + (2)	$20,148,248	
(b) Monthly on (3)	-824,682	
(c) Total interest		19,323,566
5. Expected unfunded actuarial accrued liability		$281,451,310
6. Change due to net experience loss		21,590,443
7. Unfunded actuarial accrued liability at end of year		$303,041,753

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 value of all projected benefit payments for current members less the portion that will be paid by future normal costs.

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 is a wide range of 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 J

Comparative Summary of Principal Valuation Results

	Year Ended June 30, 2012	Year Ended June 30, 2011
Participant data		
Active members	3,907	3,807
Total annual payroll	$181,406,586	$177,977,161
Retired members and beneficiaries	2,802	2,803
Total annualized benefit	$65,665,572	$64,606,044
Terminated vested members	23	24
Total annualized benefit	$312,761	$325,939
Future pensioners currently receiving benefits from Supplemental System	227	222
Total annualized benefit	$8,882,095	$8,513,914
Actuarial value of assets	$878,048,507	$892,096,375
Actuarial accrued liability:		
Active members	$476,311,523	$459,719,404
Terminated vested members	2,758,863	2,861,407
Retired members and beneficiaries	628,917,148	624,656,707
Future pensioners currently receiving benefits from Supplemental System	73,102,726	70,832,878
Total	$1,181,090,260	$1,158,070,396
Unfunded actuarial accrued liability	$303,041,753	$265,974,021

EXHIBIT I

Summary of Actuarial Valuation Results as of July 1, 2012

The valuation was made with respect to the following data supplied to us:		
1. Retired participants as of the valuation date (including 483 beneficiaries in pay status)		2,802
2. Participants inactive during year ended June 30, 2012 with vested rights (including 227 future pensioners currently receiving benefits from the Supplemental System)		250
3. Participants active during the year ended June 30, 2012		3,907
Fully vested	2,716	
Not vested	1,191	
The actuarial factors as of the valuation date are as follows:		
1. Normal cost, including administrative expenses		$22,932,786
2. Actuarial accrued liability		1,181,090,260
Retired participants and beneficiaries	$628,917,148	
Inactive participants with vested rights*	75,861,589	
Active participants	476,311,523	
3. Actuarial value of assets ($886,902,991 at market value as reported by the City)		878,048,507
4. Unfunded actuarial accrued liability		$303,041,753
The determination of the recommended contribution is as follows:		
1. Normal cost		$22,672,453
2. Administrative expenses		260,333
3. Total normal cost: (1) + (2)		$2,932,786
4. Payment on unfunded actuarial accrued liability		16,631,977
5. Total recommended contribution: (3) + (4), adjusted for timing		$41,033,875
6. Total payroll		$181,406,586
7. Total recommended contribution as a percentage of total payroll: (5) ÷ (6)		22.62%

** Includes liability for deferred benefits from the Retirement and Relief System payable to pensioners currently receiving benefits from the Supplemental System.*

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Annual Required Contributions*	Actual Contributions	Percentage Contributed
2007	$14,173,353	$12,006,508	84.7%
2008	14,818,900	12,061,584	81.4%
2009	17,050,689	12,770,110	74.9%
2010	21,118,910	13,224,808	62.6%
2011	18,147,790	13,772,490	75.9%
2012	18,904,668	13,676,554	72.3%
2013	20,516,938	--	--

* *The annual required contributions shown were calculated presuming that the employees would be responsible for an equal share of the cost of the System. However, if employee contribution rates are insufficient to cover half of the cost, as has been the case in recent years, the City is ultimately responsible for the funding of the Plan. Assuming that the employee contribution rate for the year ending June 30, 2013 remains at 6.50% of pay, the annual required contribution for the City is $29,242,532.*

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/ AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
7/1/2007	$935,821,094	$992,864,448	$57,043,354	94.25%	$167,807,596	33.99%
7/1/2008	953,079,670	1,050,785,799	97,706,129	90.70%	174,113,556	56.12%
7/1/2009	910,769,192	1,083,256,135	172,486,943	84.08%	186,523,480	92.47%
7/1/2010	913,077,824	1,113,441,433	200,363,609	82.01%	193,229,880	103.69%
7/1/2011	892,096,375	1,158,070,396	265,974,021	77.03%	177,977,161	149.44%
7/1/2012	878,048,507	1,181,090,260	303,041,753	74.34%	181,406,586	167.05%

EXHIBIT IV

Supplementary Information Required by the GASB

Valuation date	July 1, 2012
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level percent of payroll, assuming 3.00% per year increase
Remaining amortization period	Rolling 30 years
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial assumptions:	
Investment rate of return	7.00%
Projected salary increases:	
Inflation	3.00%
Merit, longevity, etc.	Varies from 0.00% to 4.50% for General Employees Varies from 0.50% to 6.50% for Public Safety
Plan membership:	
Retired participants and beneficiaries receiving benefits	2,802
Terminated participants entitled to, but not yet receiving benefits*	250
Active participants	3,907
Total	6,959

** Includes 227 future pensioners currently receiving benefits from the Supplemental System.*

EXHIBIT V

Development of the Net Pension Obligation (NPO) and the Annual Pension Cost Pursuant to GASB 27

Plan Year Ended June 30	Employer Annual Required Contribution (a)	Employer Amount Contributed (b)	Interest on NPO (h) x 7.00% (c)	ARC Adjustment (h) / (e) (d)	Amortization Factor* (e)	Pension Cost (a) + (c) – (d) (f)	Change in NPO (f) – (b) (g)	NPO Balance NPO + (g) (h)
2007	$14,173,353	$12,006,508	-$915,227	-$919,064	13.2777	$14,177,190	$2,170,682	-$10,032,349
2008	14,818,900	12,061,584	-702,264	-755,580	13.2777	14,872,216	2,810,632	-7,221,717
2009	17,050,689	12,770,110	-505,520	-543,899	13.2777	17,089,068	4,318,958	-2,902,759
2010	21,118,910	13,224,808	-203,193	-218,620	13.2777	21,134,337	7,909,529	5,006,770
2011	18,147,791	13,772,490	350,474	274,789	18.2204	18,223,476	4,450,986	9,457,756
2012	18,904,668	13,676,554	662,043	519,075	18.2204	19,047,636	5,371,082	14,828,838

** Amortization was changed from level dollar to level percent-of-pay effective July 1, 2010.*

EXHIBIT VI

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy: RP-2000 Combined Healthy Mortality Table, set forward two years for both males and females

Disabled: RP-2000 Disabled Retiree Mortality Table, multiplied by 70%

These mortality tables were determined to contain provision appropriate to reasonably reflect future mortality improvement, based on a five-year review of mortality experience for the 2005-2010 period. The mortality assumptions will be assessed again at the time of the next five-year review, and further adjustment or expected improvements in life expectancy will be made if warranted.

Termination Rates Before Retirement:

	Rate (%)							
	Mortality		Disability			Withdrawal		
Age	Male	Female	General	Fire	Police	General*	Fire**	Police***
20	0.04	0.02	0.08	0.12	0.06	4.89	3.79	6.65
25	0.04	0.02	0.11	0.17	0.09	4.76	2.69	4.73
30	0.06	0.04	0.14	0.22	0.11	4.56	2.07	3.63
35	0.09	0.06	0.19	0.29	0.15	4.23	1.59	2.80
40	0.12	0.09	0.29	0.44	0.22	3.77	1.20	2.11
45	0.17	0.13	0.47	0.72	0.36	3.18	0.82	1.43
50	0.27	0.20	0.79	1.21	0.61	2.23	0.40	0.70
55	0.47	0.35	1.31	2.02	1.01	0.85	0.00	0.00
60	0.88	0.67	2.12	3.25	1.63	0.08	0.00	0.00

* *Withdrawal rates shown for General Employees are multiplied by 2.50 during the first five years of employment.*

** *Withdrawal rates shown for Firefighters are multiplied by 1.75 during the first five years of employment.*

*** *Withdrawal rates shown for Police Officers are multiplied by 1.70 during the first five years of employment.*

Retirement Rates: Fire and Police employees are assumed to retire in accordance with the following rates. Benefits are payable from the Firemen's and Policemen's Supplemental Pension System until the participant reaches their Normal Retirement Age under the Retirement and Relief System.

Fire		Police	
Years of Service*	**Rate**	**Years of Service***	**Rate**
20	10%	20	45%
21-25	5	21	20
26	25	22-25	5
27-28	8	26	15
29	60	27	20
30	10	28	15
31-32	0	29	50
33	40	30	30
34	20	31-32	0
35	100	33	45
		34	25
		35	100

** Retirement is assumed to occur no later than age 65*

General employees are assumed to retire, after meeting the service requirements, in accordance with the following rates:

Age	Rate**
Under 50	0%
50-54	15
55-59	8
60	15
61	20
62	40
63-64	20
65	40
66-74	25
Over 74	100

** *General Employee rates are decreased to 0% at 30 years and decreased by 75% when employee has 31-32 years of service. The rate is increased to 150% of the rate shown when employee reaches 33 years of service.*

Retirement Age for Inactive Vested Participants:	60
Unknown Data for Participants:	Same as those exhibited by Participants with similar known characteristics. If not specified, Participants are assumed to be male.
Percent Married:	80%
Age of Spouse:	Females three years younger than males
On the Job Disability:	
General	50%
Fire and Police	100%
On the Job Death:	
General	5%
Fire and Police	15%
Net Investment Return:	7.00%
Salary Scale:	

	Annual Increase Rate (%)	
Age	**General**	**Fire and Police**
20	7.50	9.50
25	6.75	7.60
30	6.00	6.20
35	5.50	5.10
40	5.00	4.50
45	4.50	4.00
50	4.00	4.00
55	3.50	4.00
60	3.00	4.00

Includes allowance for inflation of 3.00% per year.

Interest on DROP Accounts:	5.00%
Administrative Expenses:	$270,000, payable monthly, equivalent to $260,333 at the beginning of the year.
Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-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 at the time the participant would have commenced employment if the plan had always been in existence. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service, with Normal Cost determined as if the current benefit accrual rate had always been in effect. Actuarial Liability is allocated by salary.
Change in Assumptions:	There have been no changes in actuarial assumptions since the last valuation.

EXHIBIT VII
Summary of Plan Provisions

This exhibit summarizes the major provisions of the System included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	July 1 through June 30
Plan Status:	Ongoing
Normal Pension:	
Eligibility	A participant may retire at (a) age 60 if he has completed 5 years of credited service, or (b) any age if he has completed 30 years of credited service.
Amount:	2.50% of final average salary for each year of credited service. This amount cannot be greater than 75.0% of the final average salary nor less than $400 per month. Service credit used to determine the benefit amount may be increased by credit granted for unused sick leave (on a percent of possible total basis). Final average salary is defined as the highest average compensation over any 36-month period of the employee's last ten years of participation.
Early Retirement Pension:	
Eligibility	A City participant may retire at age 55 if he has completed 25 years of credited service.
Amount	1.85% of final average salary for each year of credited service

Disability:

Ordinary

Service Requirement	5 years credited service.
Amount	2.00% of final average salary at disability for each year of credited service, payable immediately. This amount cannot be greater than 60% of final average salary nor less than $400.

Extraordinary

Service Requirement	None
Amount	70% of final monthly salary at disability, offset by the maximum Worker's Compensation benefit, payable immediately.

Termination:

To a participant terminating before becoming eligible for a vested deferred pension from the plan, a lump sum of his or her own contributions without interest is payable.

Participants terminating after 5 years of actual service who leave their contributions in the System Fund have a non-forfeitable right to a monthly pension beginning at age 60. The form and amount of the pension are the same as the normal pension.

Death Benefits:

If a participant dies prior to his or her attainment of eligibility for retirement, a lump sum of his or her own contributions without interest is payable to his or her beneficiary.

If an active participant who is eligible to retire or a retired participant dies, 60% of the accrued pension benefit is payable to the surviving spouse, if any, during his or her remaining lifetime. If an active participant (other than a participant of the Firemen and Policemen Supplemental System) who is not eligible to retire, but who has completed 5 years of service dies, a portion of 60% of the accrued pension benefit is payable to the spouse during her remaining lifetime. This portion is defined as follows:

Number of Years of Service	Portion of Entitled Benefit
5	50%
6	60
7	70
8	80
9	90
10 or more	100

This benefit is payable at the earlier of (a) the date that the deceased participant would have attained age 60 or (b) the date the deceased participant would have completed 20 years of service. In lieu of the above, for all participants, an annuity of 60% of salary is payable to the surviving spouse and 10% is payable to a minor child if death is service connected; the maximum for spouse and children is 75% and the maximum for children if no spouse is 60%. The minimum spouse benefit is $320 per month.

Back-DROP: An employee with 33 years of service or who is at least age 63 with 23 years of service may elect up to a 36-month Back-DROP. The employee's monthly benefit will be calculated using service and final average salary as of the Back-DROP date and the employee will receive a lump sum equal to the number of months dropped back times the retirement benefit, accumulated with interest.

Participation: All qualified employees of the Retirement and Relief System are required to participate.

Contributions: The City and the City employees each contribute 6.50% of compensation for the year.

Changes in Plan Provisions: There have been no changes in plan provisions since the last valuation.

7824644v1/02030.001