



Firemen's Relief and Retirement Fund
City of Lufkin, Texas

Actuarial Valuation Report for
Year Ended December 31, 2008

Retirement Horizons Inc.
July 22, 2009



July 22, 2009

Board of Trustees
Firemen's Relief & Retirement Fund
300 East Shepherd Street
Lufkin, Texas 75901

Re: 2008 ACTUARIAL VALUATION

Ladies and Gentlemen:

The Board of Trustees for the Lufkin Firemen's Relief & Retirement Fund retained Retirement Horizons Inc. (RHI) to perform an actuarial valuation as of December 31, 2008. This report summarizes the results of our study including an analysis of current funded status and a projection of valuation results. This report also provides financial accounting and disclosure information in accordance with GASB 25 and 27, organized as follows:

- Section 1 – Valuation Highlights
- Section 2 – Executive Summary
- Section 3 – Actuarial Exhibits
- Section 4 – Valuation Basis

The 2008 actuarial valuation was based upon member census data, asset information and plan provisions provided by the Firemen's Relief & Retirement Fund. RHI prepared the 2008 valuation in accordance with generally accepted actuarial principles and practices, and performed testing as needed to assure the accuracy of the underlying input and the results of the study. We certify the amounts presented in this actuarial report have been determined according to the actuarial assumptions and methods selected by the Board of Trustees, although we encourage further review of plan experience and consideration of a more conservative valuation basis going forward as discussed in this report.

The unfunded actuarial liability was \$15.32 million (38.2% funded status) as of December 31, 2008, compared to \$10.55 million (50.1 % funded status) for the prior valuation as of December 31, 2006. Texas Pension Review Board guidelines for actuarial soundness recommend fully amortizing this unfunded liability over a period of 25 to 30 years (maximum of 40 years). Based on results of the 2008 valuation and provided future plan experience is consistent with the valuation basis, the contribution structure totaling 29.72% of pay effective January 1, 2009, will not be adequate to amortize the unfunded actuarial liability (infinite amortization period).

The undersigned are available to respond to any questions regarding the information contained in this report or to provide further details or explanations as needed, respectfully submitted by Retirement Horizons Inc.

A handwritten signature in blue ink that reads "Mickey G. McDaniel".

Mickey G. McDaniel
Fellow of the Society of Actuaries
Member of the American Academy of Actuaries
Enrolled Actuary No. 08-03883

A handwritten signature in purple ink that reads "David Sawyer".

David A. Sawyer
Fellow of the Society of Actuaries
Member of the American Academy of Actuaries
Enrolled Actuary No. 08-06271

Table of Contents

1.	Valuation Highlights	4
2.	Executive Summary	
2.1	Plan Asset Values	6
2.2	Actuarial Present Value of Projected Benefits.....	7
2.3	Actuarial Accrued Liability	8
2.4	Funding Policy Analysis.....	9
2.5	Open Group Forecast Valuation	10
2.6	GASB 25 Accounting Information	12
2.7	GASB 27 Accounting Information	13
2.8	Membership Demographics.....	14
2.9	Actuarial Methods and Assumptions	15
3.	Actuarial Exhibits	
3.1	Fair Value of Plan Assets	18
3.2	Actuarial Value of Plan Assets.....	19
3.3	Actuarial Present Value of Projected Benefits.....	20
3.4	Actuarial Accrued Liability and Normal Cost.....	21
3.5	Funding Policy Guidelines	22
3.6	Expected Amortization Period.....	23
3.7	GASB 25 Accounting Information	24
3.8	GASB 27 Accounting Information	25
4.	Valuation Basis	
4.1	Demographic Summary	26
4.2	Data Reconciliation	27
4.3	Active Members by Age and Service	28
4.4	Assumptions and Methods.....	29
4.5	Plan Provisions	32

1. Valuation Highlights

FUNDING VALUATION	December 31, 2006	December 31, 2008
Fair Value of Assets	\$10,612,279	\$7,880,756
Average Annual Return: current year ended	9.4%	-26.1%
Average Annual Return: prior year ended	3.6%	6.3%
Actuarial Value of Assets	\$10,612,279	\$9,456,907
Average Annual Return: current year ended	9.4%	-11.5%
Average Annual Return: prior year ended	3.6%	6.3%
Present Value of Projected Benefits	\$25,148,429	\$29,688,118
% funded	42.2%	31.9%
Actuarial Accrued Liability	\$21,164,321	\$24,777,439
% funded	50.1%	38.2%
Normal Cost	\$483,995	\$599,486
% of payroll	13.6%	14.4%
PRB Recommended Funding	\$1,181,740	\$1,587,806
% of payroll	33.3%	38.3%
DEMOGRAPHICS		
Active Participants	76	77
Terminated Participants	5	6
Retired Participants	52	51
Total	<u>133</u>	<u>134</u>
Covered Payroll	\$3,552,919	\$4,148,732
ASSUMPTIONS AND METHODS		
Investment Return	7.75%	7.50%
Salary Scale	3.00%	3.00%
Payroll Growth	2.00%	2.00%
Asset Method	Fair Value	3-Year Smoothing
Contribution Rates		
- City	14.00%	17.00%
- Firefighters	11.00%	12.20%
- Total	<u>25.00%</u>	<u>29.20%</u>

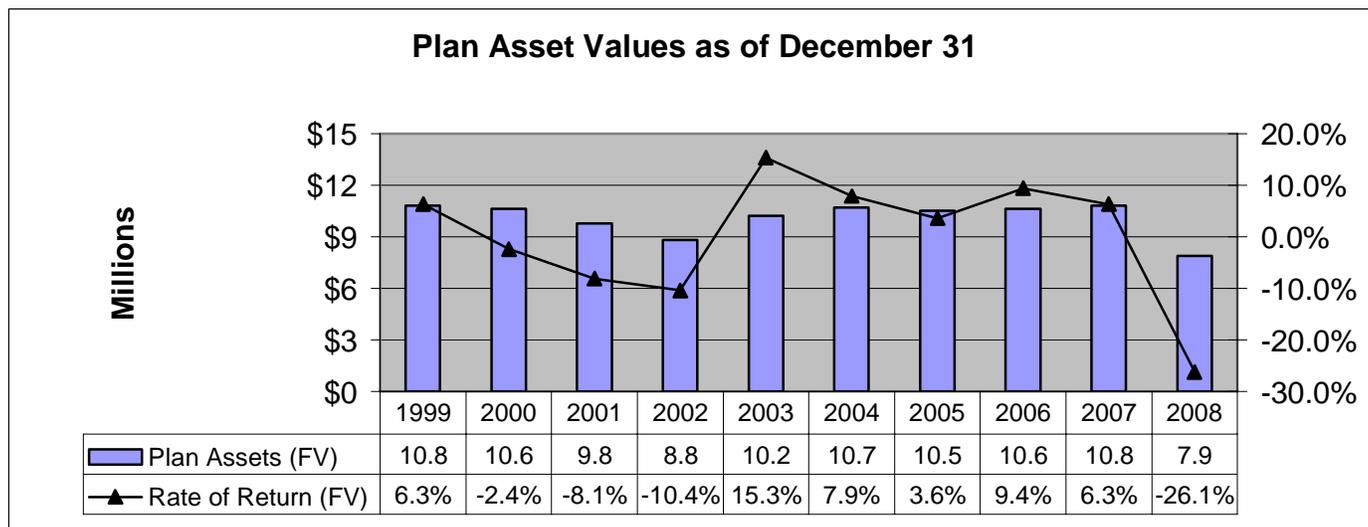
1. Valuation Highlights (continued)

GASB ACCOUNTING VALUATION	Actual December 31, 2008	Projected December 31, 2009
Total Annual Required Contribution (ARC)	\$1,587,806	\$1,629,367
% of payroll	38.3%	38.5%
Net Employer Annual Pension Cost (APC)	\$1,093,189	\$1,127,429
% of payroll	26.3%	26.6%
Net Pension Obligation	\$1,672,139	\$2,058,173
% of payroll	40.3%	48.6%
 ASSUMPTIONS AND METHODS		
Investment Return	7.50%	7.50%
Salary Scale	3.00%	3.00%
Payroll Growth	2.00%	2.00%
Asset Method	3-Year Smoothing	3-Year Smoothing
Contribution Rates		
- City	17.00%	17.52%
- Firefighters	12.20%	12.20%
- Total	29.20%	29.72%

2.1 Plan Asset Values

The *fair value (FV)* of plan assets was \$7.9 million as of December 31, 2008, compared to \$10.6 million for the prior valuation as of December 31, 2006. The net decrease of \$2.7 million over the 2-year period was primarily attributable to a net investment loss of \$2.1 million and negative net cash flow to the Fund of \$0.6 million (total contributions of \$2.1 million less total disbursements of \$2.7 million). Please see Exhibit 3.1 for more details on the development of the fair value of plan assets.

The net rate of return on the fair value of assets was +6.3% for plan year 2007 and -26.1% for plan year 2008. The average annual rate of return was -0.55% over the period 1999-2008, with the Fund failing to earn the 7.5% long-term interest assumption in 7 of the last 10 years as summarized below.



In response to the financial market meltdown during and precipitous drop in the fair value of plan assets, the Fund adopted an asset smoothing method effective December 31, 2008. Investment gains and losses are calculated comparing actual returns to the long-term interest rate assumption. The *actuarial value of plan assets (AV)* is developed as the fair value of plan assets as of the measurement date plus 2/3rd of the unrecognized (gain)/loss for the current year and 1/3rd of the unrecognized (gain)/loss for the prior year. As a result, investment gains and losses are effectively smoothed over a 3-year period, subject to corridor limits not less than 80% and not greater than 120% of the fair value of assets as of the measurement date.

As developed in Exhibit 3.2, the actuarial value of plan assets was \$9.5 million as of December 31, 2008, compared to the fair value of \$7.9 million on that date. After application of the asset smoothing method, the average annual rate of return on the actuarial value of assets was -11.5% for plan year 2008, compared to -26.1% on a fair value basis.

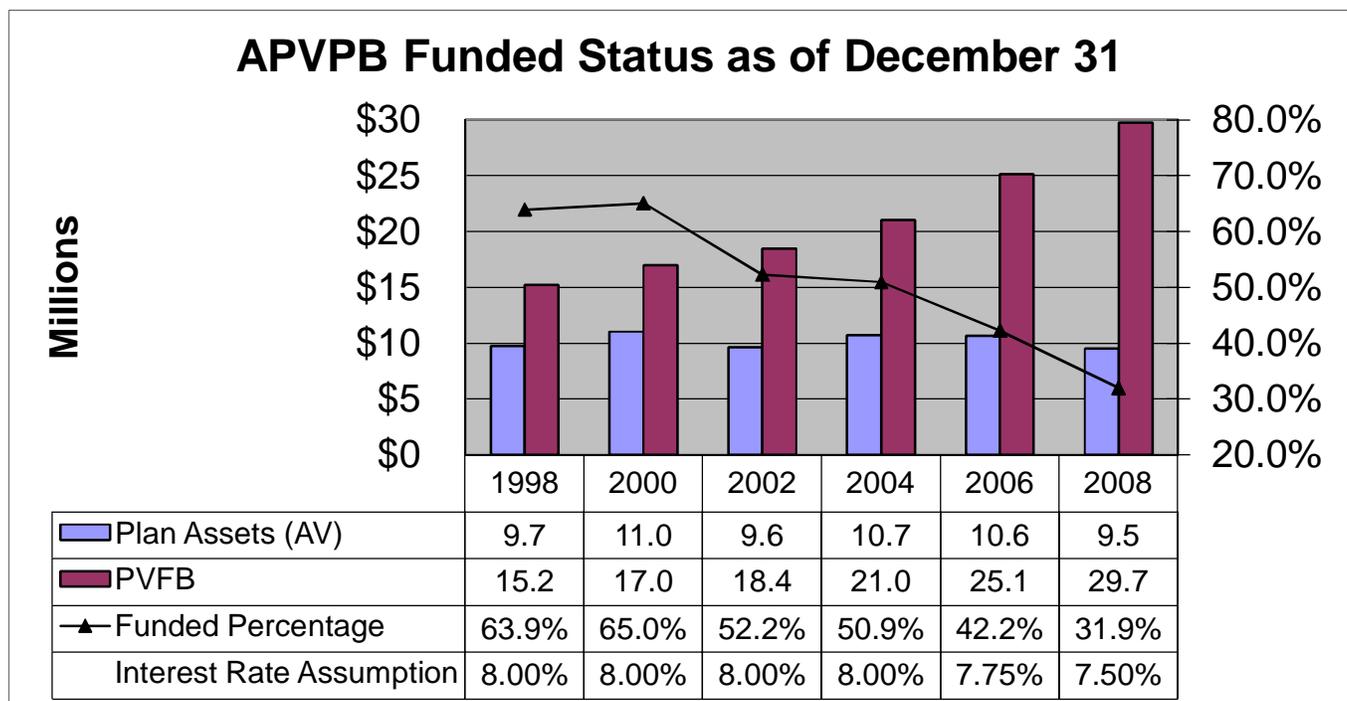
2.2 Actuarial Present Value of Projected Benefits

The true cost of a pension plan is the accumulation of benefit payments less investment income (net of expenses), over the lifetime of the program. In the actuarial valuation process, we use a mathematical model to project the future stream of plan benefits. The model incorporates current plan provisions and member census data, using the actuarial assumptions to predict future events.

Discounting the stream of expected future benefit payments for the time value of money produces the *actuarial present value of projected benefits (APVPB)*. This represents the hypothetical amount of plan assets necessary to fully fund all future plan costs – assuming future plan experience follows the actuarial assumptions. This measure of pension liability includes benefits that have not yet been earned for current employees, based on expected future pay increases as well as projected service, a portion of which will be funded by future contributions.

The total APVPB was \$29.7 million as of December 31, 2008, compared to \$25.1 million for the prior valuation as of December 31, 2006. The net increase of \$4.6 million is primarily attributable to actuarial losses due to unfavorable plan liability experience and changes in the actuarial assumptions as discussed later in this report. Please see Exhibit 3.3 for more details on the development of the APVPB.

Comparing the actuarial value of plan assets to the APVPB provides one measure of progress in the long-term funding policy. The funded status on this basis was 31.9% as of December 31, 2008, compared to 42.2% for the prior valuation as of December 31, 2006. The recent decrease in funded status is primarily attributable to unfavorable experience and the assumption changes as mentioned above. As summarized below, the APVPB funded status has dropped from 63.9% to 31.9% over the last 10 years:

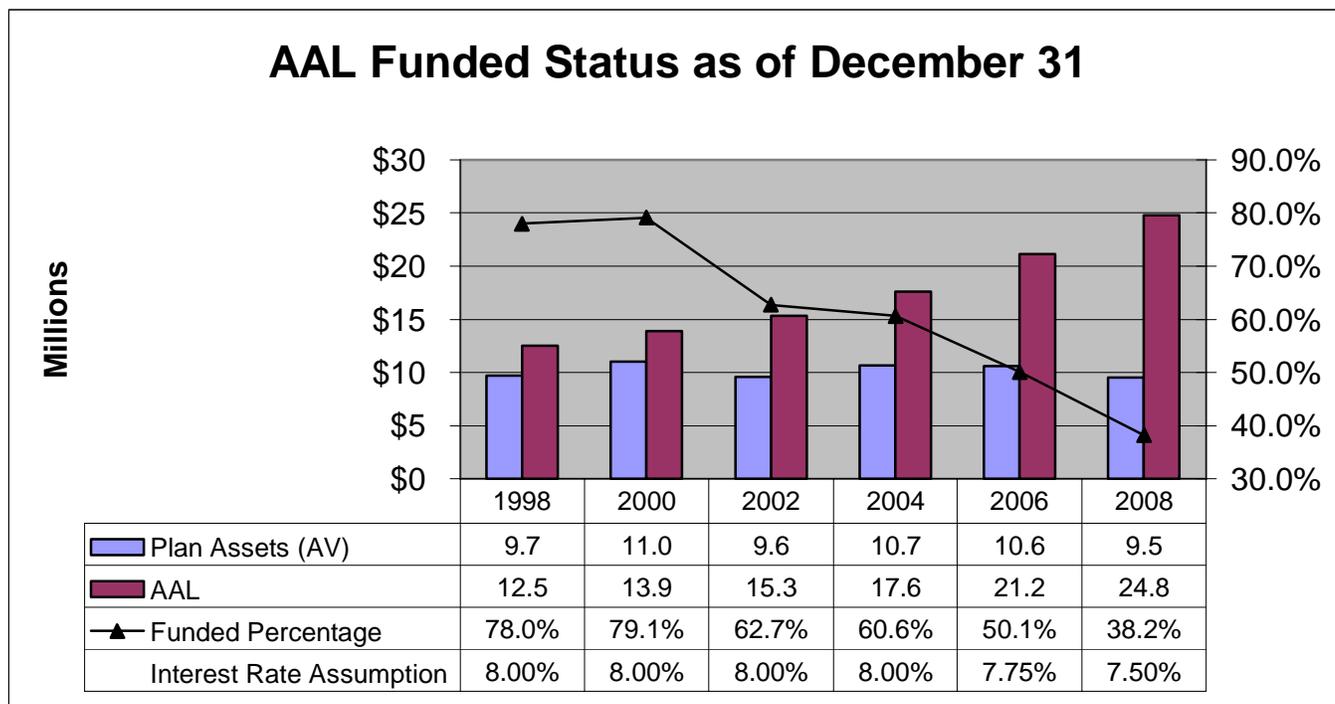


2.3 Actuarial Accrued Liability

As a practical matter, few plan sponsors can afford to fully fund benefits before they have been earned. Generally accepted actuarial principals apply a mathematical formula known as an actuarial cost method to allocate the APVPB over periods of employee service. The portion of cost attributable to periods of employee service rendered prior to the valuation date is the *actuarial accrued liability (AAL)*, and the allocation to the current year is referred to as *normal cost (NC)*.

Comparing AAL to the actuarial value of plan assets provides a more appropriate measure of progress in the long-term funding policy compared to employee services rendered. The *unfunded actuarial accrued liability (UAAL)* was \$15.3 million (38.2% funded status) as of December 31, 2008, compared to \$10.6 million (50.1% funded status) for the prior valuation as of December 31, 2006. Please see Exhibit 3.4 for more details on development of the UAAL.

The net increase in UAAL of \$4.7 million is primarily attributable to actuarial losses from unfavorable plan asset and liability experience (loss of \$4.5 million) and changes to the actuarial assumptions (loss of \$1.3 million), offset by the change in asset valuation method (gain of \$1.6 million) and normal operation of the plan (loss of \$0.5 million). As summarized below, the UAAL funded status has dropped from 78.0% to 38.2% over the last 10 years:



2.4 Funding Policy Analysis

Unfunded Actuarial Accrued Liability (UAAL) Accumulation

The actuarial accrued liability (AAL) represents the expected actuarial value of plan assets that would have accumulated as of the measurement date, assuming contributions equal to the normal cost amount were made for all years of prior service credited to covered participants. This measurement also assumes historical plan experience has been consistent with the current actuarial valuation basis – assumptions and methods, plan provisions and census data. For mature retirement systems, an unfunded actuarial accrued liability (UAAL) can accumulate due to a number of factors:

- *Plan Amendment*: Increases in future benefits, especially if prior service credit is recognized under the improved plan, without a corresponding increase in funding policy.
- *Actuarial Losses*: Unfavorable plan experience compared to the long-term actuarial assumptions, for example Fund investment performance less than the expected rate of return, or active employee pay increases greater than the expected salary scale.
- *Workforce Reduction*: A significant and permanent reduction in the active workforce can generate actuarial losses due to accelerated early retirements, and also result in a smaller population of active members going forward to support a larger retiree population.

Texas Pension Review Board Guidelines

Under generally accepted actuarial practice, a sound funding policy should provide monies sufficient to cover the current year normal cost and amortize the UAAL over a reasonable period. Guidelines issued by the Texas Pension Review Board recommend a funding policy that will amortize the UAAL over not more than 40 years, with 25-30 years being a more preferable target.

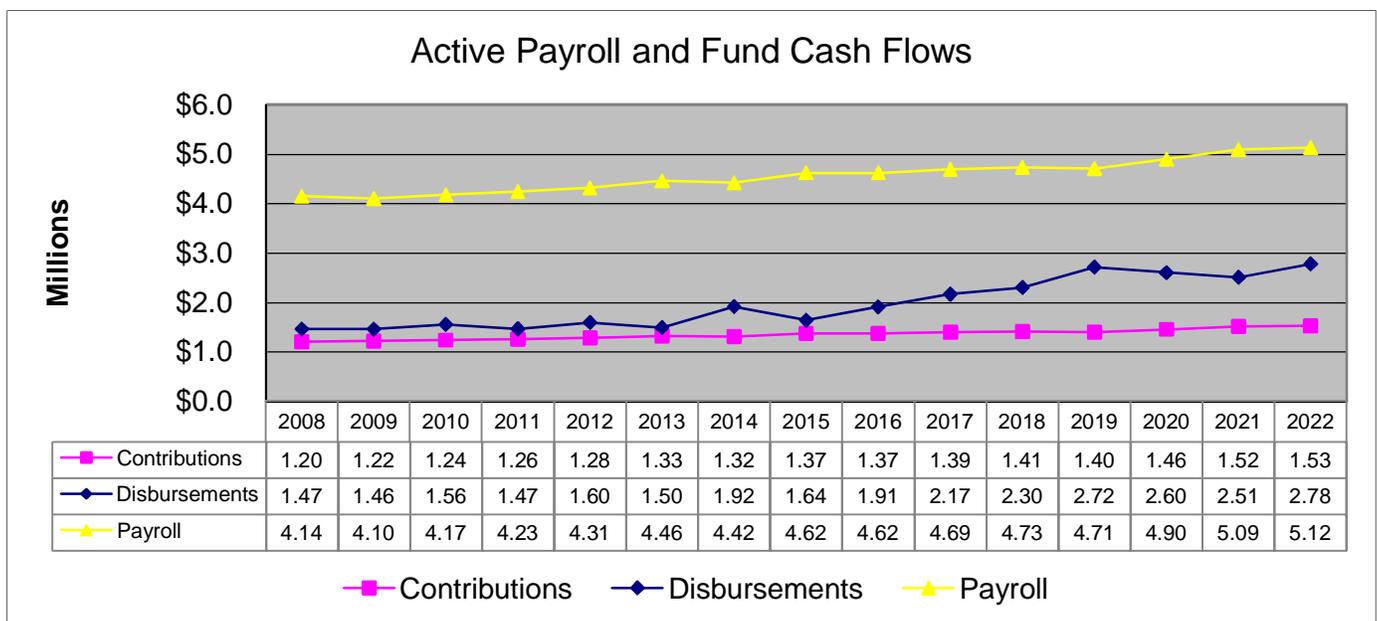
Firefighter contribution rates increased from 11.00% to 12.2% of pay effective October 10, 2007. City contribution rates increased from 14.00% to 17.00% of pay effective October 10, 2007, increased again to 17.52% effective January 1, 2009. Based on 2008 valuation results and provided future plan experience is consistent with the valuation basis, the 2009 contribution rate totaling 29.72% of pay will not be adequate to amortize the UAAL (infinite amortization period) as developed in Exhibits 3.5 and 3.6:

- *PRB Minimum*: Increasing the total contribution rate to 36.0% will reduce the expected amortization period to 40 years under the level % of pay method assuming a 2.0% annual payroll growth rate.
- *PRB Preferred*: Increasing the total contribution rate to 38.3% will reduce the expected amortization period to 30 years under the level % of pay method assuming a 2.0% annual payroll growth rate.

2.5 Open Group Forecast Valuation

The measurements of liabilities and costs summarized in the funding policy analysis are based only on the current group of plan members as of the measurement date, what is generally referred to as a closed group valuation. Based on the results from the 2008 valuation, we can project pension plan liabilities and costs using an open group forecast assuming a stable number of active employees.

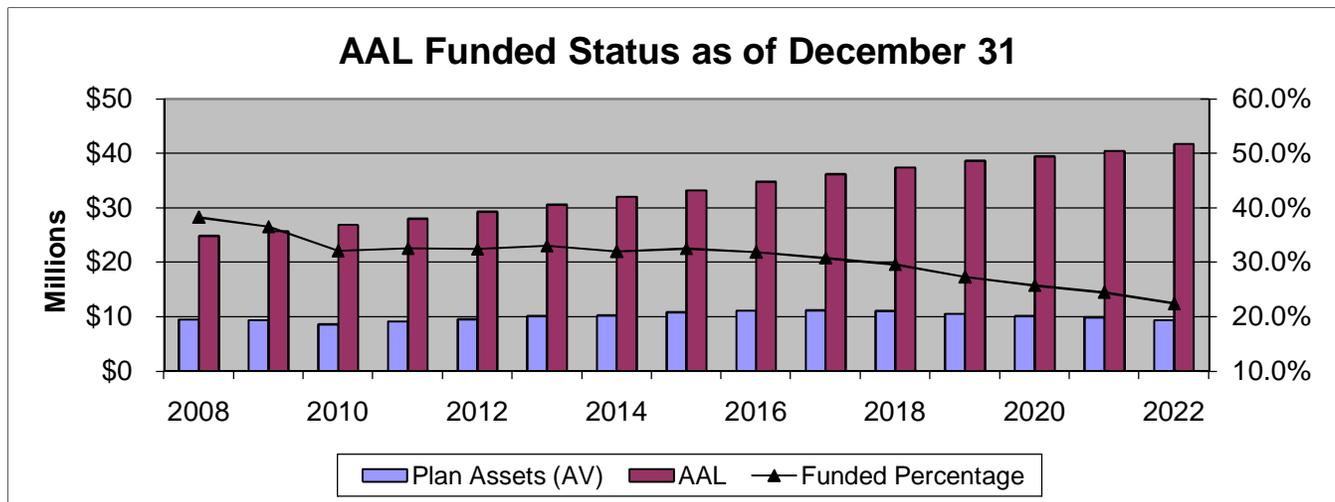
As members of the current workforce exit according to assumed rates of termination, disability, retirement and death, we assume they are replaced by entry-level Firefighters with an average age of 26 and average salary of \$43,000 (current dollars). As illustrated below, although salary increases for individual active employees are assumed to increase at 3.0% per annum, total payroll is expected to increase at an average annual rate of 1.4% over the next 15 years, as more experienced/higher paid Firefighters retire and are replaced by younger/lower paid new hires:



As noted earlier, total disbursements have exceeded total contributions for the last several years, resulting in negative net cash flow to the Fund. Based on the 2009 contribution rate totaling 29.72%, the plan will continue to experience negative net cash flows, with expected benefit payments and expenses exceeding contributions more than \$9.3 million on a cumulative basis over the next 15 years.

2.5 Open Group Forecast Valuation (continued)

Below is a projection of plan assets compared to the AAL, assuming plan experience is consistent with the actuarial assumptions, including an average annual rate of return on the Fund of 7.5%. Based on the 2008 valuation results and provided future plan experience is consistent with the valuation basis, the 2009 contribution rate totaling 29.72% of pay will not be sufficient to amortize the UAAL. Funded status will continue to deteriorate as plan liabilities will grow at a faster rate than plan assets due to negative net cash flows, projected to decrease from 38.2% to 22.4% over the next 15 years:



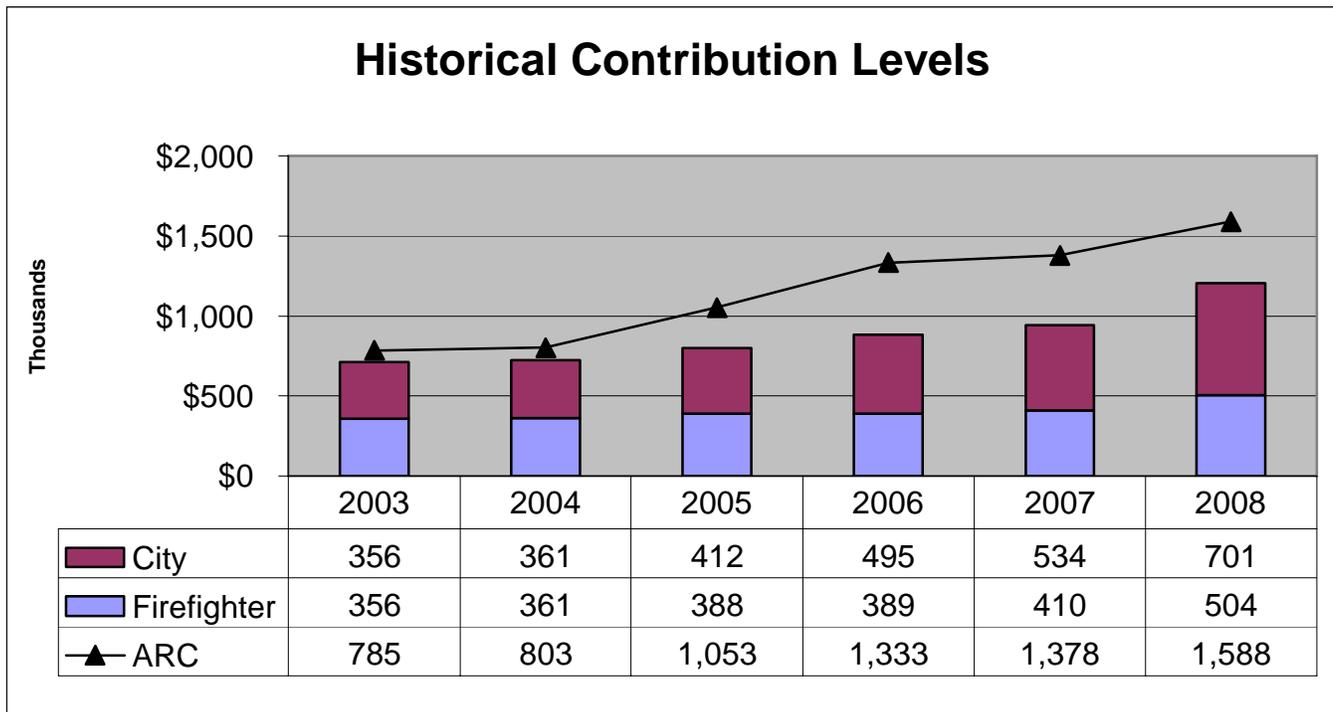
The steep drop in funded status over the period 2009-2010 is due to operation of the asset smoothing method, as the extraordinary investment losses on fair value of plan assets during 2008 are gradually recognized in the actuarial value of assets. Future investment returns in excess of the 7.5% long-term interest rate assumption will create actuarial gains and improve funded status, and actual returns below 7.5% will have the opposite effect.

2.6 GASB 25 Accounting Information

To ensure consistent financial reporting and actuarially sound long-term funding policy by the retirement system, GASB 25 requires calculation and disclosure of the *annual required contribution (ARC)*. This minimum funding guideline is calculated as the sum of two components:

- Normal Cost: The portion of APVPB assigned to the current year by the actuarial cost method.
- Amortization Cost: Repayment of the UAAL determined as a level-dollar or level-percent of pay amortization over a maximum period of 40 years (reduced to 30 years after June 15, 2006).

For plans receiving actual contributions more or less than the ARC amount, an additional amortization of the funding excess or deficiency must be included in the ARC calculation for the following year. In spite of recent increases in contribution rates, the graph below illustrates that combined funding by Firefighters and the City has not been sufficient to cover the ARC for the last several years:



The GASB 25 annual required contribution for plan years 2005-2007 was developed using the level dollar amortization method. As part of the changes in actuarial methods and assumptions adopted with the 2008 actuarial valuation, the ARC was developed using the level percentage of pay method with a 2.0% annual payroll growth assumption.

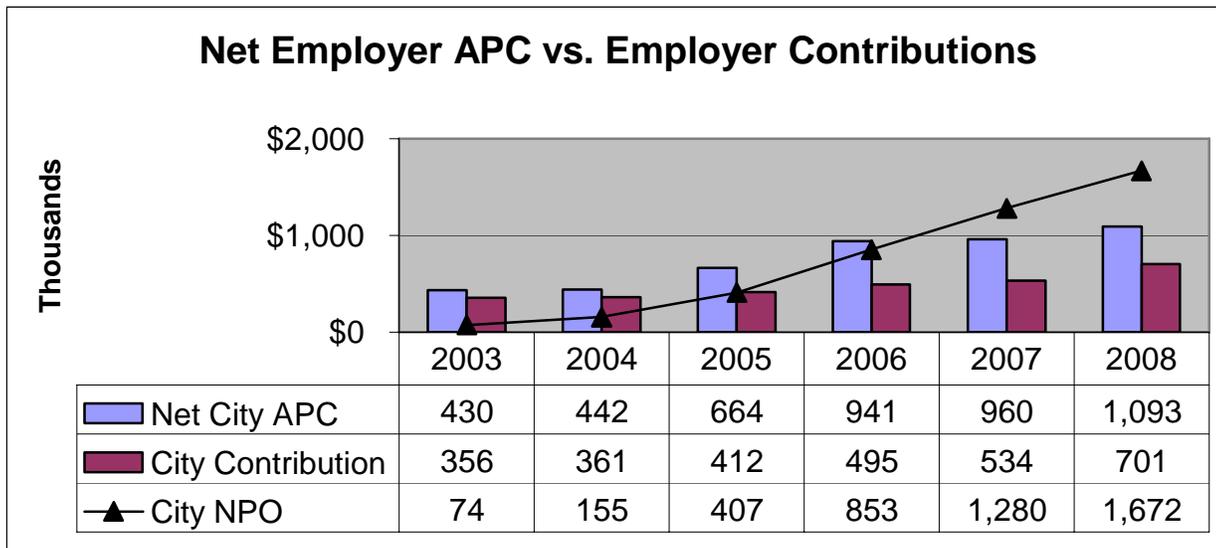
2.7 GASB 27 Accounting Information

In addition to the financial reporting and disclosure required for the retirement plan under GASB 25, the governmental entity sponsoring the retirement program has additional financial reporting and disclosure requirements under GASB 27. This standard generally requires employers to recognize annual pension cost (APC) equal to the GASB 25 annual required contribution (ARC), net of employee contributions.

If actual employer funding is less than (or greater than) the APC, the employer must recognize a liability (or asset) on its balance sheet referred to as the *net pension obligation (NPO)*. This employer balance sheet liability is calculated as the sum of three components:

- Cumulative difference between net employer annual pension cost and actual contributions.
- Interest on the net pension obligation at the rate assumed for the actuarial valuation.
- Adjustment for amortization of any funding shortfall already included in the GASB 25 ARC.

As summarized below, City contributions have not been sufficient to cover the net APC under GASB 27 for several years. This funding shortfall has resulted in an emerging balance sheet liability for the City, increasing to \$1.67 million as of December 31, 2008:



Based on the 2008 valuation results and provided future plan experience is consistent with the valuation basis, the 2009 contribution rate totaling 29.72% of pay will not be sufficient to cover the net employer APC under GASB 27. Assuming 2009 payroll of \$4.23 million, the projected NPO balance sheet liability is expected to reach \$2.1 million by December 31, 2009.

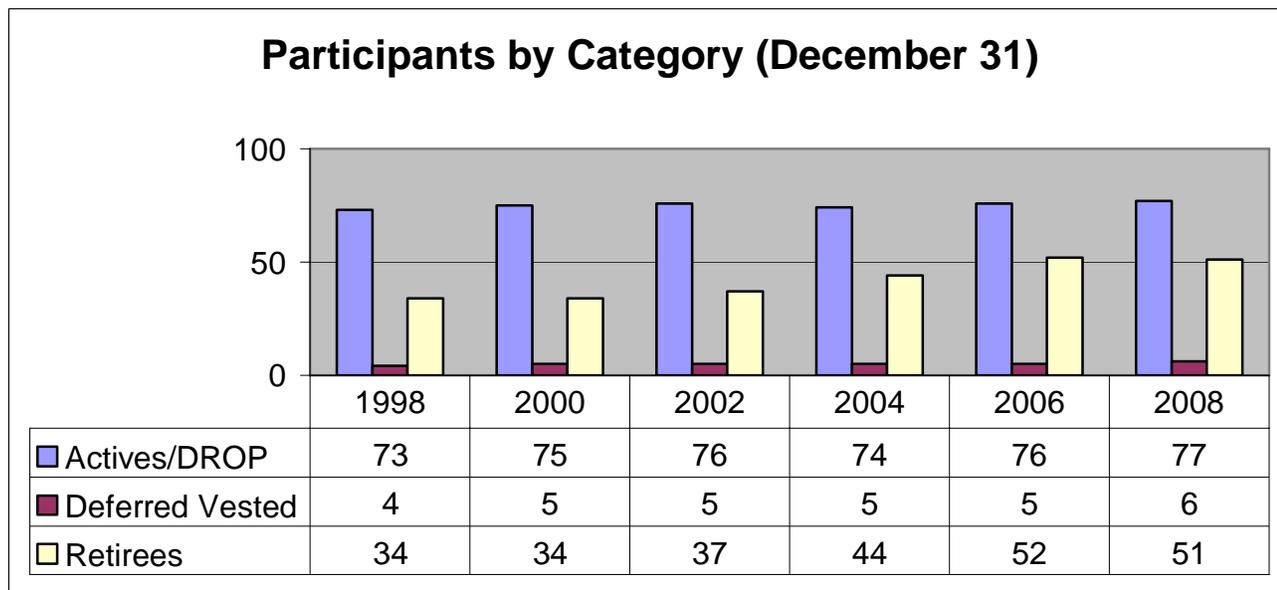
2.8 Membership Demographics

There were 77 active members covered by the Fund as of December 31, 2008, compared to 76 from the prior valuation as of December 31, 2006. Total valuation payroll increased from \$3.55 million to \$4.15 million (about 8.0% annual rate) while average valuation pay increased from \$46,749 to \$53,880 (about 7.4% annual rate). Average age increased from 34.6 years to 36.0 years, while average service increased from 8.7 years to 9.7 years, which is consistent with a fairly stable active workforce.

The number of inactive members with deferred payments/refunds due increased slightly from 5 to 6. The number of retired and disabled members in pay status decreased slightly from 52 to 51, with the average annual benefit payments increasing \$21,753 to \$22,544 (about 1.8% annual rate).

Please see Exhibit 4.1 for a summary of census data used in the valuation as of December 31, 2008, along with prior valuation data as of December 31, 2006. Exhibit 4.2 provides a reconciliation of census data by member group and exhibit 4.3 provides a distribution of active members by age and service.

As indicated in the chart below, the number of active and terminated vested members has remained fairly stable over the last 10 years, but the number of retired and disabled members has increased 50.0% over the same period. There were about 2.2 active members per every retired member receiving payments back in 1998, but this ratio had decreased to 1.5 active members per retired member by 2008:



2.9 Actuarial Methods and Assumptions

Introduction

Sponsoring a defined benefit pension plan is a long-term commitment, with the ultimate cost dependent on a number of financial and demographic variables. The actuarial valuation process uses a mathematical model and applies actuarial assumptions to predict these future events. Periodic updates of the actuarial valuation process are necessary to ensure the model is financially sound, comparing emerging plan asset and liability experience to valuation projections to measure actuarial gains and losses, making adjustments to the long-term actuarial assumptions if appropriate.

Actuarial Standards of Practice (ASOP)

ASOP No. 27 provides a framework for the actuary in providing advice on development of economic actuarial assumptions, but makes an important distinction that the client is ultimately responsible for the final selection of these assumptions, at least for purposes of financial accounting disclosures under SFAS Nos. 87 and 88 as well as GASB Nos. 25 and 27. Because no one knows for certain what the future holds with respect to volatile financial markets and a dynamic global economy, ASOP No. 27 emphasizes use of professional judgment to develop a best estimate range for each economic assumption, and then select a specific point within that range.

Under generally accepted actuarial principles, each individual assumption should represent a best estimate of expected long-term experience, and should also be reasonable and realistic in the aggregate. GASB 25 and GASB 27 accounting standards confirm that actuarial assumptions should be based on the actual plan experience (to the extent credible), emphasizing expected long-term future trends rather than giving undue weight to recent past experience.

ASOP No. 35 requires the actuary to use professional judgment in the selection of demographic and other non-economic actuarial assumptions considering the relevant universe of possible choices. It also directs the actuary to consider the specific characteristics of the particular benefit provisions and covered group of the plan being valued.

Reasonable demographic assumptions are defined as those that are expected to appropriately model the contingency being measured without producing any significant cumulative actuarial gains and losses over the measurement period. ASOP No. 35 encourages the use of more sophisticated approaches if appropriate for the situation (e.g. large plans) while also acknowledging that simplified techniques may actually be more accurate in other situations (e.g. small plans).

Please see Exhibit 4.4 for a summary of actuarial assumptions and methods used for the 2008 valuation of the Fund. The amounts presented in this actuarial report have been determined according to the actuarial assumptions and methods selected by the Board of Trustees, although we encourage further study of plan experience and consideration of a more conservative valuation basis going forward. Below is a summary of changes made for the 2008 valuation and other areas where we suggest additional review:

- Interest rate assumption and asset smoothing.
- Salary scale, payroll growth and UAAL amortization method.
- Mortality table assumption.

2.9 Actuarial Assumptions and Methods (continued)

Interest Rate

The interest rate is the most powerful assumption in the actuarial valuation process, used to project the average rate of return expected on assets and also used to discount future benefit payments in the actuarial present value calculations. To illustrate the sensitivity, a one-percentage-point increase in the interest rate assumption will generally decrease plan liabilities and cost 15% to 20% based on plan demographics.

The net rate of return on the fair value of assets was +6.3% for plan year 2007 and -26.1% for plan year 2008. The average annual rate of return was -0.55% over the period 1999-2008, with the Fund failing to earn the 7.5% long-term interest assumption in 7 of the last 10 years as illustrated in Section 2.1 of this report. In response to the financial market meltdown during 2008 and precipitous drop in the fair value of plan assets, the Fund has already taken some steps to adjust the actuarial methods and assumptions:

- The long-term interest rate assumption was lowered from 8.00% to 7.75% as of December 31, 2006, and further decreased to 7.50% for the current valuation as of December 31, 2008.
- An asset smoothing method was adopted, so that volatile actuarial gains and losses on the fair market value of plan assets are spread over a 3-year period, subject to corridor limits not less than 80% and not greater than 120% of the fair value of assets, with the change effective December 31, 2008.

Based on past plan experience and the continuing turmoil in the global economy and financial markets, we strongly encourage the Board to discuss the interest rate with its investment advisors. The changes already made are a step in the right direction towards a more conservative valuation basis, but further decreases in the interest rate may be necessary to ensure this critical assumption remains consistent with long-term risk/return expectations for the Fund.

Salary Scale

The salary scale used to project expected future pay increase for active members is also an important assumption used in actuarial valuation model, having about 50% to 75% of the impact that would result from a change in the interest rate assumption of similar magnitude. The Fund had historically used a long-term salary scale assumption of 3.50%, which the Board elected to decrease to 3.00% effective with the prior valuation as of December 31, 2006.

Basic valuation census indicates that actual pay increases have been significantly higher than the 3.00% assumed rate years. Average valuation pay increased from \$41,103 to \$46,749 (6.7% annual rate) over the period 2004-2006, and from \$46,749 to \$53,880 (7.4% annual rate) over the period 2006-2008.

It is important to note that the salary scale assumption should encompass more than just cost-of-living increases, but should also take into account other sources of pay increases including merit, promotion and periodic changes in the overall compensation structure. We suggest performing a detailed analysis of pay increase experience, to determine if a higher/more conservative salary scale assumption in the range of 5.00% to 6.00% may be more appropriate.

2.9 Actuarial Assumptions and Methods (continued)

Amortization Method and Payroll Growth

There are several different amortization methods within generally accepted actuarial and accounting practice, each of which applied properly, will determine annual contribution requirements that will meet plan obligations for benefit payments and expenses as they come due. The amortization methods differ in how rapidly the *unfunded actuarial accrued liability (UAAL)* will be paid off.

Under the level dollar amortization method, the *UAAL* is paid off similar to a traditional home mortgage consisting of interest on the *UAAL* plus principal. As the name implies, the total amortization payment is a fixed or “level dollar” amount, with the interest component declining and the principal increasing over the term of the amortization period. Under the level percentage of pay methodology, the dollar amount of amortization payment increases over time based upon an assumed growth in total payroll, but remaining level as a percentage of the payroll base.

It is important to note the level percentage of pay method may not produce an amortization amount sufficient to cover interest due on the *UAAL* over the short-term based on the regular valuation interest rate assumption, in effect paying a lower rate of interest temporarily similar to adjustable rate mortgage products. The level dollar method is more conservative because it will reduce the *UAAL* more rapidly, with amortization payments as a percentage of pay highest in the initial year, gradually decreasing to zero by the end of the amortization period.

For the level percent of pay method, the assumption used to project growth in total payroll for calculating amortization of the *UAAL* should not necessarily be the same as the salary scale assumption. Individual members may experience this rate of pay growth as they progress through their careers, but those exiting the workforce (due to termination, retirement, etc.) will in effect be replaced by lower paid entry level employees. Assuming the number of employees remains constant (i.e. no increase in head count), the net growth in total payroll will generally be 0.50% to 2.00% less than the salary scale assumption and closer to the basic inflation rate.

The amortization method was changed from level dollar to level percentage of pay in conjunction with the 2008 actuarial valuation, assuming that total payroll will grow at 2.00% per annum going forward. Like the recent experience for average pay, however, total payroll has increased at higher rates based on recent valuation results. We suggest performing a detailed analysis of payroll growth experience to determine if a higher assumption in the range of 4.00% to 5.00% may be more appropriate.

Mortality Assumption

Although not as powerful in the valuation model as investment return, the mortality assumption is still an important factor in the actuarial valuation process. The Fund has used the 1983 Group Annuity Mortality table (1983-GAM) in past years, which is becoming outdated based on more recent studies by the Society of Actuaries indicating a trend of improving life expectancies, particularly for males. In conjunction with the other changes in the actuarial methods and assumptions, a static RP-2000 mortality table with Projection Scale AA was used for the 2008 actuarial valuation.

3.1 Fair Value of Plan Assets

Asset Values as of December 31			
	<u>2006</u>	<u>2007</u>	<u>2008</u>
A. Fair Value of Plan Assets			
1. Cash Reserves	\$0	\$0	\$0
2. Money Markets	\$467,154	\$590,094	\$438,796
3. Treasury Securities	\$1,037,987	\$0	\$0
4. Corporate Bonds	\$689,470	\$1,344,192	\$1,071,696
5. Government Participations	\$1,554,526	\$1,616,054	\$1,495,078
6. Real Estate	\$0	\$0	\$0
7. Common Stock	\$5,620,515	\$4,584,244	\$2,270,277
8. Preferred Stock	\$0	\$0	\$0
9. International Investments	\$1,245,155	\$1,734,386	\$996,942
10. Alternative	\$0	\$1,044,217	\$1,672,525
11. Net Accruals	(\$2,528)	(\$51,768)	(\$64,558)
12. Total Fair Value	<u>\$10,612,279</u>	<u>\$10,861,419</u>	<u>\$7,880,756</u>
B. Change in Fair Value			
	<u>Change</u>	<u>Change</u>	
1. Contributions			
a. Firefighters	\$410,319	\$503,591	
b. City	\$533,523	\$700,739	
c. Total	<u>\$943,842</u>	<u>\$1,204,330</u>	
2. Disbursements			
a. Service and Early Retirement	(\$990,231)	(\$1,027,115)	
b. Disability (On-Duty)	(\$6,895)	(\$6,895)	
c. Spouses Benefits	(\$111,996)	(\$95,807)	
d. QDRO Payments	(\$3,706)	(\$3,706)	
e. Children's Benefits	(\$771)	(\$6,423)	
f. Disability (Off-Duty)	\$0	\$0	
g. Drop Lump Sum	(\$181,725)	(\$146,381)	
h. Refund of Contributions	(\$54,002)	(\$86,452)	
i. Balance adjustment	\$0	\$0	
j. Total	<u>(\$1,349,326)</u>	<u>(\$1,372,779)</u>	
3. Investment Return			
a. Interest and Dividends	\$325,717	\$269,128	
b. Realized and Unrealized Gain/(Loss)	\$451,239	(\$2,987,059)	
c. Plan Expenses	(\$122,332)	(\$94,283)	
d. Total Return	<u>\$654,624</u>	<u>(\$2,812,214)</u>	
4. Net Change	<u>\$249,140</u>	<u>(\$2,980,663)</u>	
5. Average Rate of Return			
a. Average Asset Value	\$10,409,537	\$10,777,195	
b. Income Net of Expenses	\$654,624	(\$2,812,214)	
c. Annual Rate of Return	6.29%	-26.09%	
6. Investment Gain/(Loss)	(\$152,115)	(\$3,647,447)	

3.2 Actuarial Value of Plan Assets

	Asset Values as of December 31		
	2006	2007	2008
A. Actuarial Value of Assets			
1. Fair Value at Prior Valuation	\$10,465,089	\$10,612,279	\$10,861,419
2. Contributions for Prior Year	\$883,528	\$943,842	\$1,204,330
3. Disbursements for Prior Year	(\$1,686,265)	(\$1,349,326)	(\$1,372,779)
4. Interest at Valuation Rate on:			
a. Item 1	\$837,207	\$822,451	\$841,760
b. Item 2	\$35,341	\$36,574	\$46,668
c. Item 3	(\$67,451)	(\$52,286)	(\$53,195)
5. Expected Value at Year End	<u>\$10,467,449</u>	<u>\$11,013,534</u>	<u>\$11,528,203</u>
6. Actual Fair Value at Year End	<u>\$10,612,279</u>	<u>\$10,861,419</u>	<u>\$7,880,756</u>
7. Gain/(Loss) [6. - 5.]	\$144,830	(\$152,115)	(\$3,647,447)
8. Amount Deferred for 2008			(\$2,431,631)
9. Amount Deferred for 2007			(\$50,705)
10. Amount Deferred for 2006			N/A
11. Preliminary Actuarial Value [6. - 8. - 9.]			\$10,363,092
12. Corridor Limits:			
a. 80% of Fair Value			\$6,304,605
b. 120% of Fair Value			\$9,456,907
13. Final Actuarial Value	\$10,612,279	\$10,861,419	\$9,456,907
B. Change in Asset Values			
1. Contributions			
a. Firefighters	\$410,319	\$503,591	
b. City	\$533,523	\$700,739	
c. Total	<u>\$943,842</u>	<u>\$1,204,330</u>	
2. Disbursements	(\$1,349,326)	(\$1,372,779)	
3. Investment Return - Net of Expenses			
a. Expected Return	\$822,452	\$841,760	
b. Gain/(Loss) Adjustment	(\$167,828)	(\$1,171,638)	
c. Corridor Adjustment	\$0	(\$906,185)	
d. Total	<u>\$654,624</u>	<u>(\$1,236,063)</u>	
4. Net Change	\$249,140	(\$1,404,512)	
5. Average Rate of Return			
a. Average Asset Value	\$10,409,537	\$10,777,195	
b. Income Net of Expenses	\$654,624	(\$1,236,063)	
c. Annual Rate of Return	6.29%	-11.47%	

3.3 Actuarial Present Value of Projected Benefits

	<u>December 31, 2006</u>	<u>December 31, 2008</u>
A. Assumptions		
1. Discount Rate	7.75%	7.50%
2. Mortality	1983 GAM	RP 2000 Projected
B. Present Value of Projected Benefits		
1. Active	\$12,344,438	\$16,874,894
2. Accumulated DROP	\$298,429	\$68,635
3. Terminated Vested	\$586,166	\$346,079
4. Disabled	\$621,570	\$81,310
5. Retired	\$11,297,826	\$12,317,200
6. Total	<u>\$25,148,429</u>	<u>\$29,688,118</u>
C. Change in Present Value of Projected Benefits		<u>Change</u>
1. New Entrants		\$857,061
2. Benefits Accumulated		\$0
3. Benefits Paid		(\$2,722,105)
4. Decrease in Discount Period		\$3,829,916
5. Plan Experience		\$821,954
6. Actuarial Assumptions		\$1,693,998
7. Actuarial Methods		\$0
8. Plan Amendments		\$58,865
9. Net Change		<u><u>\$4,539,689</u></u>
D. Actuarial Value of Assets	\$10,612,279	\$9,456,907
E. Funded Status	42.2%	31.9%
F. Present Value of Future Payroll	\$29,342,100	\$33,286,300
G. Present Value of Future Contributions		
1. Firefighter	\$3,227,631	\$4,060,929
2. City	\$4,107,894	\$5,831,760
3. Total	<u>\$7,335,525</u>	<u>\$9,892,689</u>
H. Actuarial Present Value of Future Funding Required from Other Sources [B(6) - D - G(3)]	\$7,200,625	\$10,338,522

3.4 Actuarial Accrued Liability and Normal Cost

	<u>December 31, 2006</u>	<u>December 31, 2008</u>
A. Assumptions		
1. Discount Rate	7.75%	7.50%
2. Mortality	1983 GAM	RP 2000 Projected
B. Actuarial Accrued Liability (EAN)		
1. Active	\$8,360,330	\$11,964,215
2. Accumulated DROP	\$298,429	\$68,635
3. Terminated Vested	\$586,166	\$346,079
4. Disabled	\$621,570	\$81,310
5. Retired	<u>\$11,297,826</u>	<u>\$12,317,200</u>
6. Total	<u>\$21,164,321</u>	<u>\$24,777,439</u>
C. Actuarial Value of Assets	<u>\$10,612,279</u>	<u>\$9,456,907</u>
D. Unfunded Actuarial Liability	<u><u>\$10,552,042</u></u>	<u><u>\$15,320,532</u></u>
E. Change in Unfunded Actuarial Accrued Liability		<u>Change</u>
1. Contributions		(\$2,148,172)
2. Benefits Accumulated		\$1,005,500
3. Decrease in Discount Period		\$1,645,919
4. Plan Asset Experience		\$3,799,562
5. Plan Liability Experience		\$735,298
6. Actuarial Assumptions		\$1,269,924
7. Actuarial Methods		(\$1,576,151)
8. Plan Amendments		<u>\$36,610</u>
9. Net Change		<u><u>\$4,768,490</u></u>
F. Funded Status	50.1%	38.2%
G. Present Value of Future Normal Cost	\$3,984,108	\$4,910,679
H. Normal Cost (EAN)	\$483,995	\$599,486
I. Covered Payroll	\$3,552,919	\$4,148,732
J. Normal Cost % of Payroll	13.62%	14.45%

3.5 Funding Policy Guidelines

	<u>December 31, 2006</u>	<u>December 31, 2008</u>
A. Minimum ¹		
1. Normal Cost	\$483,995	\$599,486
2. 40-year Amortization (Level %)	\$633,775	\$893,132
3. Total Funding Policy	<u>\$1,117,770</u>	<u>\$1,492,618</u>
4. Percentage of Payroll	31.46%	35.98%
B. Preferred ²		
1. Normal Cost	\$483,995	\$599,486
2. 30-year Amortization (Level %):	\$697,745	\$988,320
3. Total Funding Policy	<u>\$1,181,740</u>	<u>\$1,587,806</u>
4. Percentage of Payroll	33.26%	38.27%
B. Alternative ³		
1. Normal Cost	\$483,995	\$599,486
2. 30-year Amortization (Level \$):	\$849,458	\$1,206,705
3. Total Funding Policy	<u>\$1,333,453</u>	<u>\$1,806,191</u>
4. Percentage of Payroll	37.53%	43.54%

Notes

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- 1 Recommended minimum funding policy under Texas Pension Review Board guidelines based on amortization of Unfunded Actuarial Liability not to exceed 40 years. Preferred funding policy based on maximum amortization period of 25 - 30 years.
 - 2 Annual Required Contribution (ARC) under GASB 25 rules originally based on maximum 40 year amortization of Unfunded Actuarial Liability, reducing to 30 years after June 15, 2006.
 - 3 Level % amortization amounts assume 2.0% annual growth in payroll; alternative funding policy based on more conservative level dollar amortization method of UAAL principal and interest over 30 years.

3.6 Expected Amortization Period

	<u>December 31, 2008</u>
A. Discount Rate	7.50%
B. Present Value Future Compensation (PVFComp)	\$33,286,300
C. Present Value Future Contributions (PVFContrb)	\$9,892,689
D. Present Value Projected Benefits (PVFB)	\$29,688,118
E. Actuarial Accrued Liability (AAL)	<u>\$24,777,439</u>
F. Present Value of Future Normal Costs (PVFNLC) % of PVFComp	\$4,910,679 14.75%
G. PVFContrb available to payoff UAL % of PVFComp	\$4,982,010 14.97%
H. Valuation Compensation	\$4,148,732
I. Current Contribution Available to pay off UAL	\$621,065
J. Expected Amortization Period	
1. Annual Payroll Growth 1.5%	infinity
2. Annual Payroll Growth 2%	infinity
3. Annual Payroll Growth 3%	infinity

3.7 GASB 25 Accounting Information

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b-a)/(c)
12/31/2000	\$11,018,263	\$13,937,639	\$2,919,376	79.1%	\$2,685,849	108.7%
12/31/2002	\$9,611,084	\$15,317,650	\$5,706,566	62.7%	\$3,226,247	176.9%
12/31/2004	\$10,673,969	\$17,613,892	\$6,939,923	60.6%	\$3,041,650	228.2%
12/31/2006	\$10,612,279	\$21,164,321	\$10,552,042	50.1%	\$3,552,919	297.0%
12/31/2008	\$9,456,907	\$24,777,439	\$15,320,532	38.2%	\$4,148,732	369.3%

The economic assumptions used for the 12/31/2008 actuarial valuation include:

Investment Return	7.50%
Projected Salary Increases	3.00%
Payroll Growth Assumption	2.00%

3.8 GASB 27 Accounting Information

A. Fund Membership		December 31, 2008
1. Retired members and their beneficiaries		51
2. Vested terminated members		6
3. Active members		77
Electing DROP	1	
Vested	33	
Nonvested	43	
4. Total Fund Membership		134

B. Annual Employer Contribution Requirement

Fiscal Year Ending	Total Annual Required Contribution (ARC)	Member Contributions	Net Employer Annual Pension Cost (APC)	Employer Contributions	Percentage of APC Contributed
12/31/2002	\$ 701,778	\$ 350,889	\$ 350,889	\$ 350,889	100.0%
12/31/2003	\$ 785,384	\$ 355,800	\$ 429,584	\$ 355,800	82.8%
12/31/2004	\$ 803,257	\$ 360,849	\$ 442,123	\$ 360,849	81.6%
12/31/2005	\$ 1,052,872	\$ 388,017	\$ 664,257	\$ 412,016	62.0%
12/31/2006	\$ 1,333,453	\$ 388,544	\$ 941,146	\$ 494,984	52.6%
12/31/2007	\$ 1,377,957	\$ 410,319	\$ 959,751	\$ 533,523	55.6%
12/31/2008	\$ 1,587,806	\$ 503,591	\$ 1,093,189	\$ 700,739	64.1%

C. Reconciliation of Net Pension Obligation (NPO)

	2007	2008	2009*
1. Balance at Beginning of Year	\$ 853,461	\$ 1,279,689	\$ 1,672,139
2. Changes During Year			
a. Net Employer ARC	\$ 967,638	\$ 1,084,215	\$ 1,115,704
b. Interest on NPO	66,143	95,977	125,410
c. Amortization Adjustment on ARC	(74,030)	(87,003)	(113,685)
d. Employer Contribution	(533,523)	(700,739)	(741,395)
3. Balance at End of Year	\$ 1,279,689	\$ 1,672,139	\$ 2,058,173

* Projected assuming no changes from 2008 valuation basis and no actuarial gain/loss.

4.1 Demographic Summary

	<u>December 31, 2006</u>	<u>December 31, 2008</u>
A. Active Members		
1. Number	76	77
2. Covered payroll	\$3,552,919	\$4,148,732
3. Average pay	\$46,749	\$53,880
4. Average age	34.6	36.0
5. Average service	8.7	9.7
B. Terminated - Refund Due		
1. Number	2	2
2. Sum of EE Contributions	\$24,542	\$19,162
3. Average Refund Due	\$12,271	\$9,581
C. Deferred vested		
1. Number	3	4
2. Total Retirement Benefits	\$47,600	\$47,267
3. Average benefits	\$15,867	\$11,817
D. Disabled		
1. Number	3	1
2. Total Retirement Benefits	\$55,222	\$6,895
3. Average benefits	\$18,407	\$6,895
E. Retired		
1. Number	49	50
2. Total benefits	\$1,075,957	\$1,142,844
3. Average benefits	\$21,958	\$22,857

4.2 Data Reconciliation

	<u>Active</u>	<u>Deferred Refund</u>	<u>Deferred Inactive</u>	<u>Disabled</u>	<u>Retired</u>	<u>Total</u>
December 31, 2006 Valuation	76	2	3	3	49	133
Change Due To:						
New hires and rehires	14	0	0	0	0	14
Termination (Vested)	(1)	0	1	0	0	0
Termination (Nonvested)	0	0	0	0	0	0
Retirement	(1)	0	(1)	(2)	4	0
Disability	0	0	0	0	0	0
Death without beneficiary	0	0	0	0	(2)	(2)
Death with beneficiary	0	0	0	0	0	0
Cashouts	(11)	(1)	0	0	(1)	(13)
Data corrections	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>2</u>
Net change	<u>1</u>	<u>0</u>	<u>1</u>	<u>(2)</u>	<u>1</u>	<u>1</u>
December 31, 2008 Valuation	<u>77</u>	<u>2</u>	<u>4</u>	<u>1</u>	<u>50</u>	<u>134</u>

4.3 Active Members by Age and Service

Attained Age	Years of Service as of December 31, 2008							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 & up	
Under 25	6	0	0	0	0	0	0	6
25-29	11	2	0	0	0	0	0	13
30-34	4	10	3	0	0	0	0	17
35-39	2	7	4	5	0	0	0	18
40-44	0	1	8	3	1	0	0	13
45-49	0	0	1	3	2	0	0	6
50-54	0	0	0	0	3	1	0	4
55-59	0	0	0	0	0	0	0	0
60 & up	0	0	0	0	0	0	0	0
Total	23	20	16	11	6	1	0	77

43 Not Vested	30 Vested	4 Retirement Eligible
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4.4 Assumptions and Methods

Economic Assumptions

Interest Rates:

- Investment Return 7.50 per annum (7.75% prior valuation).
- Salary Increases 3.00% per annum.

Demographic Assumptions

- Mortality RP-2000 tables for males and females projected with Scale AA (1983 Group Annuity table for males and females prior valuation), with sample rates per 100 lives summarized below:

<u>Age</u>	<u>Male</u>	<u>Female</u>
25	0.030	0.015
35	0.069	0.036
45	0.110	0.076
55	0.434	0.311
65	1.071	0.957
75	3.019	2.472

- Termination Table Excess T-3 (over GA-51) from the Actuary's Pension Handbook, with sample rates per 100 lives summarized below:

<u>Age</u>	<u>Rate</u>
25	5.27
30	4.83
35	4.47
40	3.84
45	3.21
50	1.52

- Retirement Active firefighters are assumed to retire at the later of age 53 or 20 years of service (or age on the valuation date, if older). Terminated firefighters entitled to deferred benefits are assumed to retire at age 50 or age on valuation date, if older.

4.4 Assumptions and Methods (continued)

- **Disability** Active firefighters are assumed to incur disabilities based on experience firefighter rates that vary by age as shown below, with sample rates per 100 lives summarized below:

<u>Age</u>	<u>Rate</u>
25	0.06
30	0.06
35	0.01
40	0.27
45	1.88

Disabled firefighters are assumed to experience higher mortality during their disability as based on the 1983 Group Annuity Mortality Table set forward 10 years, with sample rates per 100 lives summarized below:

<u>Age</u>	<u>Male Rate</u>
25	0.09
35	0.22
45	0.57
55	1.56
65	4.46
75	11.48

- **Loading for Subsidies** N/A
- **Marital Status** 70% of all active firefighters are assumed to be married at the time benefits commence. Males are assumed to be two years older than their spouses.
- **Changes in Assumptions** The assumed interest rate decreased from 7.75% to 7.50% and the mortality assumption was updated to a more modern table including projected improvements in life expectancy. There have been no other changes in actuarial assumptions from the prior valuation.

4.4 Assumptions and Methods (continued)

Methods

Valuation Date	December 31, 2008
Asset Valuation Method	Smoothed market value with asset gains and losses recognized over 3-years, equal to the fair value as of the measurement date less $\frac{2}{3}$ rd s of the investment gain/(loss) for the current plan year less $\frac{1}{3}$ rd of the investment gain/(loss) for the prior plan year. The smoothed market value is adjusted to remain within a corridor range of 80% to 120% of fair market value.
Actuarial Cost Method	The <u>Entry Age Normal Actuarial Cost Method</u> (EAN) is used to develop the ERISA Full Funding limitation. The present value of the projected benefit (PVB) is determined as of the date the member entered the plan (or would have entered if the plan had always been in effect). The present value of future salary (PVFS) is also determined at entry age. The percentage of the PVFS represented by the PVB is the level percent of pay which, if contributed every year, would exactly fund the benefit if the valuation actuarial assumptions were realized. The actuarial accrued liability is the theoretical value of assets which would result from the accumulation of these contributions from the plan entry until the valuation date.
DROP Provision	The present value of future benefits represents the cost in today's dollars of all future benefits to be provided under the terms of the plan to current firefighters, retirees and beneficiaries. The present value of the future DROP benefit was explicitly valued for active members attaining 20 years of service between ages 50 and 53. For current DROP members, the accumulated balance as of the valuation date was assumed to be paid out in the following year. Under this cost method, the present value is allocated as a level percentage of the compensation of the firefighters until assumed retirement.
Changes in Methods	The DROP provision has been explicitly valued. There have been no other changes in the actuarial cost methods from the prior valuation.

4.5 Plan Provisions

Effective Date	The Plan was most recently amended and restated effective March 26, 2008.
Eligibility	A firefighter shall become a member when he first becomes employed with the Lufkin Fire Department.
Service	<p>A firefighter receives credit for the number of years and months of employment with the Fire Department. It includes the period of time during which the firefighter pays into and keeps on deposit in the fund the contributions required by this plan.</p> <p>Periods of leave of absence are deemed continuous employment but shall be excluded in determining a member's service, unless the member receives regular compensation during the leave of absence and makes the required contributions based on this compensation.</p>
Compensation	<p>Compensation includes regular salary or wages, longevity and overtime pay, but excludes car allowances and lump sum distributions for unused sick leave or vacation.</p> <p>Highest 36-Month Average Salary is the average of the firefighter's compensation for the 36 consecutive calendar months of service with the department during which his total pay was highest.</p> <p>Highest 60-Month Average Salary is the average of the firefighter's compensation for the 60 consecutive calendar months of service with the department during which his total pay was highest.</p>
Contributions	City contribution rates increased from 14.00% to 17.00% effective October 10, 2007, and to 17.52% effective January 1, 2009. Firefighter contribution rates increased from 11.00% to 12.2% effective October 10, 2007.

4.5 Plan Provisions (continued)

Service Retirement

Attainment of age 50 and completion of 10 years of service (15 years of service if hired after 8/2005).

Each firefighter who retires on or after his retirement eligibility date receives a monthly retirement income equal to the sum of (a) and (b), where:

- (a) A “base” benefit of 3.35% of the Highest 60-Month Average Salary multiplied by the lesser of his years of service or 20 years; plus
- (b) A “longevity” benefit equal to \$66 for each year of service in excess of 20 years.

In no event will a retirement benefit be less than what was vested under a prior plan.

Disability Retirement

An active firefighter who has completed his probationary period is eligible for a disability benefit if he becomes disabled from any cause whatsoever for either physical or mental reasons, except for those causes specified in the plan document.

The disability benefit will commence after the expiration of all vacation and sick leave, and will continue as long as the member remains disabled. However, if the firefighter is less than 15% disabled as determined by at least two doctors, payments will be made for a maximum of five years as such determination is made. Further, disability payments may not begin as long as the firefighter is receiving a Worker’s Compensation benefit which is equal to or larger than \$100 per month.

A disability benefit is equal to the \$100 per month TLFFRA minimum disability benefit from this plan. In addition, the firefighter is provided with disability coverage under a separate disability policy provided to all municipal employees.

The Board of Trustees may require a disabled firefighter to be reevaluated from time to time in order to determine whether he has recovered or whether the percentage of disability has changed. The Board of Trustees may also require the disabled firefighter to provide evidence of income received from other sources during a period of disability.

4.5 Plan Provisions (continued)

If a disabled firefighter with credit for less than 10 years of service recovers to the extent that his disability allowance is terminated, and he does not return to the employ of the Fire Department, an amount equal to the excess, if any, of the firefighter's own contributions over the amount of disability payments which have been made on his behalf will be paid to him in a lump-sum payment.

If a disabled firefighter is age 50 with credit for at least 10 years of service (15 years of service for all firefighters hired on or after August 18, 2005), he may apply for a service retirement.

Vested Termination Benefit

Upon a firefighter's termination, he is eligible for a deferred benefit if he has completed at least 10 years of service (15 years of service for all firefighters hired on or after August 18, 2005) and agrees to leave his contributions in the Fund. The firefighter is not required to make any additional contributions to the Fund after his termination from service.

The benefit is equal to his service retirement benefit determined as of the date of separation from service. Benefits may not commence prior to attainment of age 50.

If a firefighter terminates with less than 10 years of service (15 years of service for all firefighters hired on or after August 18, 2005), he will receive an amount equal to the excess of his own contributions to the fund over the amount of benefits that he has previously received from the fund. A firefighter with 10 or more years of service (15 years of service for all firefighters hired on or after August 18, 2005) may elect a refund of his own contributions; however, he will forfeit his right to all future benefits he otherwise would have been entitled to receive.

4.5 Plan Provisions (continued)

Pre-Retirement Death Benefit

- Spouse
Upon the death of an active firefighter, a benefit is payable to his beneficiaries commencing on the first of the month following his death.
The benefit payable to the surviving spouse of a firefighter is equal to two-thirds of the service retirement benefit the firefighter would have been eligible to receive as of the date of death (without taking into consideration eligibility requirements for service retirement), but not less than 44.67% of his Highest 36-Month Average Salary. This benefit shall be paid until the earlier of remarriage or death. If the spouse remarries or subsequently divorces or again loses her new spouse to death, the spouse's pension shall be reinstated.
- Child
Each surviving unmarried child under age 18 shall receive a benefit equal to 11.17% of the firefighter's Highest 36-Month Average Salary. However, if the firefighter is unmarried or the firefighter's widow dies after being entitled to a benefit, each unmarried child will receive a benefit equal to two-thirds of the firefighter's Highest 36-Month Average Salary, but not less than 44.67% of the Highest 36-Month Average Salary. This death benefit shall be paid until age 18, or continue until age 22 as long as the child remains a full-time student. In addition, benefits are payable after age 18 for as long as a child remains totally disabled.
- Dependent Parents
If no spouse or child is entitled to a pre-retirement death benefit at the time of a firefighter's death, the amount the spouse would have received will be paid to the firefighter's dependent parents.

Post-Retirement Death Benefit

- Spouse
Upon the death of a service retiree or disabled retiree, a benefit is payable to his beneficiaries commencing on the date of death.
The benefit payable to the surviving spouse of a service retiree or disabled retiree is equal to two-thirds of the service retirement or disability retirement benefit the firefighter was receiving as of the date of death. This benefit shall be paid until the earlier of remarriage or death. If the spouse remarries and subsequently divorces or again loses her new spouse to death, the spouse's pension shall be reinstated.

4.5 Plan Provisions (continued)

➤ Child

Each surviving unmarried child under age 18 shall receive a benefit equal to 11.17% of the firefighter's Highest 36-Month Average Salary. However, if the firefighter is unmarried or the firefighter's widow dies after being entitled to a benefit, each unmarried child will receive a benefit equal to two-thirds of the firefighter's Highest 36-Month Average Salary. This death benefit shall be paid until age 18, or continue until age 22 as long as the child remains a full-time student. In addition, benefits are payable after age 18 for as long as a child remains totally disabled.

➤ Dependent Parents

If no spouse or child is entitled to a post-retirement death benefit at the time of a firefighter's death, the amount the spouse would have received will be paid to the firefighter's dependent parents.

Limitation on Death Benefits

The sum of all death benefits payable on behalf of a retired firefighter may not exceed the benefit he was receiving as of the date of his death. The sum of all death benefits payable on behalf of a non-retired firefighter may not exceed the service retirement or disability benefit that he would have been entitled to receive as of his date of death. In the event this limit is exceeded, each beneficiary is reduced pro-rata until the limit is met.

Changes in Plan Provisions

City contribution rates increased from 14.00% to 17.00% effective October 10, 2007, and to 17.52% effective January 1, 2009. Firefighter contribution rates increased from 11.00% to 12.2% effective October 10, 2007. There have been no other changes in plan provisions since the prior valuation.