



San Benito Firemen Relief and Retirement Fund

Actuarial Valuation Report
As of September 30, 2021

**Prepared by
Definiti LLC
April 12, 2022**



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April 12, 2022

Board of Trustees
San Benito Firemen Relief and Retirement Fund
1201 S. Sam Houston Blvd.
San Benito, Texas 78586

Re: SEPTEMBER 30, 2021 ACTUARIAL VALUATION

Ladies and Gentlemen:

The Board of Trustees for the San Benito Firemen Relief and Retirement Fund (“Fund”) retained Definiti LLC to perform an actuarial valuation of the Fund as of September 30, 2021. This report summarizes the results of our study including analysis of current funded status and other valuation results organized as follows:

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

The unfunded actuarial accrued liability (UAAL) was \$1.980 million (70.6% funded status) as of September 30, 2021, compared to \$2.523 million (60.9% funded status) in the prior valuation. Provided future plan experience is consistent with the underlying methods and assumptions, the current contribution policy (total 24.00% of payroll) will be sufficient to amortize the UAAL over 16.9 years based on the 2021 valuation (9.2 year decrease from the prior valuation).

Texas Pension Review Board funding policy guidelines recommends contributions that will amortize the UAAL over a preferred period of 10-25 years, not to exceed a maximum of 30 years. Therefore, the 2021 valuation confirms that the current financing arrangement remains sufficient to satisfy the PRB funding policy guidelines, provided future plan experience is consistent with the underlying methods and assumptions.

In addition, the Board adopted a funding policy that targets a 23 year closed UAAL amortization period. If the UAAL amortization period exceeds the target for two consecutive valuations, then the Board will work with its members and the City to improve the actuarial position. Since the UAAL amortization period is 16.9 years, the Fund satisfies its funding policy for the current valuation cycle.

Board of Trustees
April 12, 2022

We certify the amounts presented in the 2021 valuation report have been determined according to the actuarial assumptions and methods selected by the Board of Trustees, with review and concurrence by Definiti. However, it is important to note that future results may be materially different if actual plan experience varies significantly from the underlying valuation basis. Differences could occur for a number of reasons such as plan experience differing from underlying demographic and economic assumptions, changes in the plan provisions, or changes in the law or accounting standards. Due to the limited scope of this report, an analysis of the potential range of impact on results from any such future measurements has not been performed.

Although the scope of this Actuarial Report is as stated above, there are events and anomalies that are identified below to disclose risks associated with their impact on the plan and its cost. The assessment and disclosure of these risks and the actual future results may reasonably be expected to differ. These risks can impact pension obligations, the funded status, and the adequacy of the funding policy.

Investment Risk - As the return on the plan trust assets is subject to market return, should the actual rate of return be lower than the expected return the cost of the plan will rise and vice versa.

Asset/Liability Mismatch Risk - The changes in assets are not tied to the changes in the value of liabilities in direction or magnitude. That is, the Liabilities could increase more than expected over the same time period that the assets increase less than expected or vice-versa.

Longevity and other Demographic Risks - Cessation from employment due to termination, disability, death, or retirement may not directly align with the assumptions used to value the Actuarial Accrued Liability (AAL). Actual demographic experience of the plan population may increase or decrease the future measurement of the AAL.

Contribution Risk - The expected amortization period to amortize the Unfunded AAL as stated in this valuation presumes future contributions equal to the current fixed rate funding policy. If contributions are less than expected, the funded status will not increase as expected and could actually decrease over certain periods. The current plan funding policy indicates that the members will contribute 12.0% of their plan compensation and the City will contribute 12.00% of payroll both growing by 3.0% each year, and this valuation has not considered the possibility of unpaid contributions. If the Board knows of events that might impact the ability to follow the funding policy; these events should be discussed and evaluated as to how they may or may not impact the future funded status of the plan.

Understand that the above risks may not be independent of one another. Thus, it is important to discuss any known upcoming changes in the City of San Benito's financial position and the impact on the Fund to better identify associated risks. Please discuss with me any impending changes as soon as possible, so corresponding measures may be taken to align the pension plan liabilities with these variations.

Board of Trustees
April 12, 2022

Also understand that this valuation did not assess the likelihood or consequences of potential future changes in applicable law that would impact future benefits or funding of the plan. Should applicable law be changed, these changes will be addressed in separate actuarial communications.

The 2021 actuarial valuation was based upon member census data, financial information and plan provisions as provided by the Plan Administrator. We relied on the member census data provided and performed testing as needed to assure the reasonableness of the underlying input and the results of the study, but Definiti did not perform a full audit of the member census data. The 2021 valuation was prepared in accordance with generally accepted actuarial principles and practices including compliance with applicable Actuarial Standards of Practice issued by the Actuarial Standards Board.

Information contained in this report was prepared for the Board of Trustees. A separate GASB report was published for the City's and the Fund's financial reporting purposes. This report is not intended for any other purposes, and it should not be distributed to any outside party without the express written consent of Definiti, as significantly different results from those contained in this report may be needed for other purposes.

The undersigned has met the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" and is available to respond to any questions regarding the information contained in this report or provide further details or explanations as needed, respectfully submitted by Definiti LLC.



David A. Sawyer, FSA EA MAAA
Senior Consulting Actuary

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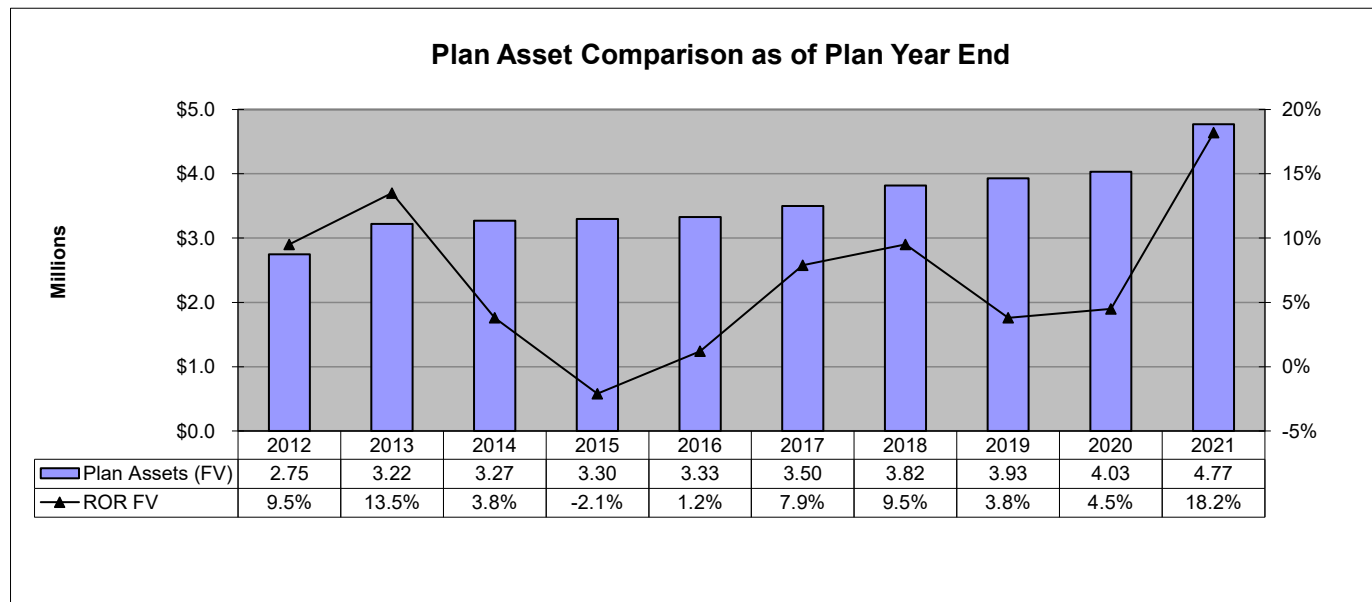
1. Valuation Highlights

FUNDING VALUATION	September 30, 2019	September 30, 2021
Fair Value of Assets	\$3,927,895	\$4,765,739
Average Annual Return: valuation year ended	3.8%	18.2%
Average Annual Return: prior year ended	9.5%	4.5%
Present Value of Projected Benefits	\$8,179,728	\$8,747,723
% funded	48.0%	54.5%
Actuarial Accrued Liability (AAL)	\$6,451,289	\$6,745,956
% funded	60.9%	70.6%
Normal Cost Rate (% of Pay)	11.60%	11.65%
Unfunded Actuarial Liability (UAAL)	\$2,523,394	\$1,980,217
% of valuation compensation	184.9%	127.1%
Expected Unfunded AAL Amortization Period (years)	26.1	16.9
Firefighter Contribution Rate (% of Pay)	12.0%	12.0%
City Contribution Rate (% of Pay)	12.0%	12.0%
Total Contribution Rate	24.0%	24.0%
PRB Contribution Rate Guidelines (as a % of payroll)		
- Minimum UAL Amortization Period (30 years)	23.1%	20.9%
- Preferred UAL Amortization Period (25 years)	24.3%	21.7%
- Preferred UAL Amortization Period (10 years)	35.4%	29.1%
DEMOGRAPHICS		
Active	22	26
Terminated with Deferred Benefits	2	1
Retirees and Beneficiaries in Pay	12	13
Total	36	40
Valuation Compensation	\$1,364,654	\$1,557,723
ASSUMPTIONS		
Investment Return	7.50%	7.50%
Salary Scale	5.50%	5.50%
Payroll Growth Assumption	4.00%	3.00%
Administrative Expense (% of Payroll)	1.60%	1.60%

2.1 Value of Plan Assets

The *fair value (FV)* of plan assets was \$4.766 million as of September 30, 2021, compared to \$3.928 million for the prior valuation as of September 31, 2019. The net increase of \$0.838 million over the two-year period is attributable to the total contributions of \$0.650 million plus an investment return of \$0.909 million (net of investment expenses), less total disbursements and administrative expenses of \$0.721 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 4.5% for plan year 2020 and 18.2% for plan year 2021, producing an average annual rate of return of 11.1% over the two-year period. As summarized in the graph below, the annual rate of return on a fair market value basis exceeded the 7.5% long-term interest rate assumption in 3 of the last 5 years (period 2017-2021), producing an average rate of return of 8.7%. However, the average annual rate of return was only 6.8% over the last 10 years (period 2012-2021).



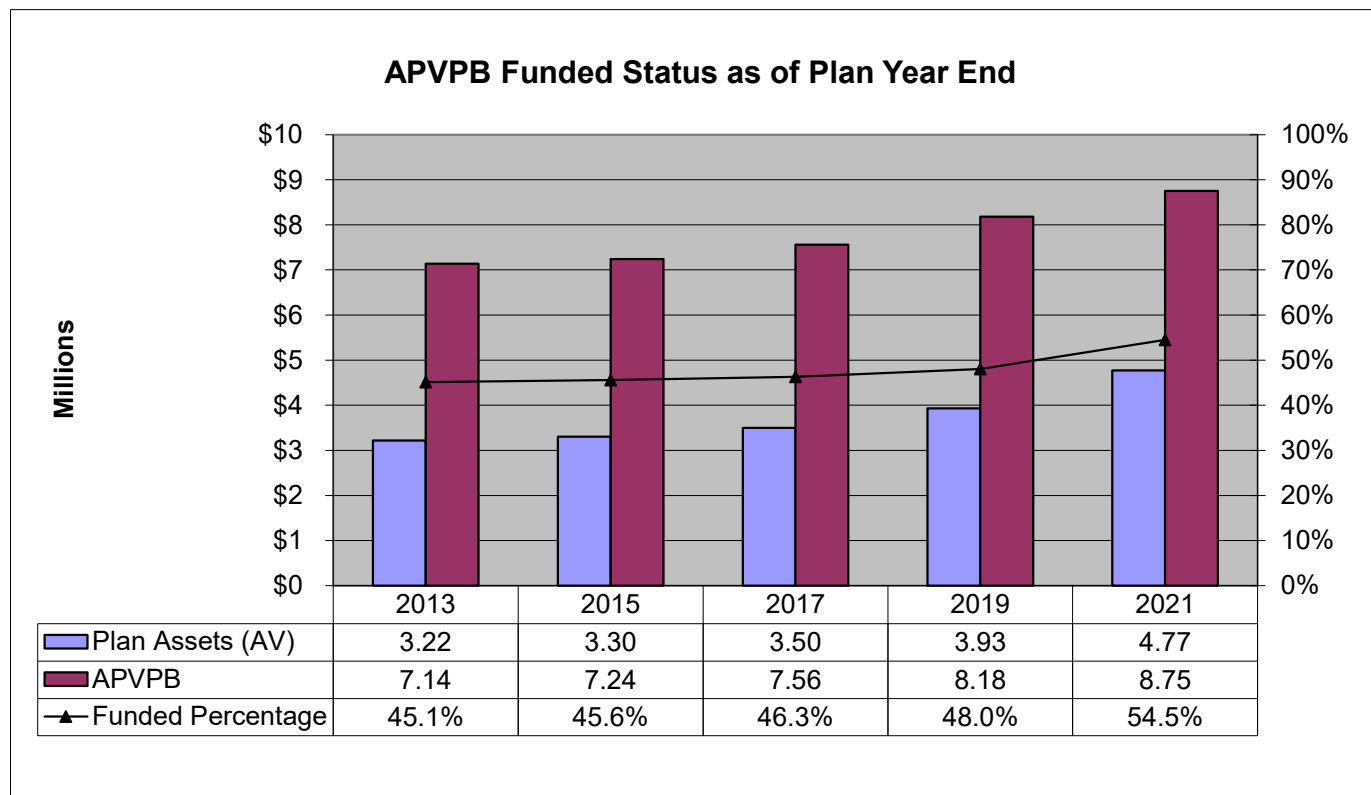
2.2 Actuarial Present Value of Projected Benefits

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/endow all future plan costs for the current population – 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 \$8.748 million as of September 30, 2021, compared to \$8.180 million for the prior valuation as of December 31, 2019. The net increase of \$0.568 million is primarily attributable to the normal operation of the plan. Please see Exhibit 3.2 for more details on the development of the APVPB.

Comparing the value of plan assets to the APVPB provides one measure of long-term funding policy progress. The funded status on this basis was 54.5% as of September 30, 2021, compared to 48.0% for the prior valuation as of December 31, 2019. Below is a historical comparison of plan assets to the APVPB.

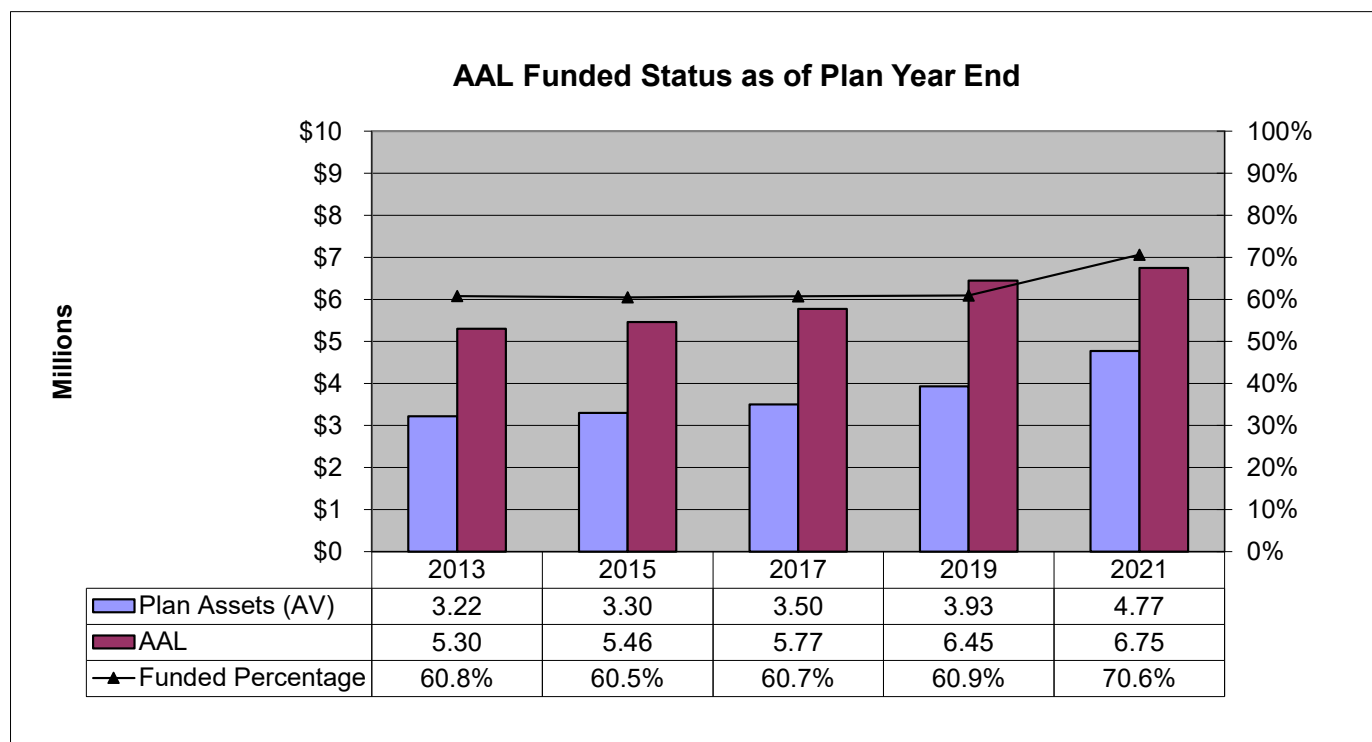


2.3 Actuarial Accrued Liability

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)*. The difference between the APVPB and the AAL represents the present value of all future normal costs (PVFNC).

Comparing AAL to plan assets provides a more appropriate measure of progress in the long-term funding policy. The *unfunded actuarial accrued liability (UAAL)* was \$1.980 million (70.6% funded status) as of September 30, 2021, compared to \$2.523 million (60.9% funded status) as of December 31, 2019.

The net UAAL decrease of \$0.543 million is primarily attributable to favorable asset experience and favorable demographic experience. Please see Exhibit 3.3 for more details on the development of the UAAL. As illustrated in the historical comparison below, until this valuation, the UAAL funded status has been relative flat over the last 8 years.



2.4 Funding Policy Analysis

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, which generally should not extend beyond the average future working lifetime of the active members.

Recently revised Texas Pension Review Board funding policy guidelines recommended contributions that will amortize the UAAL over a period of 10-25 years, not to exceed a maximum period of 30 years. Furthermore, plan improvements should not be considered if the resulting expected amortization period would exceed 25 years.

Based on the 2021 actuarial valuation and provided future plan experience is consistent with the actuarial methods and assumptions, current plan contributions (total 24.00% of pay) will be sufficient to amortize the unfunded actuarial liability in 16.9 years (9.2 year decrease from 2019 valuation). The expected amortization period decreased primarily because of the favorable asset experience. Please see Exhibits 3.4 and 3.5 for more details.

The current financing arrangement is sufficient to satisfy the PRB preferred range. As illustrated in the table below, the UAAL amortization period had been in the 21 – 26 year period for the last few valuations before decreasing this year. While the Fund remains in compliance with PRB funding policy guidelines, we expect it will be difficult to earn 7.5% over the next 5-10 years, and we recommend additional contributions to retain or improve on this UAAL amortization period.

	2011	2013	2015	2017	2019	2021
UAAL Amortization Period	14.8	21.7	21.7	21.8	26.1	16.9

Board Funding Policy

Effective with the September 30, 2019 valuation, the Board adopted a funding policy targeting a 25 year closed period UAAL amortization period. The target period decreases by 1 annually until it reaches 15 years. As such, the target amortization period is 23 years as of September 30, 2021. If the UAAL amortization period exceeds this target for two consecutive valuation cycles, the Board will work with its members and the City and consider actions to get the UAAL amortization back in line with the target.

Since the September 30, 2021 UAAL amortization period of 16.9 years is less than 23 years, the Fund is in compliance with its funding policy. However, most investment advisors believe it will be difficult to earn 7.5% per year for the next 5 -10 years, and we recommend increasing the contributions.

2.5 Deterministic Forecast of UAAL Amortization Period

Based on the results of the current valuation, the expected UAAL amortization period is 16.9 years. Assuming the future asset returns are equal to 7.50% per year, the amortization period is projected to decrease annually by 1 year. That is, the expected UAAL amortization period is projected to be 11.9 years as of September 30, 2026 (5 years in the future). However, if actual returns are lower than 7.50%, the actual amortization period will not decrease as quickly, and may increase. Below is an illustration demonstrating the expected amortization period if asset returns are equal to 7.00% per year.

(\$ Millions)

Valuation Date	Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability (UAAL)	UAAL Amortization Period
September 30, 2021	\$6.746	\$4.766	\$1.980	16.9 years
September 30, 2022	\$7.049	\$5.070	\$1.979	16.2 years
September 30, 2023	\$7.367	\$5.393	\$1.974	15.4 years
September 30, 2024	\$7.706	\$5.742	\$1.964	14.7 years
September 30, 2025	\$8.046	\$6.096	\$1.951	14.0 years
September 30, 2026	\$8.405	\$6.473	\$1.932	13.3 years

As shown in the table above, the UAAL Amortization Period is projected to be 13.3 years as of September 30, 2026 (5 years in the future), compared to an expected 11.9 years if all valuation assumptions, including the 7.50% return, are met. At the end of 10 years, the projected amortization period would be 9.7 years using the 7.00% return, compared to 6.9 years using the valuation assumptions. **Increasing the contribution rate from 24% of payroll to 24.62% of payroll effective September 30, 2022 is projected to result in a 6.9 year amortization period 10 years in the future even if the Fund were to earn 7.00% over this period.**

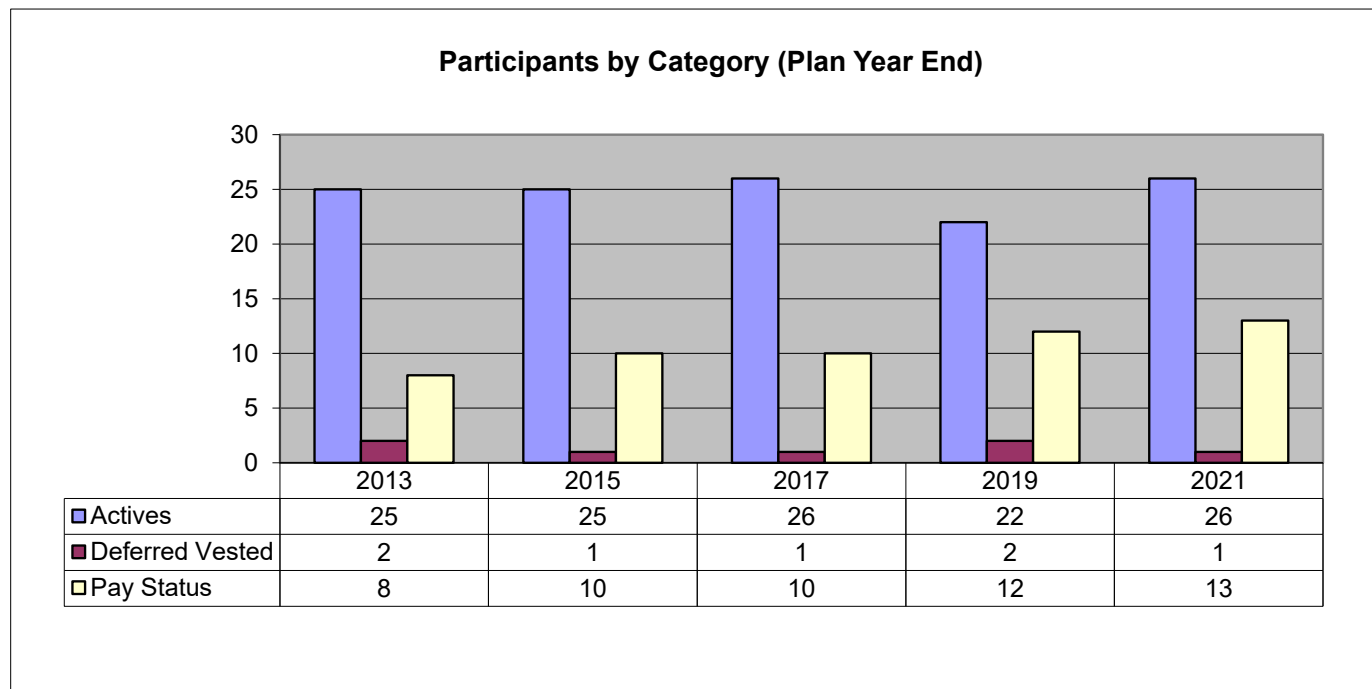
Over the last 10 years, the Fund has earned less than 7.00% per year. If this was expected to continue and the Board reduced its long-term return assumption to 7.00%, the actual amortization period would be almost 27 years assuming no other changes to the valuation assumptions. Increasing the contribution rate from 24% to 27.25% of payroll is projected to be needed to return the UAAL amortization period back to 16.9 years. Absent contribution increases, reducing the long-term return assumption will increase the UAAL expected amortization period in the short-run, but the continued use of an overly optimistic rate of return assumption increases the risk that the funding policy may eventually prove to be inadequate.

2.6 Membership Demographics

The number of active members increased from 22 to 26 since the last valuation. Total eligible payroll increased from \$1.365 million to \$1.558 million (about 6.8% annual increase) while average pay decreased from \$62,030 to \$59,912 (about 1.7% annual decrease). Average age of the group decreased from 37.0 to 35.8 years and average service decreased from 11.0 years to 9.8 years.

The number of retired and disabled members in pay status increased from 12 to 13 and average annual benefits decreased \$25,974 to \$25,451. The number of terminated vested members remained at 0. The number of participants due a refund of contributions decreased from 2 to 1. The number of beneficiaries in pay status remained at 0.

Please see Exhibit 4.1 for a summary of member census data used in the current valuation, along with a comparison to the prior valuation. Exhibit 4.2 provides a reconciliation of data by member group and exhibit 4.3 provides an age/service distribution of active members.



2.7 Actuarial Assumptions and Methods

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. 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 the use of professional judgment to develop a best estimate for each economic assumption.

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. To the extent the experience is credible, the actuarial assumptions should be based on the actual plan experience, 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 model the contingency being measured appropriately 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 2021 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 with review and concurrence by Definiti. The mortality tables were changed to the Society of Actuaries (SOA) Public Safety mortality tables projected generationally with Scale MP-2020. In addition, the payroll growth assumption was lowered from 4% to 3%. There have been no other changes in the actuarial assumptions from the prior valuation.

2.7 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 decrease in the interest rate assumption will generally increase plan liabilities and cost 10% to 15% based on plan demographics.

The net rate of return on the *fair value of assets (FV)* was 4.5% for 2020 and 18.2% for 2021, producing an average annual rate of return during the two-year period of 11.1%, compared to the long-term actuarial assumption of 7.50% (net of investment expenses). As summarized in Section 2.1, the actual FV rate of return of the Fund has been higher than the long-term actuarial assumption of 7.50% (net of investment expenses) for 3 out of the last 5 years (period 2017-2021), producing an average annual rate of return of 8.7%. However, the average rate of return was only 6.8% over the last 10 years (period 2012-2021).

The long-term interest rate assumption was recently revised by the Board to 7.50% net of investment expenses only, with other plan administrative expenses separately accounted similar to the GASB accounting standards. As the investment expenses have averaged around 100 basis points in recent years, the Fund will need to earn a gross rate of return of about 8.5% in order to achieve the long-term actuarial assumption of 7.50% net of investment expenses.

Based on long-term historical capital market performance and the current Fund asset allocation of 70% equity and 30% fixed income and cash, an expected rate of return of 8.50% is possible – but certainly on the optimistic end. Furthermore, forward looking capital market expectations over the next 10-15 years from organizations like J.P. Morgan indicate it may be difficult to achieve an 8.5% rate of return within a traditional diversified investment allocation model:

Capital Market Expectations	Total Expected Return
U.S. Equity – Large Cap	4.10%
U.S. Equity – Small Cap	4.40%
International Equity – EAFE	6.50%
International Equity – Emerging Markets	6.90%
U.S. Treasury Bonds	1.80%
U.S. Corporate Bonds – Investment Grade	2.80%
US REITs	5.70%

We encourage the Board to review this critical assumption with its investment advisors, to confirm that 7.50% (net of investment expenses) is consistent with their expectations for the Fund under the current asset allocation strategy and financial market outlook. Reducing the long-term return assumption will increase the unfunded liability expected amortization period in the short-run, but the continued use of an overly optimistic rate of return assumption increases the risk that the funding policy may eventually prove to be inadequate.

2.7 Actuarial Assumptions and Methods (Continued)

Amortization Method and Payroll Growth Rate

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 the salary scale 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 between the average salary scale increase and the basic inflation rate.

The Fund currently uses a payroll growth rate assumption of 3.00% per annum. The actual rate of growth in total payroll averaged 2.2% over the period 2011-2021, but 2% since 2017. We recommend the Board retain the current 3% payroll growth assumption for now but continue to monitor this assumption. As developed in Exhibit 3.4, a lower payroll growth assumption of 2.5% would have increased the expected UAAL amortization period from 16.9 to 17.8 years.

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Avg
Payroll (\$ millions)	\$1.20	\$1.16	\$1.20	\$1.18	\$1.45	\$1.04	\$1.36	\$1.42	\$1.34	\$1.24	\$1.47	2.2%
Rate of Increase	-9.2%	-2.8%	3.5%	-1.9%	22.9%	-28.2%	30.7%	4.7%	-6.0%	-7.5%	18.8%	

Please note the 2016 payroll only covers the 9-month period from December 31, 2015 to September 30, 2016.

Mortality Assumption

The mortality assumption is another important factor in the actuarial valuation process. The current base mortality assumption is the Society of Actuaries (SOA) Public Safety mortality tables with generational improvement using the MP-2020 longevity projection scales. The MP-2020 projection scale replaced the MP-2019 projection scale.

2.8 Plan Provisions

We are not aware of any changes to the plan provisions since the prior valuation. We have assumed the current contribution rates – 12.0% firefighters and 12.0% City – will remain constant in the future. Please see Exhibit 4.5 for a summary of provisions included in the current year valuation.

3.1 Fair Value of Plan Assets

	<u>September 30, 2019</u>	<u>September 30, 2020</u>	<u>September 30, 2021</u>
A. Fair Value of Plan Assets			
1. Fixed Income	\$1,231,564	\$1,536,544	\$1,510,821
2. Equities	\$1,942,191	\$2,360,278	\$3,115,855
3. Cash Equivalents	\$265,797	\$93,275	\$87,512
4. Alternatives	<u>\$488,343</u>	<u>\$42,718</u>	<u>\$51,551</u>
5. Total Fair Value	\$3,927,895	\$4,032,815	\$4,765,739
B. Change in Fair Value	<u>Change</u>	<u>Change</u>	
1. Contributions			
a. Firefighters	\$148,602	\$176,558	
b. City	<u>\$148,602</u>	<u>\$176,558</u>	
c. Total	\$297,204	\$353,116	
2. Disbursements			
a. Monthly Payments	(\$301,151)	(\$308,596)	
b. Refund of Contributions	(\$53,417)	(\$22,693)	
c. Administrative Expenses	<u>(\$13,492)</u>	<u>(\$22,066)</u>	
d. Total	(\$368,060)	(\$353,355)	
3. Investment Return			
a. Interest and Dividends	\$77,015	\$106,454	
b. Realized and Unrealized Gain/(Loss)	\$131,996	\$665,662	
c. Investment Expenses	<u>(\$33,235)</u>	<u>(\$38,953)</u>	
d. Total Return	<u>\$175,776</u>	<u>\$733,163</u>	
4. Net Change	<u>\$104,920</u>	<u>\$732,924</u>	
5. Average Rate of Return			
a. Average Asset Value	\$3,892,467	\$4,032,696	
b. Income Net of Investment Expenses	\$175,776	\$733,163	
c. Annual Rate of Return Net of Investment Expenses	4.5%	18.2%	
6. Investment Gain/(Loss)	(\$116,207)	\$430,711	

3.2 Actuarial Present Value of Projected Benefits

	<u>September 30, 2019</u>	<u>September 30, 2021</u>
A. Discount Rate	7.50%	7.50%
B. Present Value of Projected Benefits		
1. Active	\$4,619,196	\$5,067,214
2. Contribution Refund Payable	\$18,993	\$4,907
3. Terminated Vested	\$0	\$0
4. Retired	\$3,510,238	\$3,340,822
5. Disabled	\$31,301	\$30,542
6. Beneficiary	\$0	\$304,238
7. Total	<u>\$8,179,728</u>	<u>\$8,747,723</u>
C. Change in Present Value of Projected Benefits		
		<u>Change</u>
1. Benefits Accumulated		\$0
2. Benefits Paid		(\$685,857)
3. Decrease in Discount Period		\$1,219,602
4. Plan Experience		\$51,253
5. Actuarial Assumptions		(\$17,003)
6. Actuarial Methods		\$0
7. Plan Amendments		\$0
8. Net Change		<u>\$567,995</u>
D. Actuarial Value of Assets	<u>\$3,927,895</u>	<u>\$4,765,739</u>
E. Funded Status	48.0%	54.5%
F. Present Value of Future Payroll	\$14,898,973	\$17,189,617
G. Present Value of Future Contributions		
1. Firefighter	\$1,787,877	\$2,062,754
2. City	\$1,787,877	\$2,062,754
3. Total	<u>\$3,575,754</u>	<u>\$4,125,508</u>

3.3 Actuarial Accrued Liability and Normal Cost

	<u>September 30, 2019</u>	<u>September 30, 2021</u>
A. Discount Rate	7.50%	7.50%
B. Actuarial Accrued Liability (EAN)		
1. Active	\$2,890,757	\$3,065,447
2. Contribution Refund Payable	\$18,993	\$4,907
3. Terminated Vested	\$0	\$0
4. Retired	\$3,510,238	\$3,340,822
5. Disabled	\$31,301	\$30,542
6. Beneficiary	\$0	\$304,238
7. Total	<u>\$6,451,289</u>	<u>\$6,745,956</u>
C. Actuarial Value of Assets	<u>\$3,927,895</u>	<u>\$4,765,739</u>
D. Unfunded Actuarial Liability	<u><u>\$2,523,394</u></u>	<u><u>\$1,980,217</u></u>
E. Change in Unfunded Actuarial Accrued Liability		<u>Change</u>
1. Contributions		(\$650,320)
2. Benefits Accumulated		\$362,896
3. Decrease in Discount Period		\$389,263
4. Plan Asset Experience		(\$305,788)
5. Plan Liability Experience		(\$359,352)
6. Actuarial Assumptions		(\$15,434)
7. Administrative Expenses		\$35,558
8. Actuarial Methods		\$0
9. Plan Amendments		\$0
10. Net Change		<u><u>(\$543,177)</u></u>
F. Funded Status	60.9%	70.6%
G. Present Value of Future Normal Cost	\$1,728,439	\$2,001,767
H. Present Value of Future Payroll	\$14,898,973	\$17,189,617
I. Normal Cost Rate	11.60%	11.65%

3.4 Expected Amortization Period

	<u>September 30, 2019</u>	<u>September 30, 2021</u>
A. Discount Rate	7.50%	7.50%
B. Present Value Future Compensation (PVFComp)	\$14,898,973	\$17,189,617
C. Present Value Future Contributions (PVFContrb) % of Compensation	\$3,575,754 24.00%	\$4,125,508 24.00%
D. Present Value Projected Benefits (PVFB)	\$8,179,728	\$8,747,723
E. Actuarial Accrued Liability (AAL)	<u>\$6,451,289</u>	<u>\$6,745,956</u>
F. Present Value of Future Normal Costs (PVFNC) % of PVFComp	\$1,728,439 11.60%	\$2,001,767 11.65%
G. PVFContrb available to payoff UAL % of PVFComp	\$1,847,315 12.40%	\$2,123,741 12.35%
H. Valuation Compensation	\$1,364,654	\$1,557,723
I. Current Contribution Available to pay off UAL		
1. Current Contribution in Excess of PVFNC	\$163,207	\$185,547
2. Administrative Expenses	<u>(\$21,059)</u>	<u>(\$24,038)</u>
3. Current Contribution Available to pay off UAL	\$142,148	\$161,509
J. Unfunded Actuarial Liability (UAL)	\$2,523,394	\$1,980,217
K. Expected Amortization Period	26.1	16.9
L. Expected Amortization Period - Payroll Growth Sensitivity		
1. Annual Payroll Growth 3.00%/2.50%	32.3	17.8
2. Annual Payroll Growth 3.50%	28.9	16.1

3.5 Recommended Funding Policy

	<u>September 30, 2019</u>	<u>September 30, 2021</u>
A. PRB Minimum Funding Policy		
1. Normal Cost	11.60%	11.65%
2. Administrative Expenses	1.60%	1.60%
3. 30-year Amortization Payment:	<u>9.92%</u>	<u>7.64%</u>
4. Total Minimum Funding	23.12%	20.89%
B. PRB Preferred Funding Policy		
1. Normal Cost	11.60%	11.65%
2. Administrative Expenses	1.60%	1.60%
3. 25-year Amortization Payment:	<u>11.10%</u>	<u>8.41%</u>
4. Total Preferred Funding	24.30%	21.66%
C. PRB Preferred Funding Policy - High		
1. Normal Cost	11.60%	11.65%
2. Administrative Expenses	1.60%	1.60%
3. 10-year Amortization Payment:	<u>22.16%</u>	<u>15.86%</u>
4. Total Preferred Funding	35.36%	29.11%
D. Board's Funding Policy		
1. Normal Cost	11.60%	11.65%
2. Administrative Expenses	1.60%	1.60%
3. Closed Amortization Period	25	23
3. UAAL Amortization Payment:	<u>11.10%</u>	<u>8.81%</u>
4. Total Preferred Funding	24.30%	22.06%

Notes

(1) Recommended minimum funding policy under Texas Pension Review Board (PRB) guidelines based on amortization of Unfunded Actuarial Liability not to exceed 30 years. PRB preferred funding policy, based on an amortization period of 10 - 25 years.

(2) Amortization calculated under the level percent of pay method, with fresh start each valuation date. Payroll is assumed to grow 3.00% per year (4.00% for 9/30/2019 valuation)

4.1 Demographic Summary

	<u>September 30, 2019</u>	<u>September 30, 2021</u>
A. Active Members		
1. Number	22	26
2. Valuation Compensation	\$1,364,654	\$1,557,723
3. Average pay	\$62,030	\$59,912
4. Average age	37.0	35.8
5. Average service	11.0	9.8
B. Terminated Vested Members - Deferred Contribution Refund		
1. Number	2	1
2. Total benefits	\$19,649	\$5,255
3. Average Annual benefits	\$9,825	\$5,255
4. Average Age	27.8	29.3
C. Terminated Vested Members - Deferred Annuity		
1. Number	0	0
2. Total benefits	\$0	\$0
3. Average Annual benefits	N/A	N/A
4. Average Age	N/A	N/A
D. Retired and Disabled Members		
1. Number	12	11
2. Total benefits	\$311,684	\$298,299
3. Average Annual benefits	\$25,974	\$27,118
4. Average Age	64.6	64.8
E. Beneficiaries		
1. Number	0	2
2. Total benefits	\$0	\$32,559
3. Average Annual benefits	N/A	\$16,280
4. Average Age	N/A	68.5

4.2 Data Reconciliation

	<u>Active</u>	<u>Deferred Inactive</u>	<u>Disabled</u>	<u>Retired</u>	<u>Total</u>
Included in September 30, 2019 Valuation	22	2	1	11	36
Change Due To:					
New hires and rehires	7	0	0	0	7
Termination (Vested)	0	0	0	0	0
Termination (Nonvested)	0	0	0	0	0
Retirement	(1)	0	0	1	0
Disability	0	0	0	0	0
Death without beneficiary	0	0	0	0	0
Death with beneficiary	0	0	0	0	0
Cashouts	(2)	(1)	0	0	(3)
Data corrections	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net change	<u>4</u>	<u>(1)</u>	<u>0</u>	<u>1</u>	<u>4</u>
Included in September 30, 2021 Valuation	<u>26</u>	<u>1</u>	<u>1</u>	<u>12</u>	<u>40</u>

4.3 Active Members by Age and Service

Attained Age	Years of Service as of September 30, 2021							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 & up	
Under 25	4	0	0	0	0	0	0	4
25-29	8	0	0	0	0	0	0	8
30-34	0	2	0	0	0	0	0	2
35-39	1	2	0	0	0	0	0	3
40-44	0	0	0	3	1	0	0	4
45-49	0	0	0	1	2	0	0	3
50-51	0	0	0	0	0	0	1	1
52-54	0	0	0	0	0	1	0	1
55-59	0	0	0	0	0	0	0	0
60 & up	0	0	0	0	0	0	0	0
Total	13	4	0	4	3	1	1	26

Not Vested	Vested	Retirement Eligible
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4.4 Assumptions and Methods

Economic Assumptions

Interest Rates:

- Investment Return 7.50% per annum (net of investment expenses).
- Administrative Expense 1.60% of payroll.
- Salary Increases 5.50% per annum.
- Total Payroll Growth 3.00% per annum.

Demographic Assumptions

- Mortality – All Participants Society of Actuaries (SOA) Public Safety mortality tables projected generationally with Scale MP-2020.
- Termination Custom table based on service of firefighter.

Sample rates per 100 firefighters:

<u>Service</u>	<u>Rate</u>
1	10.70
6	5.40
11	2.80
16	1.80

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, assuming 50% of future disabilities are duty related and 50% non-duty related. Sample rates per 100 firefighters are shown below:

<u>Age</u>	<u>Rate</u>
25	0.06
30	0.08
35	0.10
40	0.23
45	0.39
50	0.70

- Retirement Custom table based on age of the firefighter, resulting in an average retirement age of 54.2:

<u>Age</u>	<u>Rate</u>
52-59	20%
60	100%

- Marital Status 80% 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 mortality projection scale was updated from Scale MP-2019 to Scale MP-2020. In addition, the payroll growth assumption was lowered from 4% to 3%. There have been no other changes in principal actuarial assumptions from the prior valuation.

4.4 Assumptions and Methods (continued)

Methods

Valuation Date	September 30, 2021
Valuation Compensation	Valuation Compensation is equal to the actual pension eligible compensation for the current active members projected one year into the future using the salary scale.
Asset Valuation Method	Actual Market Value
Entry Age Normal Actuarial Cost Method	The <u>Entry Age Normal Actuarial Cost Method</u> A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age. The portion of this actuarial present value allocated to a valuation year is called the <i>normal cost</i> . The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the <i>actuarial accrued liability</i> .
Changes in Methods	There have been no changes in the actuarial methods from the prior valuation.

4.5 Plan Provisions

Effective Date	The Plan was most recently amended December 1, 2013.
Eligibility	A firefighter shall become a participant when he first becomes employed with the San Benito Fire Department.
Service	A firefighter receives credit for the number of years and months of continuous employment with the Fire Department. The records of the Fire Department will determine service prior to 1990. After January 1, 1990, service will be credited for each month the firefighter holds a position in the Department and contributes to the plan.
Compensation	<p>Compensation includes all elements of pay except lump sum distributions for unused sick leave or vacation.</p> <p>Highest 60-Month Average Salary is the average of the firefighter's total pay for the highest 260 weekly pay periods with the department during which his total pay was the highest multiplied by 4.333.</p>
Contributions	<p>The City contributes 12.00% of compensation. Active firefighters contribute 12.00% of their compensation.</p> <p>The City may elect to contribute amounts that exceed those required amounts.</p>

4.5 Plan Provisions (continued)

Service Retirement

The retirement eligibility date is the attainment of age 52 and the completion of 20 years of service.

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 45.00% of the Highest 60-Month Average Salary; plus
- (b) A longevity benefit equal to \$70 per month for each whole year of service in excess of 20 years. Partial credit will be given to a year based on the number of completed months of service.

Disability Retirement

An active firefighter is eligible for a disability benefit if he becomes disabled from any cause and is unable to perform the duties of a position offered to him in the fire department at an equal or higher pay level.

The disability allowance will commence after the expiration of all vacation and sick leave, and will continue as long as the participant remains disabled as defined above.

The monthly benefit for duty-related disability is determined in the same manner as Service Retirement as defined above. The monthly benefit for non-duty-related disability is determined as 5% of the duty-related disability benefit for each completed year and fractional year of service (maximum 100%).

The Board of Trustees shall have the ability to continue, to terminate, to reduce or to reinstate a firefighter's disability benefit based on prescribed conditions as defined in the plan document.

4.5 Plan Provisions (continued)

Termination Benefit

Upon a firefighter's termination, he is eligible for a deferred benefit if he has completed at least 10 years of service and agrees to leave his contributions in the Fund.

The monthly benefit is equal to his service retirement benefit determined as of the date of separation from service multiplied by the Vested Percentage based on his years and completed months of service at time of termination, as illustrated in the following schedule:

Years of Service	Vested Percentage
10	50%
11	55%
12	60%
13	65%
14	70%
15	75%
16	80%
17	85%
18	90%
19	95%
20	100%

Full benefits may not commence prior to the end of the month of attainment of age 52.

Refund of Contributions

If a firefighter terminates with less than 10 years of service, 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 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 at the end of the month of death.

The duty-related death benefit payable to the eligible surviving spouse of a firefighter who was not yet eligible for retirement is equal to 2/3 of the Service Retirement Benefit the firefighter would have been entitled to receive as of the date of death (using the maximum of service at date of death or 20 years). This benefit shall be paid as long as the surviving spouse is living and does not remarry. The not duty-related death benefit payable to the eligible surviving spouse of a firefighter is equal to 5% of the on-duty death benefit for each completed year and fractional year of service (maximum 100%).
- Child

Each surviving unmarried child under age 18 shall receive a monthly benefit equal to 7.6% of the Highest 60-Month Average Salary of the firefighter as of the date of death. If there is no surviving spouse, an unmarried child will receive 15.2% of the Service Retirement Benefit the firefighter would have been entitled to receive. This death benefit shall be paid until age 18, or continue until age 25 as long as the child remains a full-time student. In addition, benefits are payable after age 17 for as long as a child remains totally disabled.

Post-Retirement Death Benefit

- Spouse

Upon the death of a service retiree or disabled retiree, a benefit is payable to his beneficiaries commencing at the end of the month of death.

The benefit payable to the eligible surviving spouse of a service retiree or disabled retiree is equal to 2/3 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 spouse's death or remarriage.
- Child

Same as Pre-Retirement Child Death Benefit.

4.5 Plan Provisions (continued)

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 retirement benefit that he would have been entitled to receive as of his date of death. In the event this limit is exceeded, each beneficiary's benefit is reduced pro-rata until the limit is met.

Partial Lump Sum Option (PLSO)

A firefighter eligible for normal service retirement who is at least age 55 with at least 23 years of service can elect the PLSO option. At retirement the firefighter will receive a reduced monthly benefit based on the service retirement benefit formula multiplied by a percentage factor based on the firefighter's age at retirement and the number of months included in the PLSO lump sum elected by the retiring firefighter. In addition, the firefighter will receive a lump sum amount based on the reduced monthly benefit multiplied by the number of applicable months elected.

Changes in plan provisions

There were no changes in plan provisions since the prior valuation.