



San Benito Firemen Relief and Retirement Fund

Actuarial Valuation Report
As of September 30, 2019

Prepared by
Retirement Horizons Inc.
May 29, 2020



May 29, 2020

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

Re: 2019 ACTUARIAL VALUATION

Ladies and Gentlemen:

The Board of Trustees for the San Benito Firemen Relief and Retirement Fund retained Retirement Horizons Inc. (RHI) to perform an actuarial valuation of the Fund as of September 30, 2019. This report summarizes the results of our study including analysis of current funded status and other valuation results. Our report also provides financial accounting and disclosure information in accordance with GASB Nos. 67 and 68 with results organized as follows:

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

The unfunded actuarial liability was \$2.523 million (60.9% funded status) as of September 30, 2019, compared to \$2.271 million (60.7% 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 unfunded actuarial liability over 26.4 years based on the 2019 valuation (4.6 years increase from the prior valuation).

Texas Pension Review Board guidelines for actuarial soundness require a contribution policy that will amortize the unfunded liability over a preferred period of 10-25 years, not to exceed a maximum of 30 years. Therefore, the 2019 valuation confirms that the current financing arrangement remains sufficient to satisfy the PRB actuarial soundness guidelines, provided future plan experience is consistent with the underlying methods and assumptions.

We certify the amounts presented in the 2019 valuation report have been determined according to the actuarial assumptions and methods selected by the Board of Trustees, with review and concurrence by RHI. 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 4.0% 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
May 29, 2020

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 2019 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 RHI did not perform a full audit of the member census data. The 2019 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 as well as the respective auditors of the GASB No. 67 and 68 financial disclosure information. It is not intended for any other purposes, and it should not be distributed to any outside party without the express written consent of RHI, 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 Retirement Horizons Inc.



David A. Sawyer, FSA EA MAAA
Senior Consulting Actuary

Table of Contents

1.	Valuation Highlights	6
2.	Executive Summary	
2.1	Value of Plan Assets	8
2.2	Actuarial Present Value of Projected Benefits	9
2.3	Actuarial Accrued Liability	10
2.4	Funding Policy Analysis.....	11
2.5	Deterministic Forecast of UAL Amortization Period	12
2.6	GASB 67/68 Accounting Information.....	13
2.7	Membership Demographics.....	14
2.8	Actuarial Assumptions and Methods.....	15
2.9	Plan Provisions.....	18
3.	Actuarial Exhibits	
3.1	Fair Value of Plan Assets	19
3.2	Actuarial Present Value of Projected Benefits	20
3.3	Actuarial Accrued Liability and Normal Cost	21
3.4	Expected Amortization Period	22
3.5	Recommended Funding Policy	23
3.6	GASB 67 Accounting Information.....	24
3.7	GASB 68 City Accounting Information	27
4.	Valuation Basis	
4.1	Demographic Summary	30
4.2	Data Reconciliation	31
4.3	Active Members by Age and Service	32
4.4	Assumptions and Methods.....	33
4.5	Plan Provisions.....	36

1. Valuation Highlights

FUNDING VALUATION	September 30, 2017	September 30, 2019
Fair Value of Assets	\$3,503,753	\$3,927,895
Average Annual Return: valuation year ended	7.9%	3.8%
Average Annual Return: prior year ended	1.2%	9.5%
Present Value of Projected Benefits	\$7,562,769	\$8,179,728
% funded	46.3%	48.0%
Actuarial Accrued Liability (AAL)	\$5,774,598	\$6,451,289
% funded	60.7%	60.9%
Normal Cost Rate (% of Pay)	12.21%	11.60%
Unfunded Actuarial Liability (UAAL)	\$2,270,845	\$2,523,394
% of valuation compensation	152.3%	184.9%
Expected Unfunded AAL Amortization Period (years)	21.8	26.1
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)	22.1%	23.1%
- Preferred UAL Amortization Period (25 years)	23.1%	24.3%
- Preferred UAL Amortization Period (10 years)	32.2%	35.4%
DEMOGRAPHICS		
Active	26	22
Terminated with Deferred Benefits	1	2
Retirees and Beneficiaries in Pay	10	12
Total	37	36
Valuation Compensation	\$1,491,018	\$1,364,654
ASSUMPTIONS		
Investment Return	7.50%	7.50%
Salary Scale	5.50%	5.50%
Payroll Growth Assumption	4.00%	4.00%
Administrative Expense (% of Payroll)	1.75%	1.60%

1. Valuation Highlights (continued)

GASB 67 PLAN ACCOUNTING DISCLOSURE	September 30, 2017	September 30, 2018	September 30, 2019
Total Pension Liability	\$5,774,598	\$6,058,181	\$6,451,289
Plan Fiduciary Net Position	\$3,503,753	\$3,824,045	\$3,927,895
Fund Net Pension Liability	\$2,270,845	\$2,234,136	\$2,523,394
Effective Discount Rate	7.50%	7.50%	7.50%

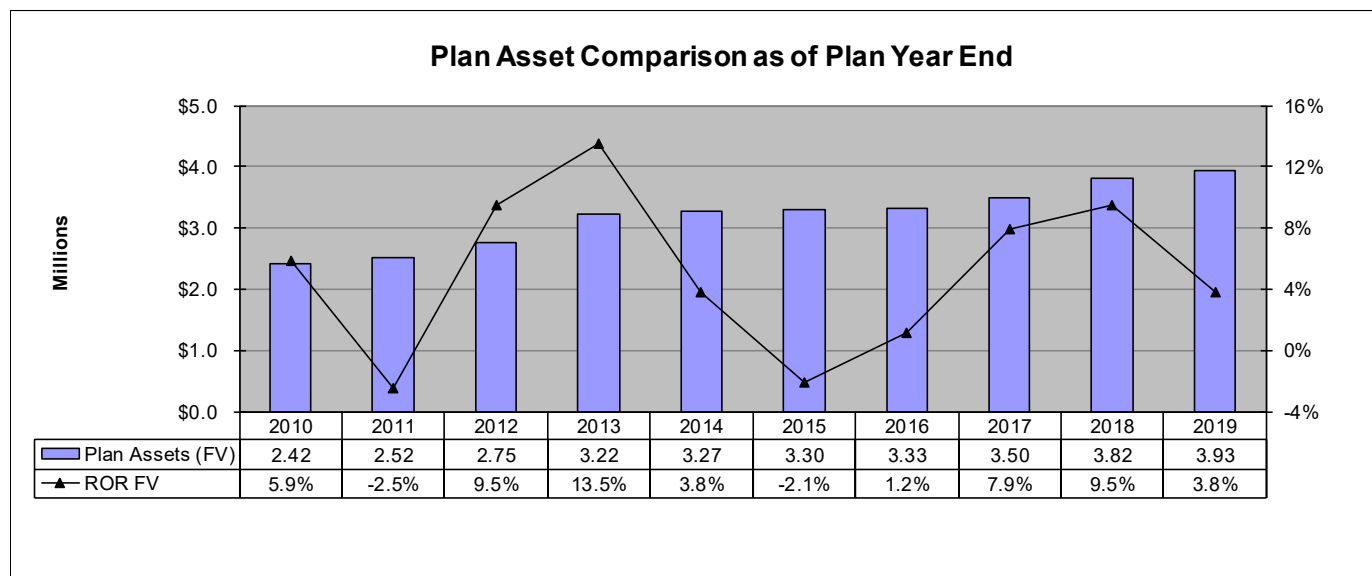
GASB 68 EMPLOYER ACCOUNTING DISCLOSURE	September 30, 2018	September 30, 2019	September 30, 2020
Total Pension Liability	\$5,774,598	\$6,058,181	\$6,451,289
Plan Fiduciary Net Position	\$3,503,753	\$3,824,045	\$3,927,895
Net Pension Liability	\$2,270,845	\$2,234,136	\$2,523,394
Measurement Date	September 30, 2017	September 30, 2018	September 30, 2019
Pension Expense	\$260,101	\$239,666	\$278,395
Effective Discount Rate	7.50%	7.50%	7.50%

DEMOGRAPHICS	September 30, 2017	September 30, 2019
Active	26	22
Terminated with Deferred Benefits	1	2
Retirees and Beneficiaries in Pay	10	12
Total	<u>37</u>	<u>36</u>
Valuation Compensation	\$1,491,018	\$1,364,654
Average Pay	\$57,347	\$62,030
Average Age	36.3	37.0
Average Service	10.4	11.0

2.1 Value of Plan Assets

The *fair value (FV)* of plan assets was \$3.928 million as of September 30, 2019, compared to \$3.503 million for the prior valuation at December 31, 2017. The net increase of \$0.425 million over the two-year period is attributable to the total contributions of \$0.663 million plus an investment return of \$0.478 million (net of investment expenses), less total disbursements and administrative expenses of \$0.716 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 9.5% for plan year 2018 and 3.8% for plan year 2019, producing an average annual rate of return of 6.6% 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 2 of the last 5 years (period 2015-2019), producing an average rate of return of 4.0%. Furthermore, the average annual rate of return was only 4.9% over the last 10 years (period 2010-2019).



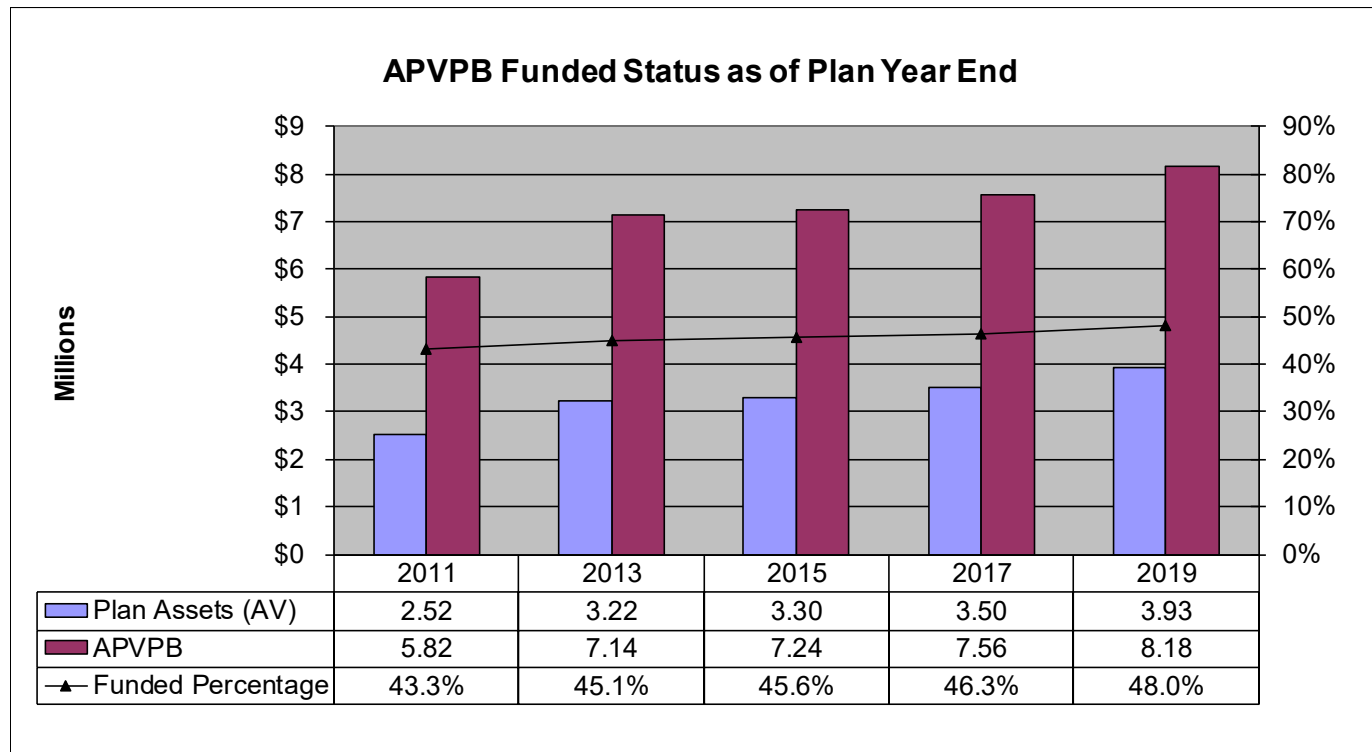
2.2 Actuarial Present Value of Projected Benefits

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 \$8.180 million as of September 30, 2019, compared to \$7.563 million for the prior valuation as of December 31, 2017. The net increase of \$0.617 million is primarily attributable to the normal operation of the plan and the change in the mortality assumption. 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 48.0% as of September 30, 2019, compared to 46.3% for the prior valuation as of December 31, 2017. Below is a historical comparison of plan assets to the APVPB.

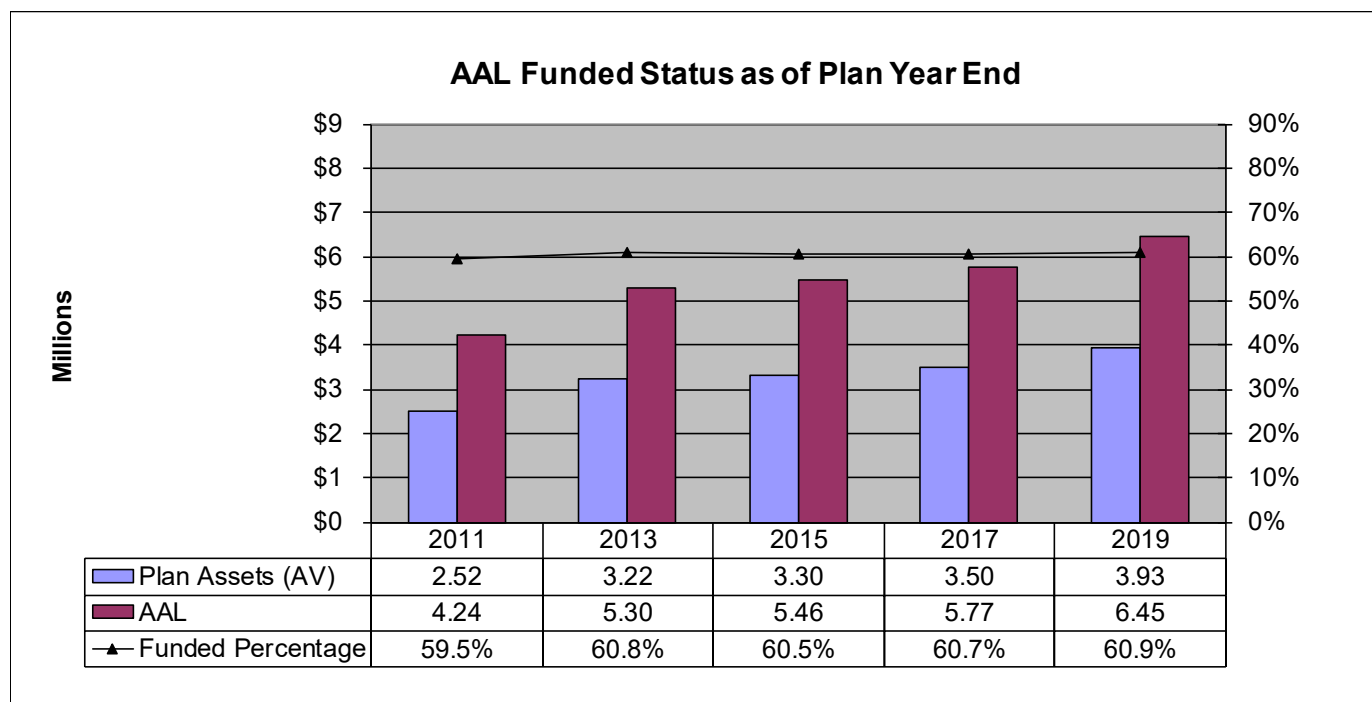


2.3 Actuarial Accrued Liability

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 \$2.523 million (60.9% funded status) as of September 30, 2019, compared to \$2.271 million (60.7% funded status) as of December 31, 2017.

The net UAAL increase of \$0.252 million is primarily attributable to unfavorable asset experience, assumption changes previously discussed, and fewer contributions than expected. Please see Exhibit 3.3 for more details on the development of the UAAL. As illustrated in the historical comparison below, 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 guidelines for actuarial soundness recommend a funding policy 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 2019 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 26.1 years (4.3 years increase from 2017 valuation). The expected amortization period increased primarily because of the unfavorable asset experience, increased liabilities due to the new mortality assumption, and the lower projected future contributions resulting from the reduction in the number of active members. Please see Exhibits 3.4 and 3.5 for more details.

The current financing arrangement is sufficient to satisfy the PRB minimum contribution rate but is just above the top end of the PRB preferred period of 10-25 years. As illustrated in the table below, the UAAL amortization period has stayed level the last few years before the increase this year. While the Fund remains in compliance with PRB funding policy guidelines, we would like the trend to show a general reduction in the expected amortization period.

	2008	2011	2013	2015	2017	2019
UAAL Amortization Period	18.7	14.8	21.7	21.7	21.8	26.1

Please Note: The increase in the expected period to fully amortize the UAAL was impacted by the reduction in the projected future contributions to the Fund. This reduction in expected contributions is the result of the reduction in the active population (26 members to 22 members). If the payroll/contributions had grown by 4% over the last two years, the expected period to fully amortize the UAAL would have been closer to 23 years. If the reduction in the active member population was a temporary change and the active population returned to 26 members, then the next valuation may show improved results.

2.5 Deterministic Forecast of UAL Amortization Period

Based on the results of the current valuation, the expected UAL amortization period is 26.1 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 UAL amortization period is projected to be 21.1 years as of September 30, 2024 (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 (UAL)	UAL Amortization Period
September 30, 2019	\$6.451	\$3.927	\$2.523	26.1 years
September 30, 2020	\$6.720	\$4.140	\$2.580	25.7 years
September 30, 2021	\$7.021	\$4.384	\$2.636	25.0 years
September 30, 2022	\$7.331	\$4.638	\$2.692	24.3 years
September 30, 2023	\$7.658	\$4.912	\$2.746	23.6 years
September 30, 2024	\$8.007	\$5.208	\$2.799	22.9 years

As shown in the table above, the UAL Amortization Period is projected to be 22.9 years as of September 30, 2024 (5 years in the future), compared to an expected 21.4 years if all valuation assumptions, including the 7.50% return, are met. At the end of 10 years, the projected amortization period would be 19.4 years using the 7.00% return, compared to 16.4 years using the valuation assumptions.

Over the last 10 years, the Fund has earned less than 6.50% per year. If this was expected to continue and the Board reduced its long-term return assumption to 6.50%, the actual amortization period would be over 150 years assuming no other changes to the valuation assumptions. 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.

2.6 GASB 67/68 Accounting Information

The GASB adopted changes to GASB Statement Nos. 25 and 27, creating GASB statement Nos. 67 and 68. These statements apply solely to the accounting valuation and do not require any change to the calculation of the actuarially determined financing arrangement. The new accounting statements expand the disclosure information required for both the Fund and the sponsoring employer and also increase the complexity of the actuarial calculations. Below is a high-level summary of the potential impact for the City of San Benito based on our current understanding of the guidance issued to date:

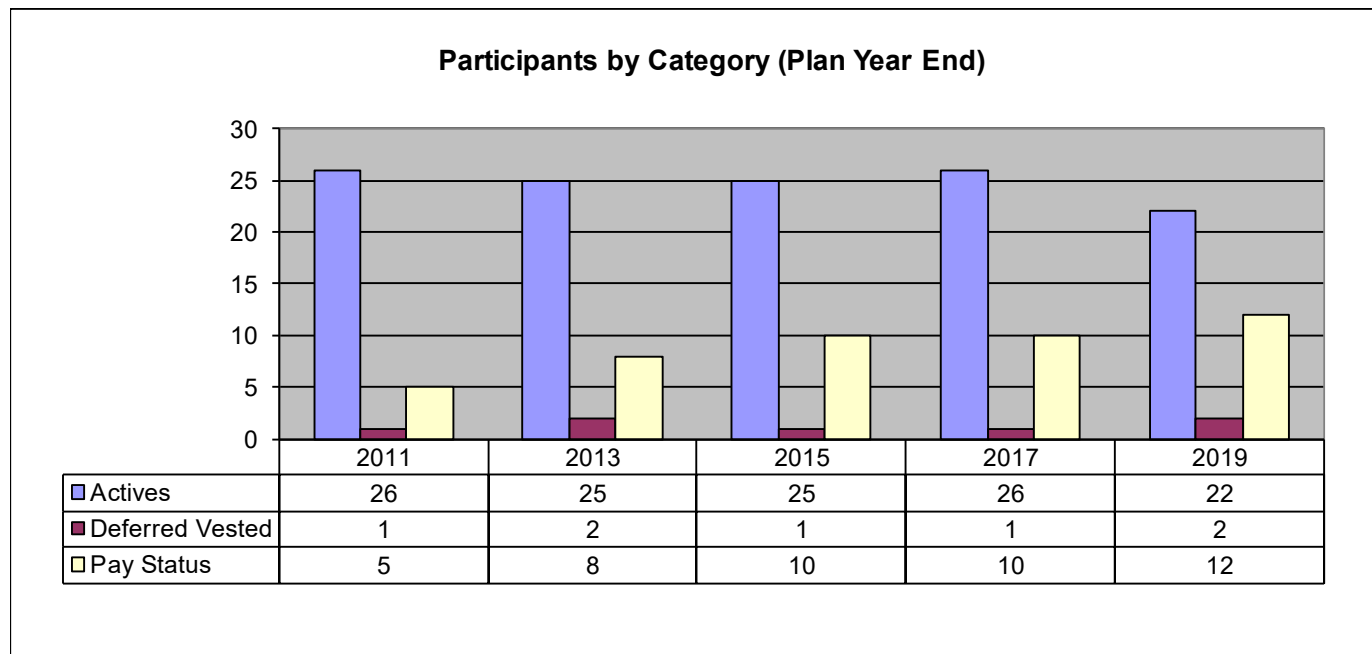
- New Terminology – GASB 67 and 68 introduced new labels for the traditional actuarial terminology that was used in GASB 25 and 27. The actuarial accrued liability is referred to as the Total Pension Liability, the market value of assets is referred to as the Plan Fiduciary Position, and the unfunded actuarial liability and balance sheet liability are now referred to as the Net Pension Liability.
- Net Pension Liability – Under GASB 68, the City must recognize the unfunded actuarial liability on its balance sheet. Based on the 2019 actuarial valuation and applying the “look back” approach, the City’s September 30, 2020 Net Pension Liability will increase to \$2.523 million.
- Discount Rate Assumption – To the extent current plan assets and funding policy are not sufficient to cover projected plan benefit payments, the net pension liability would be measured using a blended discount rate based on the plan’s long-term actuarial assumption for the funded portion and a 30-year municipal bond index rate (AA/Aa or higher) for the unfunded portion. Based on the 2019 valuation projections, we do not believe this provision will impact the Fund.
- Pension Expense – Under GASB 67, the pension expense will equal the Fund’s fixed contribution rate. However, GASB 68 requires a completely separate calculation of pension expense for the City’s financial statements that will result in more rapid cost recognition of changes in the Net Pension Liability than prior rules. The GASB 68 pension expense will equal the sum of the following components:
 - Service Cost (Normal Cost) for additional benefits accrued.
 - Interest Cost on Total Pension Liability less Expected Return on Plan Fiduciary Position.
 - Amortization of changes in the components of Net Pension Liability:
 - Full and immediate recognition of plan changes and improvements.
 - Plan asset experience gains and losses amortized over 5 years.
 - Plan liability experience gain/loss amortized over future service (about 8 years).
 - Impact of assumption changes amortized over future service (about 8 years).
- Expanded Disclosure – Exhibit 3.6 provides the GASB 67 disclosure information assuming a fresh start approach from December 31, 2011 through September 30, 2019. Exhibit 3.7 provides GASB 68 disclosure information for City fiscal year end September 30, 2020, using the look back approach for the plan year end measurement date of September 30, 2019. Please note the City Contribution made for the fiscal year ending September 30, 2020 will need to be added to the Deferred Outflow of Resources once the amount is known.

2.7 Membership Demographics

The number of active members decreased from 26 to 22 since the last valuation. Total eligible payroll decreased from \$1.491 million to \$1.365 million (about 4.3% annual decrease) while average pay increased from \$57,347 to \$62,030 (about 4.0% annual). Average age of the group increased from 36.3 to 37.0 years and average service increased from 10.4 years to 11.0 years.

The number of retired and disabled members in pay status increased from 10 to 12 and average annual benefits increased \$23,082 to \$25,974. The number of terminated vested members remained at 0. The number of participants due a refund of contributions increased from 1 to 2. 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.



2.8 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. The GASB 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 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 2019 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 RHI. The mortality tables were changed to the Society of Actuaries (SOA) Public Safety mortality tables projected generationally with Scale MP-2019. In addition, the administrative expense assumption was reduced from 1.75% to 1.60% to better anticipate future experience. There have been no other changes in principal actuarial assumptions from the prior valuation.

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 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 9.5% for 2018 and 3.8% for 2019, producing an average annual rate of return during the two-year period of 6.6%, 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) only 2 out of the last 5 years (period 2015-2019), producing an average annual rate of return of 4.0%. Furthermore, the average rate of return was only 4.9% over the last 10 years (period 2010-2019).

The long-term interest rate assumption was recently revised by the Board to 7.50% net of investment management expenses only, with other plan administrative expenses separately accounted for as required under GASB rules. As the investment expenses have averaged over 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 still within a reasonable range – but certainly on the higher 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	5.60%
U.S. Equity – Small Cap	6.50%
International Equity – EAFE	7.20%
International Equity – Emerging Markets	9.20%
U.S. Treasury Bonds	1.60%
U.S. Corporate Bonds – Investment Grade	3.40%
US REITs	6.00%

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.

2.9 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 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 less than the salary scale and closer to the basic inflation rate.

The Fund currently uses a payroll growth rate assumption of 4.00% per annum. The actual rate of growth in total payroll averaged 0.7% over the period 2009-2019, but -0.8% since 2017. We recommend the Board consider lowering the payroll growth assumption to 3.50% for the next valuation. As developed in Exhibit 3.4, a payroll growth assumption of 3.5% would have increased the expected UAAL amortization period from 26.1 to 28.9 years.

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Avg.
Payroll (\$ millions)	\$1.25	\$1.32	\$1.20	\$1.16	\$1.20	\$1.18	\$1.45	\$1.04	\$1.36	\$1.42	\$1.34	n/a
Rate of Increase	-2.8%	5.0%	-9.2%	-2.8%	3.5%	-1.9%	22.9%	-28.2%	30.7%	4.7%	-6.0%	

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-2019 longevity projection scales. These tables replace the RP-2014 blue collar mortality tables projected back to 2006 with mortality improvement Scale MP-2014, with mortality improvement projected forward on a generational basis with Scale MP-2016 used in the prior valuation.

Using the new assumption, a 55-year-old member is expected to live to 85.5 years of age. This is a future life expectancy of 30.5 years compared to 28.5 years under the prior assumption. As shown in the table below, this new mortality basis reflects slight increases in life expectancy ranging from 0.4 to 2.7 years based on gender and age as of the measurement date. This increase is a result of the new public service mortality table offset slightly by the new longevity scale projecting a smaller mortality improvement over the projection period.

Age	Future Life Expectancy in Years - Males			Future Life Expectancy in Years- Females		
	Prior Basis	Revised Basis	Change	Prior Basis	Revised Basis	Change
25	59.8	62.5	2.7	63.1	64.6	1.5
35	49.1	51.6	2.5	52.3	53.7	1.4
45	38.4	40.7	2.3	41.5	42.8	1.3
55	28.5	30.5	2.0	31.4	32.4	1.3
65	19.8	21.0	1.2	22.2	22.9	0.7
75	12.2	12.8	0.6	14.0	14.4	0.4

2.9 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>09/30/2017</u>	<u>09/30/2018</u>	<u>09/30/2019</u>
A. Fair Value of Plan Assets			
1. Fixed Income	\$376,683	\$261,894	\$1,231,564
2. Equities	\$2,314,081	\$3,027,902	\$1,942,191
3. Cash Equivalents	\$53,561	\$126,799	\$265,797
4. Alternatives	<u>\$759,428</u>	<u>\$407,450</u>	<u>\$488,343</u>
5. Total Fair Value	\$3,503,753	\$3,824,045	\$3,927,895
B. Change in Fair Value		<u>Change</u>	<u>Change</u>
1. Contributions			
a. Firefighters		\$170,906	\$160,605
b. City		\$170,906	\$160,605
c. Total		<u>\$341,812</u>	<u>\$321,210</u>
2. Disbursements			
a. Monthly Payments		(\$236,254)	(\$278,765)
b. Refund of Contributions		(\$98,482)	(\$62,715)
c. Administrative Expenses		(\$19,316)	(\$21,214)
d. Total		<u>(\$354,052)</u>	<u>(\$362,694)</u>
3. Investment Return			
a. Interest and Dividends		\$63,626	\$85,187
b. Realized and Unrealized Gain/(Loss)		\$333,299	\$96,863
c. Investment Expenses		(\$64,393)	(\$36,716)
d. Total Return		<u>\$332,532</u>	<u>\$145,334</u>
4. Net Change		<u>\$320,292</u>	<u>\$103,850</u>
5. Average Rate of Return			
a. Average Asset Value		\$3,497,633	\$3,803,303
b. Income Net of Investment Expenses		\$332,532	\$145,334
c. Annual Rate of Return Net of Investment Expenses		9.5%	3.8%
6. Investment Gain/(Loss)		\$70,210	(\$139,914)

3.2 Actuarial Present Value of Projected Benefits

	<u>September 30, 2017</u>	<u>September 30, 2019</u>
A. Discount Rate	7.50%	7.50%
B. Present Value of Projected Benefits		
1. Active	\$4,952,129	\$4,619,196
2. Contribution Refund Payable	\$5,255	\$18,993
3. Terminated Vested	\$0	\$0
4. Retired	\$2,575,595	\$3,510,238
5. Disabled	\$29,790	\$31,301
6. Beneficiary	\$0	\$0
7. Total	<u>\$7,562,769</u>	<u>\$8,179,728</u>
C. Change in Present Value of Projected Benefits		
		<u>Change</u>
1. Benefits Accumulated		\$0
2. Benefits Paid		(\$676,216)
3. Decrease in Discount Period		\$1,124,338
4. Plan Experience		\$10,638
5. Actuarial Assumptions		\$158,199
6. Actuarial Methods		\$0
7. Plan Amendments		\$0
8. Net Change		<u><u>\$616,959</u></u>
D. Actuarial Value of Assets	<u>\$3,503,753</u>	<u>\$3,927,895</u>
E. Funded Status	46.3%	48.0%
F. Present Value of Future Payroll	\$14,641,600	\$14,898,973
G. Present Value of Future Contributions		
1. Firefighter	\$1,756,992	\$1,787,877
2. City	\$1,756,992	\$1,787,877
3. Total	<u>\$3,513,984</u>	<u>\$3,575,754</u>

3.3 Actuarial Accrued Liability and Normal Cost

	<u>September 30, 2017</u>	<u>September 30, 2019</u>
A. Discount Rate	7.50%	7.50%
B. Actuarial Accrued Liability (EAN)		
1. Active	\$3,163,958	\$2,890,757
2. Contribution Refund Payable	\$5,255	\$18,993
3. Terminated Vested	\$0	\$0
4. Retired	\$2,575,595	\$3,510,238
5. Disabled	\$29,790	\$31,301
6. Beneficiary	\$0	\$0
7. Total	<u>\$5,774,598</u>	<u>\$6,451,289</u>
C. Actuarial Value of Assets	<u>\$3,503,753</u>	<u>\$3,927,895</u>
D. Unfunded Actuarial Liability	<u><u>\$2,270,845</u></u>	<u><u>\$2,523,394</u></u>
E. Change in Unfunded Actuarial Accrued Liability		<u>Change</u>
1. Contributions		(\$663,022)
2. Benefits Accumulated		\$370,112
3. Decrease in Discount Period		\$347,102
4. Plan Asset Experience		\$64,438
5. Plan Liability Experience		(\$27,466)
6. Actuarial Assumptions		\$120,855
7. Administrative Expenses		\$40,530
8. Actuarial Methods		\$0
9. Plan Amendments		\$0
10. Net Change		<u><u>\$252,549</u></u>
F. Funded Status	60.7%	60.9%
G. Present Value of Future Normal Cost	\$1,788,171	\$1,728,439
H. Present Value of Future Payroll	\$14,641,600	\$14,898,973
I. Normal Cost Rate	12.21%	11.60%

3.4 Expected Amortization Period

	<u>September 30, 2017</u>	<u>September 30, 2019</u>
A. Discount Rate	7.50%	7.50%
B. Present Value Future Compensation (PVFComp)	\$14,641,600	\$14,898,973
C. Present Value Future Contributions (PVFContrb) % of Compensation	\$3,513,984 24.00%	\$3,575,754 24.00%
D. Present Value Projected Benefits (PVFB)	\$7,562,769	\$8,179,728
E. Actuarial Accrued Liability (AAL)	<u>\$5,774,598</u>	<u>\$6,451,289</u>
F. Present Value of Future Normal Costs (PVFNC) % of PVFComp	\$1,788,171 12.21%	\$1,728,439 11.60%
G. PVFContrb available to payoff UAL % of PVFComp	\$1,725,813 11.79%	\$1,847,315 12.40%
H. Valuation Compensation	\$1,491,018	\$1,364,654
I. Current Contribution Available to pay off UAL		
1. Current Contribution in Excess of PVFNC	\$169,548	\$163,207
2. Administrative Expenses	<u>(\$25,345)</u>	<u>(\$21,059)</u>
3. Current Contribution Available to pay off UAL	\$144,203	\$142,148
J. Unfunded Actuarial Liability (UAL)	\$2,270,845	\$2,523,394
K. Expected Amortization Period (4% Payroll Growth)	21.8	26.1
L. Expected Amortization Period Sensitivity		
1. Annual Payroll Growth 3.00%	25.2	32.3
2. Annual Payroll Growth 3.50%	23.3	28.9

3.5 Recommended Funding Policy

	<u>September 30, 2017</u>	<u>September 30, 2019</u>
A. PRB Minimum Funding Policy		
1. Normal Cost	12.21%	11.60%
2. Administrative Expenses	1.75%	1.60%
3. 30-year Amortization Payment:	<u>8.18%</u>	<u>9.92%</u>
4. Total Minimum Funding	22.14%	23.12%
B. PRB Preferred Funding Policy		
1. Normal Cost	12.21%	11.60%
2. Administrative Expenses	1.75%	1.60%
3. 25-year Amortization Payment:	<u>9.15%</u>	<u>11.10%</u>
4. Total Preferred Funding	23.11%	24.30%
C. PRB Preferred Funding Policy - High		
1. Normal Cost	12.21%	11.60%
2. Administrative Expenses	1.75%	1.60%
3. 10-year Amortization Payment:	<u>18.26%</u>	<u>22.16%</u>
4. Total Preferred Funding	32.22%	35.36%

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 4.00% per year.

3.6 GASB 67 Accounting Information

**Schedule of Changes in San Benito Firemen's Relief and Retirement Fund
Net Pension Liability and Related Ratios**

	<u>September 30, 2017</u>	<u>September 30, 2018</u>	<u>September 30, 2019</u>
Total Pension Liability			
Service Cost	\$182,053	\$190,628	\$174,158
Interest	\$389,309	\$427,691	\$467,041
Changes of benefit terms	\$0	\$0	\$0
Differences between expected and actual experience	(\$16,067)	\$0	(\$27,466)
Changes of assumptions	(\$43,774)	\$0	\$120,855
Benefit payments, including refunds of member contributions	(\$385,720)	(\$334,736)	(\$341,480)
Net change in total pension liability	\$125,801	\$283,583	\$393,108
Total pension liability - beginning	\$5,648,797	\$5,774,598	\$6,058,181
Total pension liability - ending (a)	\$5,774,598	\$6,058,181	\$6,451,289
Plan fiduciary net position			
Contributions - employer	\$163,218	\$170,906	\$160,605
Contributions - member	\$163,218	\$170,906	\$160,605
Net investment income	\$599,133	\$332,532	\$145,334
Benefit payments, including refunds of member contributions	(\$385,720)	(\$334,736)	(\$341,480)
Administrative expense	(\$23,611)	(\$19,316)	(\$21,214)
Other	\$0	\$0	\$0
Net change in plan fiduciary net position	\$516,238	\$320,292	\$103,850
Plan fiduciary net position - beginning	\$2,987,515	\$3,503,753	\$3,824,045
Plan fiduciary net position - ending (b)	\$3,503,753	\$3,824,045	\$3,927,895
Fund's net pension liability - ending (a) - (b)	\$2,270,845	\$2,234,136	\$2,523,394
Plan fiduciary net position as a percentage of the total pension liability	60.7%	63.1%	60.9%
Covered-employee payroll	\$1,360,150	\$1,424,217	\$1,338,375
Fund's net position liability as a percentage of covered employee payroll	167.0%	156.9%	188.5%

Notes to Schedule: Covered-employee payroll is estimated using firefighter contributions divided by the contribution percentage.

3.6 GASB 67 Accounting Information (continued)

Schedule of San Benito's Contributions

	<u>September 31, 2017</u>	<u>September 31, 2018</u>	<u>September 31, 2019</u>
City Required Contribution	\$163,218	\$170,906	\$160,605
Contributions in relation to the City required contribution	\$163,218	\$170,906	\$160,605
Contribution deficiency (excess)	\$0	\$0	\$0
Covered-employee payroll	\$1,360,150	\$1,424,217	\$1,338,375
Contributions as a percentage of covered-employee payroll	12.0%	12.0%	12.0%

Notes to Schedule

Valuation date: September 30, 2019

Contributions to the fund are based on negotiations between the members and the City rather than an actuarially determined rate. The funding policy of the San Benito Firemen's Relief and Retirement Fund requires contributions from both the City and the firefighters. The City's contribution rate is currently 12.00% of member payroll with each active member contributing 12.00% of pensionable pay.

The base mortality assumption was changed to the Society of Actuaries (SOA) Public Safety mortality tables with generational improvement using the MP-2019 longevity projection scales. These tables replace the RP-2014 blue collar mortality tables and older longevity projection scales used in the prior valuation. There were no other changes to the assumptions, methods, or plan provisions since the prior valuation.

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll
Asset Valuation Method	Fair Value
Inflation:	2.50%
Payroll Growth:	4.00%
Salary Increases:	5.5% per annum.
Investment Rate of Return	7.50% net of pension plan investment expenses
Mortality:	PUBS-2010 mortality tables projected generationally with Scale MP-2019

3.6 GASB 67 Accounting Information (continued)

Notes to Schedule

The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of September 30, 2019 (see the discussion of the pension plan's investment policy) are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>
Equity	6.5%
Fixed Income	3.5%
Cash	0.0%

Discount rate. The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that the City contribution would equal 12% of payroll and that member contributions would equal 12% of compensation. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension investments was applied to all periods of benefit payments to determine the total pension liability.

Sensitivity of the net pension liability to changes in the Discount rate: The following presents the net pension liability of the City, calculated using the discount rate of 7.50% as well as what the City's net pension liability would be if it were to be calculated using the discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

	<u>1% Decrease (6.50%)</u>	<u>Current Discount Rate (7.50%)</u>	<u>1% Increase (8.50%)</u>
City's net pension liability	\$3,350,258	\$2,523,394	\$1,835,421

Schedule of Investment Returns

Fiscal Year Ending

	<u>09/30/2017</u>	<u>09/30/2018</u>	<u>09/30/2019</u>
Annual money-weighted rate of return, net of investment expense	20.34%	9.51%	3.82%

3.7 GASB 68 City Accounting Information

Changes in Net Pension Liability

The Net Pension Liability amounts shown below assume the City will use a measurement date equal to the Fund's prior fiscal year end. Under this method, the City's fiscal year end September 30, 2020 reporting period would use the Fund's September 30, 2019 valuation results.

	Increase (Decrease)		
	<u>Total Pension Liability (TPL)</u>	<u>Plan Fiduciary Net Position</u>	<u>Net Pension Liability (NPL)</u>
Balance at 9/30/2019	\$6,058,181	\$3,824,045	\$2,234,136
Changes for the year:			
Service Cost	174,158		174,158
Interest	467,041		467,041
Experience	(27,466)		(27,466)
Employer Contributions		160,605	(160,605)
Member Contributions		160,605	(160,605)
Net Investment Income		145,334	(145,334)
Benefit Payments	(341,480)	(341,480)	-
Administrative Expense		(21,214)	21,214
Assumption Changes	120,855		120,855
Net Change	<u>393,108</u>	<u>103,850</u>	<u>289,258</u>
Balance at 9/30/2020	<u>\$6,451,289</u>	<u>\$3,927,895</u>	<u>\$2,523,394</u>

Sensitivity of the Net Pension Liability to Changes in the Discount Rate.

The following presents the net pension liability, calculated using the discount rate of 7.50%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

	<u>1% Decrease 6.50%</u>	<u>Current Discount Rate of 7.50%</u>	<u>1% Increase 8.50%</u>
Firefighters' Fund Net Pension Liability	\$3,350,258	\$2,523,394	\$1,835,421

3.7 GASB 68 City Accounting Information (continued)

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

Pension Expense Components	FYE 9/30/2020
Service Cost	\$ 174,158
Interest on TPL	467,041
Differences between expected and actual experience	(1,438)
Changes in Assumptions	(33,833)
Changes in Benefit Terms	-
Employee Contributions	(160,605)
Projected Earnings on Pension Plan Investments	(285,248)
Differences between projected and actual earnings on plan investments	97,106
Pension Plan Administrative Expenses	21,214
Other Changes in Fiduciary Net Position	-
Total Pension Expense	<u>\$ 278,395</u>

For the year ended September 30, 2020, the City recognized pension expenses of \$278,395. At September 30, 2020, the City reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between expected and actual experience	16,524	34,146
Changes in assumptions	105,749	208,232
Net difference between projected and actual investment earnings	54,303	-
City Contributions subsequent to Measurement Date	<u>To be determined</u>	<u> </u>
Total	To be determined	242,378

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended September 30:	
2021	\$14,516
2022	(\$72,673)
2023	(\$21,327)
2024	(\$7,285)
2025	(\$1,644)
Thereafter	\$22,611

3.7 GASB 68 City Accounting Information (continued)

Recognition of Changes in TPL

City's Fiscal Year	Differences Between Expected and Actual Experience	Recognition Period (Years)	Year									
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
			9/30/2016	\$35,434	8.9	\$3,981	\$3,981	\$3,981	\$3,981	\$3,981	\$3,981	\$600
9/30/2018	(\$16,067)	8.1	(\$1,984)	(\$1,984)	(\$1,984)	(\$1,984)	(\$1,984)	(\$1,984)	(\$1,984)	(\$195)	\$0	\$0
9/30/2020	(\$27,466)	8	\$0	(\$3,435)	(\$3,433)	(\$3,433)	(\$3,433)	(\$3,433)	(\$3,433)	(\$3,433)	(\$3,433)	(\$3,433)
Subtotal			\$1,997	(\$1,438)	(\$1,436)	(\$1,436)	(\$1,436)	(\$1,436)	(\$4,817)	(\$3,628)	(\$3,433)	\$0

City's Fiscal Year	Changes in Assumptions	Recognition Period (Years)	Year									
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
			9/30/2016	(\$387,461)	8.9	(\$43,535)	(\$43,535)	(\$43,535)	(\$43,535)	(\$43,535)	(\$43,535)	(\$6,530)
9/30/2018	(\$43,774)	8.1	(\$5,404)	(\$5,404)	(\$5,404)	(\$5,404)	(\$5,404)	(\$5,404)	(\$5,404)	(\$542)	\$0	\$0
9/30/2020	\$120,855	8	\$0	\$15,106	\$15,107	\$15,107	\$15,107	\$15,107	\$15,107	\$15,107	\$15,107	\$15,107
Subtotal			(\$48,939)	(\$33,833)	(\$33,832)	(\$33,832)	(\$33,832)	(\$33,832)	\$3,173	\$14,565	\$15,107	\$0

Recognition of Investment (Gains) / Losses

City's Fiscal Year	Differences between Projected and Actual Earnings on Pension Plan Investment	Recognition Period (Years)	Year									
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
			9/30/2015	\$87,163	5	\$17,433	\$4,356	\$0	\$0	\$0	\$0	\$0
9/30/2016	\$286,451	5	\$57,290	\$57,290	\$14,323	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9/30/2017	\$485,779	5	\$97,156	\$97,156	\$97,156	\$24,288	\$0	\$0	\$0	\$0	\$0	\$0
9/30/2018	(\$378,178)	5	(\$75,636)	(\$75,636)	(\$75,636)	(\$75,634)	\$0	\$0	\$0	\$0	\$0	\$0
9/30/2019	(\$70,210)	5	(\$14,042)	(\$14,042)	(\$14,042)	(\$14,042)	(\$14,042)	\$0	\$0	\$0	\$0	\$0
9/30/2020	\$139,914	5	\$0	\$27,982	\$27,983	\$27,983	\$27,983	\$27,983	\$0	\$0	\$0	\$0
Subtotal			\$82,201	\$97,106	\$49,784	(\$37,405)	\$13,941	\$27,983	\$0	\$0	\$0	\$0
Total			\$35,259	\$61,835	\$14,516	(\$72,673)	(\$21,327)	(\$7,285)	(\$1,644)	\$10,937	\$11,674	\$0

4.1 Demographic Summary

	<u>September 30, 2017</u>	<u>September 30, 2019</u>
A. Active Members		
1. Number	26	22
2. Valuation Compensation	\$1,491,018	\$1,364,654
3. Average pay	\$57,347	\$62,030
4. Average age	36.3	37.0
5. Average service	10.4	11.0
B. Terminated Vested Members - Deferred Contribution Refund		
1. Number	1	2
2. Total benefits	\$5,255	\$19,649
3. Average Annual benefits	\$5,255	\$9,825
4. Average Age	22.0	27.8
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	10	12
2. Total benefits	\$230,816	\$311,684
3. Average Annual benefits	\$23,082	\$25,974
4. Average Age	63.3	64.6
E. Beneficiaries		
1. Number	0	0
2. Total benefits	\$0	\$0
3. Average Annual benefits	N/A	N/A
4. Average Age	N/A	N/A

4.2 Data Reconciliation

	<u>Active</u>	<u>Deferred Inactive</u>	<u>Disabled</u>	<u>Retired</u>	<u>Total</u>
Included in September 30, 2017 Valuation	26	1	1	9	37
Change Due To:					
New hires and rehires	1	0	0	0	1
Termination (Vested)	0	0	0	0	0
Termination (Nonvested)	(1)	1	0	0	0
Retirement	(2)	0	0	2	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)	0	0	0	(2)
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>2</u>	<u>(1)</u>
Included in September 30, 2019 Valuation	<u>22</u>	<u>2</u>	<u>1</u>	<u>11</u>	<u>36</u>

4.3 Active Members by Age and Service

Attained Age	Years of Service as of September 30, 2019							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 & up	
Under 25	1	0	0	0	0	0	0	1
25-29	6	0	0	0	0	0	0	6
30-34	3	1	0	0	0	0	0	4
35-39	0	1	0	0	0	0	0	1
40-44	0	0	2	3	0	0	0	5
45-49	0	0	0	1	1	0	0	2
50-51	0	0	0	0	0	2	0	2
52-54	0	0	0	0	1	0	0	1
55-59	0	0	0	0	0	0	0	0
60 & up	0	0	0	0	0	0	0	0
Total	10	2	2	4	2	2	0	22

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 4.00% per annum.

Demographic Assumptions

- Mortality – All Participants Society of Actuaries (SOA) Public Safety mortality tables projected generationally with Scale MP-2019.
- 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 administrative expense assumption as a percent of payroll was reduced from 1.75% to 1.60% to reflect future expectations and the mortality tables were changed to the Society of Actuaries (SOA) Public Safety mortality tables projected generationally with Scale MP-2019. 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, 2019
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	<p>The <u>Entry Age Normal Actuarial Cost Method</u> is 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>.</p>
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.