

City of Sunrise Police Officers' Retirement System

ACTUARIAL VALUATION REPORT
AS OF OCTOBER 1, 2019

ANNUAL EMPLOYER CONTRIBUTION FOR THE FISCAL YEAR
ENDING SEPTEMBER 30, 2021





May 27, 2020

Board of Trustees
City of Sunrise Police Officers'
Retirement System
Sunrise, Florida

Dear Board Members:

The results of the October 1, 2019 Annual Actuarial Valuation of the City of Sunrise Police Officers' Retirement System are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending September 30, 2021, and to determine the actuarial information for GASB Statement No. 67 for the fiscal year ending September 30, 2019. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section B of this report. This report includes risk metrics on page 5 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data or other information through September 30, 2019. The valuation was based upon information furnished by the Plan Administrator concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

This report was prepared using certain assumptions approved by the Board as authorized under Florida Statutes and prescribed by the Florida Statutes as described in the section of this report entitled Actuarial Assumptions and Cost Method. The assumed mortality rates detailed in the Actuarial Assumptions and Methods section were prescribed by Chapter 112.63, Florida Statutes. All actuarial assumptions used in this report are reasonable for purposes of this valuation.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

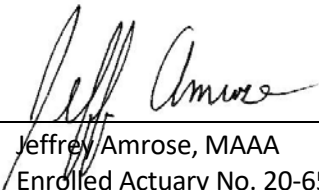
The signing actuaries are independent of the plan sponsor.

This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

By: 
Jeffrey Amrose, MAAA
Enrolled Actuary No. 20-6599
Senior Consultant & Actuary

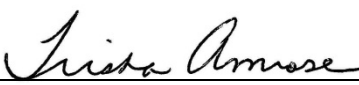
By: 
Trisha Amrose, MAAA
Enrolled Actuary No. 20-8010
Consultant & Actuary



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SECTION A

DISCUSSION OF VALUATION RESULTS

DISCUSSION OF VALUATION RESULTS

Comparison of Required Employer Contributions

The required employer contribution this year compared with the preceding year is as follows:

	For FYE 9/30/2021 Based on 10/1/2019 Valuation	For FYE 9/30/2020 Based on 10/1/2018 Valuation	Increase (Decrease)
Required Contribution	\$ 11,625,766	\$ 12,504,318	\$ (878,552)
As % of Contr. Year Payroll	61.64 %	67.61 %	(5.97) %
Estimated State Contribution	858,107	858,107 *	0
As % of Contr. Year Payroll	4.55 %	4.64 %	(0.09) %
Net Employer Contribution if Paid Biweekly	10,767,659	11,646,211	(878,552)
As % of Contr. Year Payroll	57.09 %	62.97 %	(5.88) %
Net Employer Contribution if Paid on First Day of Fiscal Year	10,354,609	11,185,691	(831,082)
As % of Contr. Year Payroll	54.90 %	60.48 %	(5.58) %

* Updated from the prior year valuation report to reflect the state contribution received for the fiscal year ending September 30, 2019.

Required Contribution Expressed as a Percentage of Payroll Including DROP Members

The following table shows the required contribution developed in this valuation as a percentage of payroll including the salaries of members who are participating in the DROP as of October 1, 2019.

	2019 Valuation	2018 Valuation
Required Contribution	51.89 %	57.28 %
Estimated State Contribution	3.83 %	3.93 %
Net Employer Contribution	48.06 %	53.35 %

Payment of Required Contribution

The contribution developed in this valuation has been calculated as though payments are made at the end of each biweekly pay period. Also shown is the required amount if the full contribution for the fiscal year ending September 30, 2021 is paid on October 1, 2020.

Further, the required Employer contribution has been computed with the assumption that the amount to be received from the State in 2021 will be equal to the amount received in 2019 of \$858,107. If the actual payment from the State falls below this amount, then the Employer must increase its contribution by the difference.

Actual contributions for the last year were \$10,207,194 from the City plus \$858,107 of annual State revenue, for a total of \$11,065,301. The total annual required contribution was \$11,065,301 reflecting an expedited payment schedule.

Revisions in Benefits

There were no revisions in benefits in the current valuation.

Revisions in Actuarial Assumptions and Methods

The investment return assumption was lowered from 7.65% to 7.35% effective October 1, 2019.

In addition, the mortality tables were updated from the mortality rates used by the Florida Retirement System (FRS) for Special Risk Class members in the July 1, 2018 FRS Actuarial Valuation to the rates used in the July 1, 2019 FRS Actuarial Valuation. Please see the Actuarial Assumptions and Cost Method section for more details.

The net impact of the above assumption changes increased the required employer contribution by \$443,227 or 2.35% of covered payroll.

For this valuation a long-term average annual future net investment return assumption of 7.35%, or about 7.7% before investment expenses, was used. Based on the Plan's asset allocation, an assumed net rate of return of 6.5% to 7.0% would be more in line with projected expected returns over the next several years. We recommend consideration be given to lowering the investment return assumption to a rate in this range.

If the investment return assumption is lowered, the required City contribution will increase in the short term and there will be a higher probability the Plan will meet or exceed its assumed return in future years. In other words, there will be a lower probability the Plan will generate investment losses which will be funded by future tax payers.

If the actual experience matches the assumptions, including the actual returns equaling 7.35%, the UAL is expected to decrease over time. On the other hand, if actual investment returns are less than assumed each year, the UAL will increase over time even if actuarially calculated contributions are made and there are no other actuarial gains or losses.



Actuarial Experience

There was a net actuarial loss of \$1,692,495 since the last valuation which means that actual experience was less favorable than expected. The loss was primarily due to a recognized investment return below the assumed rate of 7.65%. The investment return was 3.3% based on market value of assets and 6.5% based on actuarial value of assets. The loss was offset slightly by lower than expected average salary increases (4.0% compared to 5.2% expected). The net loss caused the required employer contribution reflecting bi-weekly payments to increase by 0.72% of covered payroll.

Funded Ratio

This year's funded ratio is 69.4% compared to 68.2% last year. The ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability. The funded ratio before the changes in assumptions was 70.3%.

Analysis of Change in Employer Contribution

The components of change in the required Employer contribution assuming biweekly payments are as follows:

Contribution Rate Last Year	62.97 %
Experience (Gains) or Losses	0.72
Revision in Assumptions/Methods	2.35
Amortization Payment on UAAL*	(8.68)
Normal Cost Rate	(0.26)
Administrative Expense	(0.10)
Benefit Changes	0.00
Change in State Contribution Rate	0.09
Contribution Rate This Year	<u>57.09 %</u>

* Mainly due to the expiration of charge bases.

Variability of Future Contribution Rates

The Actuarial Cost Method used to determine the required contribution is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year. Over time, if the year-to-year gains and losses offset each other, the contribution rate would be expected to return to the current level, but this does not always happen.

The Actuarial Value of Assets exceeds the Market Value of Assets by \$3,260,754 as of the valuation date (see Section C). This difference will be gradually recognized in the absence of offsetting gains and losses. In turn, the computed employer contribution rate will increase by about 1.35% of covered payroll.



Relationship to Market Value

If Market Value had been the basis for the valuation, the City contribution rate would have been 58.44% assuming biweekly payments and the funded ratio would have been 67.9%. In the absence of other gains and losses, the City contribution rate should increase to that level over the next several years.

Conclusion

It is important to note that the funded ratio has dropped from over 85% in 2004 to the current level of 69.4%. Some steps have been taken to address these issues, such as strengthening the actuarial assumptions and shortening the amortization period. Given the low funded ratio, it is advisable to consider further steps, such as a further shortening of the amortization period and/or further reductions in the investment return assumption. Any of these steps would result in higher contributions in the short-term for the City. For each additional \$5 million contributed, the funded ratio will increase by 2.2%.

The remainder of this Report includes detailed actuarial valuation results, information relating to the pension fund, financial accounting information, miscellaneous employee data and a summary of plan provisions.

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.



PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>2019</u>	<u>2018</u>
Ratio of the market value of assets to payroll	8.41	8.12
Ratio of actuarial accrued liability to payroll	12.38	11.78
Ratio of actives to retirees and beneficiaries	1.0	1.0
Ratio of net cash flow to market value of assets	1.45 %	1.18 %

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.



ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

CHAPTER REVENUE

Under the most recent collective bargaining agreement, the City and Union have reached mutual consent regarding the treatment of Chapter 185 revenue. Based on this, the City may use the full amount of the Chapter 185 revenue, up to \$2,137,895, as an offset to the required contribution.

Actuarial Confirmation of the Use of State Chapter Money	
1. Base Amount Previous Plan Year	\$ 785,047
2. Amount Received for Previous Plan Year	858,107
3. Benefit Improvements	0
4. Excess Funds for Previous Plan Year	0
5. Accumulated Excess at Beginning of Previous Year	0
6. Prior Excess Used in Previous Plan Year	0
7. Accumulated Excess as of Valuation Date (Available for Benefit Improvements): (4) + (5) - (6)	0
8. Base Amount This Plan Year	858,107

The Accumulated Excess shown in line 7 is being held in reserve and is subtracted from Plan assets (see Section C of this Report). The Base Amount in line 8 is the amount the employer may take as a credit against its required contribution; however, in no event may the employer take credit for more than the actual amount of Chapter revenue received.

SECTION B

VALUATION RESULTS

PARTICIPANT DATA		
	October 1, 2019	October 1, 2018
ACTIVE MEMBERS		
Number of non-DROP members	159	158
Number of DROP members	21	23
Covered Annual Non-DROP Payroll	\$ 18,311,408	\$ 17,956,093
Average Annual Non-DROP Salary	\$ 115,166	\$ 113,646
Total Payroll Including DROP Members	\$ 21,856,679	\$ 21,291,451
Average Age (Non-DROP Members)	38.4	38.4
Average Past Service (Non-DROP Members)	10.7	10.4
Average Age at Hire (Non-DROP Members)	27.7	28.0
RETIRES, BENEFICIARIES & DROP		
Number	151	147
Annual Benefits*	\$ 8,934,705	\$ 8,450,206
Average Annual Benefit	\$ 59,170	\$ 57,484
Average Age	61.1	60.5
DISABILITY RETIREES		
Number	10	10
Annual Benefits	\$ 487,011	\$ 486,439
Average Annual Benefit	\$ 48,701	\$ 48,644
Average Age	55.6	54.6
TERMINATED VESTED MEMBERS		
Number	1	0
Annual Benefits	\$ 42,588	\$ 0
Average Annual Benefit	\$ 42,588	\$ 0
Average Age	44.7	0.0

* Does not include deferred supplemental benefits for DROP members.



ACTUARIALLY DETERMINED CONTRIBUTION (ADC)			
A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. ADC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021	9/30/2020
C. Assumed Dates of Employer Contributions	Biweekly	Biweekly	Biweekly
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 6,920,387	\$ 6,784,840	\$ 8,029,841
E. Employer Normal Cost	3,965,263	3,671,926	3,663,076
F. ADC if Paid on the Valuation Date: D+E	10,885,650	10,456,766	11,692,917
G. ADC Adjusted for Frequency of Payments	11,286,895	10,857,365	12,140,873
H. ADC as % of Covered Payroll	61.64 %	59.29 %	67.61 %
I. Assumed Rate of Increase in Covered Payroll to Contribution Year	3.00 %	3.00 %	3.00 %
J. Covered Payroll for Contribution Year	18,860,750	18,860,750	18,494,776
K. ADC for Contribution Year: H x J	11,625,766	11,182,539	12,504,318
L. Estimated Credit for State Revenue in Contribution Year	858,107	858,107	858,107
M. Required Employer Contribution (REC) in Contribution Year	10,767,659	10,324,432	11,646,211
N. REC as % of Covered Payroll in Contribution Year: M/J	57.09 %	54.74 %	62.97 %
O. REC (Line M) as % of Total Payroll Including DROP Members	48.06 %	46.08 %	53.35 %
P. REC if Paid on First Day of Next Fiscal Year	10,354,609	9,913,267	11,185,691
Q. REC as % of Covered Payroll if Paid on First Day of Next Fiscal Year	54.90 %	52.56 %	60.48 %

ACTUARIAL VALUE OF BENEFITS AND ASSETS

A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 124,340,149	\$ 119,585,858	\$ 115,239,744
b. Vesting Benefits	3,497,878	3,273,395	3,312,771
c. Disability Benefits	4,804,561	4,540,124	4,612,040
d. Preretirement Death Benefits	1,009,476	1,228,088	1,270,449
e. Return of Member Contributions	515,849	512,189	496,917
f. Total	134,167,913	129,139,654	124,931,921
2. Inactive Members			
a. Service Retirees & Beneficiaries	124,039,608	123,476,341	116,946,616
b. Disability Retirees	5,451,085	5,316,822	5,358,760
c. Terminated Vested Members	325,738	313,905	-
d. Total	129,816,431	129,107,068	122,305,376
3. Total for All Members	263,984,344	258,246,722	247,237,297
C. Actuarial Accrued (Past Service) Liability under Entry Age Normal	226,753,357	223,552,348	211,527,397
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	211,512,032	208,416,083	194,406,016
E. Plan Assets			
1. Market Value	154,004,594	154,004,594	145,849,792
2. Actuarial Value	157,265,348	157,265,348	144,174,690
F. Unfunded Actuarial Accrued Liability	69,488,009	66,287,000	67,352,707
G. Actuarial Present Value of Projected Covered Payroll	132,553,969	130,415,185	130,962,420
H. Actuarial Present Value of Projected Member Contributions	12,406,851	12,212,162	12,389,394
I. Accumulated Contributions of Active Members	14,372,873	14,372,873	13,508,857



CALCULATION OF EMPLOYER NORMAL COST			
A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Normal Cost for			
1. Service Retirement Benefits	\$ 4,455,026	\$ 4,201,190	\$ 4,169,055
2. Vesting Benefits	302,215	281,766	274,759
3. Disability Benefits	422,242	397,185	391,961
4. Preretirement Death Benefits	108,943	113,788	114,254
5. Return of Member Contributions	<u>144,881</u>	<u>146,041</u>	<u>143,467</u>
6. Total for Future Benefits	5,433,307	5,139,970	5,093,496
7. Assumed Amount for Administrative Expenses	<u>286,383</u>	<u>286,383</u>	<u>298,306</u>
8. Total Normal Cost	5,719,690	5,426,353	5,391,802
C. Expected Member Contribution	1,754,427	1,754,427	1,728,726
D. Employer Normal Cost: B8-C	3,965,263	3,671,926	3,663,076
E. Employer Normal Cost as a % of Covered Payroll	21.66%	20.05%	20.40%

A. UAAL AMORTIZATION PERIOD AND PAYMENTS						
Original UAAL			Current UAAL			
Date Established	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment	
					After Changes	Before Changes
10/1/2003	30	\$ (1,528,469)	14	\$ (1,867,004)	\$ (174,346)	\$ (177,178)
10/1/2005	30	7,739,078	16	9,355,877	794,777	809,443
10/1/2006	30	736,681	17	864,820	70,486	71,862
10/1/2008	30	1,493,880	19	1,746,060	132,255	135,115
10/1/2009	20	29,172,763	10	26,344,332	3,180,516	3,217,386
10/1/2010	20	912,239	11	842,612	94,361	95,567
10/1/2010	20	2,344,741	11	2,165,773	242,537	245,638
10/1/2010	20	(773,531)	11	(714,489)	(80,013)	(81,036)
10/1/2011	20	3,495,369	12	3,308,002	346,436	351,271
10/1/2011	20	2,623,230	12	2,482,613	259,996	263,624
10/1/2012	20	247,206	13	236,515	23,322	23,674
10/1/2012	20	2,912,111	13	2,786,161	274,734	278,886
10/1/2013	20	(1,666,097)	14	(1,613,147)	(150,640)	(153,087)
10/1/2013	20	3,211,480	14	3,109,421	290,366	295,083
10/1/2014	20	(1,812,870)	15	(1,778,303)	(158,047)	(160,790)
10/1/2014	20	6,666,275	15	6,539,166	581,169	591,257
10/1/2015	20	749,184	16	742,576	63,081	64,246
10/1/2016	20	700,203	17	700,050	57,056	58,171
10/1/2016	20	(1,161,687)	17	(1,161,432)	(94,660)	(96,509)
10/1/2017	20	3,374,172	18	3,396,692	266,491	271,977
10/1/2017	20	1,213,117	18	1,221,213	95,811	97,784
10/1/2018	20	3,089,041	19	3,105,188	235,202	240,289
10/1/2018	20	1,453,219	19	1,460,814	110,649	113,042
10/1/2018	20	1,314,125	19	1,320,995	100,059	102,222
10/1/2019	20	1,692,495	20	1,692,495	124,093	126,903
10/1/2019	20	3,201,009	20	3,201,009	234,696	N/A
		\$ 78,881,447		\$ 69,488,009	\$ 6,920,387	\$ 6,784,840



B. Amortization Schedule

The UAAL is being amortized as a level percentage of covered annual payroll over the number of years remaining in the amortization period. The following schedule illustrates the expected amortization of the UAAL:

Amortization Schedule	
Year	Expected UAAL
2019	\$ 69,488,009
2020	67,166,317
2021	64,468,221
2022	61,360,331
2023	57,806,669
2024	53,768,449
2029	24,727,150
2034	8,707,341
2039	-

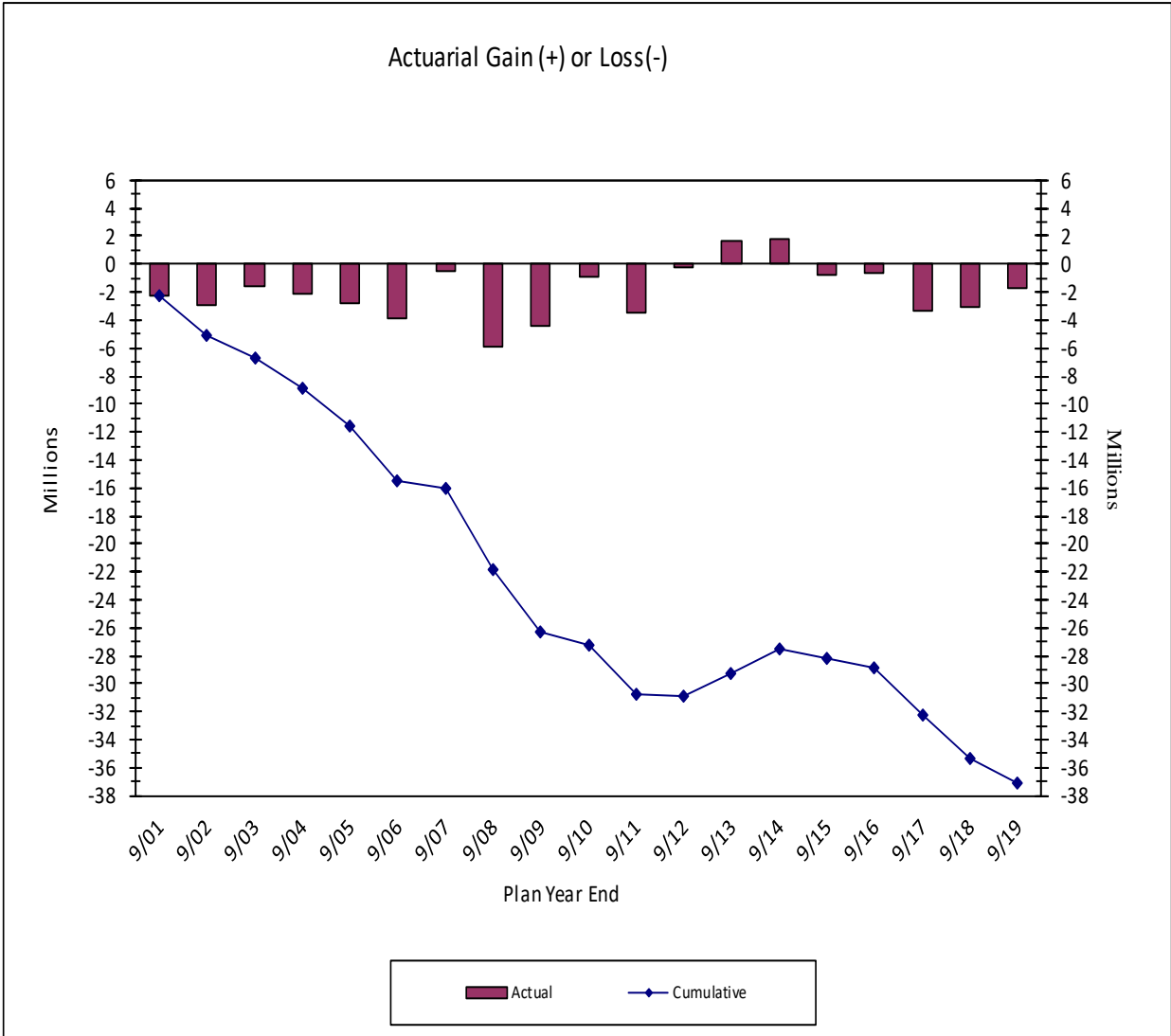
ACTUARIAL GAINS AND LOSSES

The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gain (loss) for the past year is computed as follows:

1. Last Year's UAAL	67,352,707
2. Last Year's Employer Normal Cost	3,663,076
3. Last Year's Contributions	11,065,301
4. Interest at the Assumed Rate on:	
a. 1 and 2 for one year	5,432,707
b. 3 from dates paid	788,684
c. a - b	<u>4,644,023</u>
5. This Year's Expected UAAL Prior to Revision: 1 + 2 - 3 + 4c	64,594,505
6. Change in UAAL Due to Plan Amendments and/or Changes in Actuarial Assumptions	3,201,009
7. This Year's Expected UAAL (after changes): 5 + 6	67,795,514
8. This Year's Actual UAAL (after changes)	69,488,009
9. Net Actuarial Gain/(Loss): 7 - 8	(1,692,495)
10. Gain/(Loss) Due to Investment	(1,758,077)
11. Gain/(Loss) Due to Other Sources	65,582

Net actuarial gains/(losses) in previous years have been as follows:

Year Ending	Actuarial Gain / (Loss)
9/92	300,204
9/93	349,769
9/94	(235,263)
9/96	2,828,948
9/97	274,306
9/98	1,198,126
9/99	1,434,197
9/00	1,589,573
9/01	(2,225,048)
9/02	(2,912,478)
9/03	(1,617,825)
9/04	(2,097,257)
9/05	(2,791,395)
9/06	(3,884,844)
9/07	(445,973)
9/08	(5,873,241)
9/09	(4,445,762)
9/10	(912,239)
9/11	(3,495,369)
9/12	(247,206)
9/13	1,666,097
9/14	1,812,870
9/15	(749,184)
9/16	(700,203)
9/17	(3,374,172)
9/18	(3,089,041)
9/19	(1,692,495)



13th and/or 14th Checks are payable during years which there is a net actuarial gain and cumulative actuarial gains since October 1, 2000. The table below shows the net actuarial gains/(losses) since October 1, 2000:

Year Ending	Actuarial Gain / (Loss)	Cumulative Gain / (Loss)
9/01	(2,225,048)	(2,225,048)
9/02	(2,912,478)	(5,137,526)
9/03	(1,617,825)	(6,755,351)
9/04	(2,097,257)	(8,852,608)
9/05	(2,791,395)	(11,644,003)
9/06	(3,884,844)	(15,528,847)
9/07	(445,973)	(15,974,820)
9/08	(5,873,241)	(21,848,061)
9/09	(4,445,762)	(26,293,824)
9/10	(912,239)	(27,206,063)
9/11	(3,495,369)	(30,701,432)
9/12	(247,206)	(30,948,638)
9/13	1,666,097	(29,282,541)
9/14	1,812,870	(27,469,671)
9/15	(749,184)	(28,218,855)
9/16	(700,203)	(28,919,058)
9/17	(3,374,172)	(32,293,230)
9/18	(3,089,041)	(35,382,271)
9/19	(1,692,495)	(37,074,766)

The fund earnings and salary increase assumptions have considerable impact on the cost of the plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last few years:

Year Ending	Investment Return		Salary Increases	
	Actual*	Assumed	Actual	Assumed
9/30/1978	7.2 %	6.0 %	---	---
9/30/1979	8.6	6.0	---	---
9/30/1980	9.7	6.0	---	---
9/30/1981	10.3	6.0	---	---
9/30/1982	11.6	7.0	---	---
9/30/1983	11.3	7.0	---	---
9/30/1984	11.4	7.0	---	---
9/30/1985	9.7	7.0	---	---
9/30/1986	17.8	9.0	(1.8) %	9.0 %
9/30/1987	6.3	9.0	16.1	9.0
9/30/1988	8.3	9.0	24.6	9.0
9/30/1989	10.7	9.0	0.5	9.0
9/30/1990	5.8	9.0	9.4	9.0
9/30/1991	13.8	9.0	9.6	9.0
9/30/1992	15.0	9.0	8.4	9.0
9/30/1993	10.8	9.0	5.6	9.0
9/30/1994	2.6	9.0	6.5	9.0
9/30/1995	15.2	9.0	4.5	9.0
9/30/1996	12.4	9.0	4.8	9.0
9/30/1997	12.9	8.5	5.8	7.1
9/30/1998	12.9	8.5	4.9	6.8
9/30/1999	13.6	8.5	12.2 **	7.4
9/30/2000	14.0	8.5	6.9	7.1
9/30/2001	9.2	8.5	11.0	7.1
9/30/2002	(0.8)	8.5	5.1	7.1
9/30/2003	3.9	8.5	8.3	7.0
9/30/2004	2.8	8.5	7.1	7.0
9/30/2005	2.3	8.5	7.7	6.8
9/30/2006	5.5	8.5	10.7	6.7
9/30/2007	8.9	8.5	5.3	6.4
9/30/2008	4.3	8.5	12.8	6.6
9/30/2009	3.4	8.5	8.3	6.5
9/30/2010	8.7	8.4	5.4	6.5
9/30/2011	6.8	8.3	6.4	6.4
9/30/2012	9.3	8.2	3.2	6.4
9/30/2013	9.8	8.1	3.8	6.3
9/30/2014	9.9	8.0	3.2	6.2
9/30/2015	7.8	7.8	6.3	5.2
9/30/2016	8.9	7.8	7.6	5.2
9/30/2017	8.0	7.75	7.6	5.2
9/30/2018	7.6	7.70	7.1	5.2
9/30/2019	6.5	7.65	4.0	5.2
Average	8.9 %	---	7.2 %	---

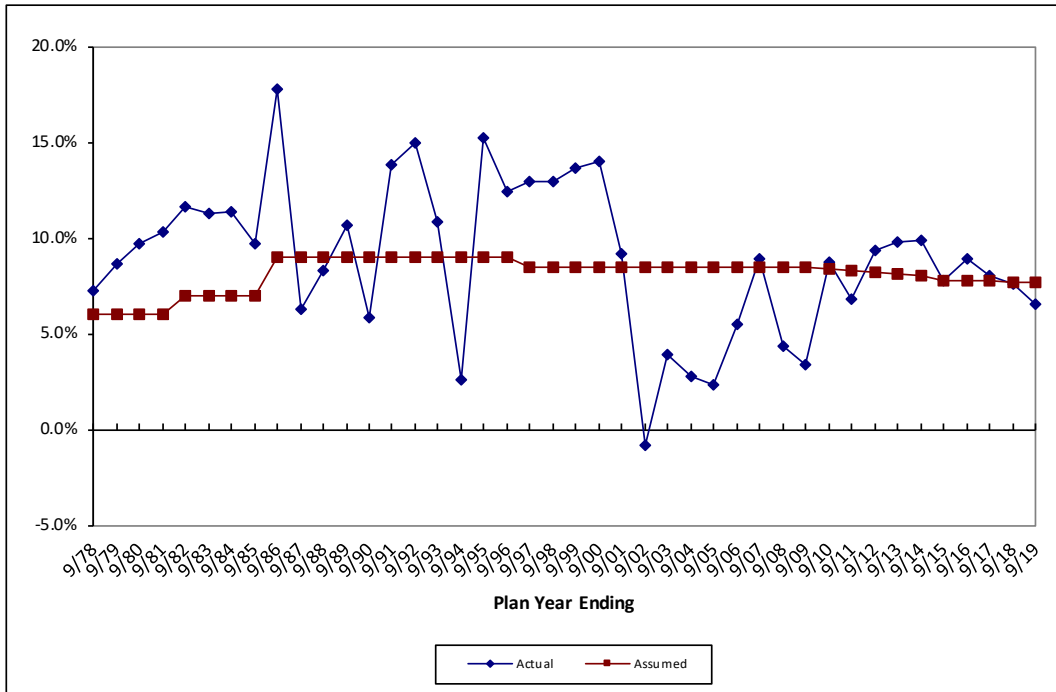
* Figures through 1989 reflect the entire fund before separation of plans.

** Includes retroactive payments of salary increases per the collective bargaining agreement.

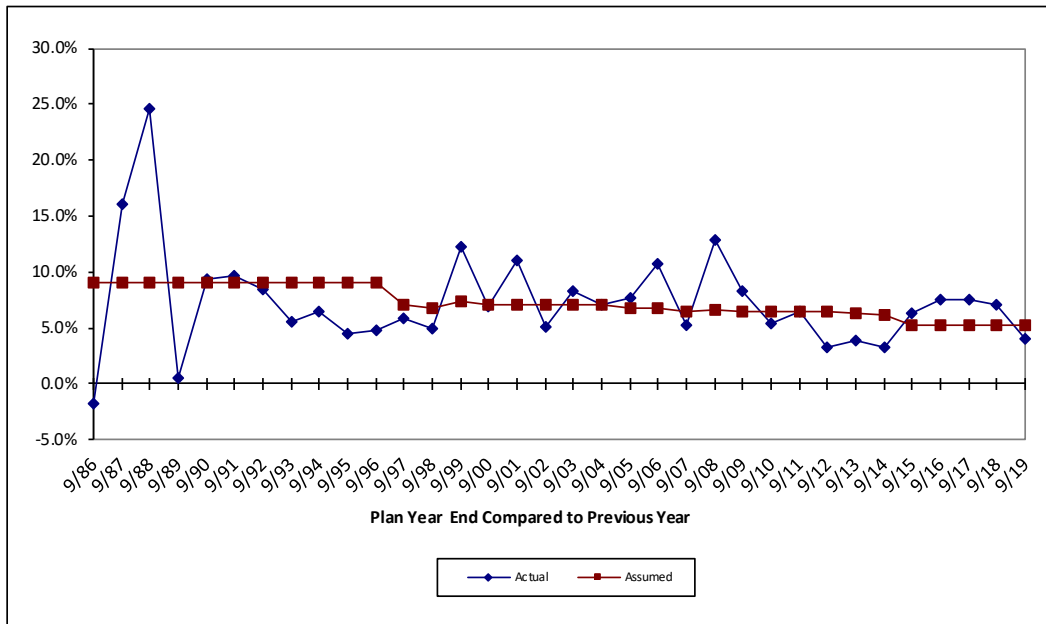
The actual investment return rates shown above are based on the actuarial value of assets. The actual salary increase rates shown above are the increases received by those active members who were included in the actuarial valuations both at the beginning and end of each period.



History of Investment Return Based on Actuarial Value of Assets



History of Salary Increases



Number Added To and Removed from Active Participation

Year Ended	Number Added During Year		Service & DROP Retirement		Disability Retirement		Died In Service		Terminations				Active Members End of Year
	A	E	A	E	A	E	A	E	Vested	Other	Totals		
									A	A	A	E	
9/30/2002	15	16	5	3	0	1	0	0	1	10	11	6	159
9/30/2003	9	6	1	3	1	1	0	0	0	4	4	6	162
9/30/2004	6	5	0	1	0	1	0	0	0	5	5	6	163
9/30/2005	6	11	1	4	0	1	0	0	1	9	10	6	158
9/30/2006	17	21	10	3	0	1	0	0	1	10	11	5	154
9/30/2007	15	11	4	2	1	0	0	0	0	6	6	5	158
9/30/2008	11	12	9	2	0	1	0	0	0	3	3	5	157
9/30/2009	5	8	5	1	0	0	0	0	1	2	3	5	154
9/30/2010	0	12	11	2	0	0	0	0	0	1	1	5	142
9/30/2011	4	7	6	2	1	0	0	0	0	0	0	5	139
9/30/2012	12	12	8	2	1	0	0	0	0	3	3	4	139
9/30/2013	3	7	4	1	0	0	0	0	0	3	3	4	135
9/30/2014	12	2	1	1	1	0	0	0	0	0	0	4	145
9/30/2015	8	3	1	3	0	0	0	0	0	2	2	4	150
9/30/2016	12	9	5	4	1	0	1	0	0	2	2	4	153
9/30/2017	8	6	5	5	0	1	0	0	0	1	1	4	155
9/30/2018	15	12	10	8	0	1	0	0	0	2	2	4	158
9/30/2019	11	10	4	4	0	1	0	0	1	5	6	5	159
9/30/2020				9		1		0				5	
18 Yr Totals 2002 - 2019	169	170	90	51	6	9	1	0	5	68	73	87	



RECENT HISTORY OF VALUATION RESULTS

Valuation Date	Number of		Covered Annual Payroll	Actuarial Value of Assets	Accrued Liability	Unfunded Accrued Liability	Funded Ratio	Employer Normal Cost	
	Active Members	Inactive Members						Amount	% of Payroll
10/1/1993	136	20	\$6,267,523	\$16,851,657	\$18,823,880	\$1,972,223	89.5 %	\$627,218	10.01 %
10/1/1994	135	23	6,529,063	18,112,244	20,093,126	1,980,882	90.1	671,749	10.29
10/1/1996	132	30	6,613,181	24,322,087	26,135,593	1,813,506	93.1	475,798	7.19
10/1/1997	141	35	7,170,493	27,830,337	29,616,974	1,786,637	94.0	570,529	7.96
10/1/1998	153	36	7,837,902	31,671,180	32,769,924	1,098,744	96.6	471,685	6.02
10/1/1999	145	67	7,357,096	35,269,226	41,748,203	6,478,977	84.5	364,562	4.96
10/1/2000 ¹	143	68	7,770,678	37,512,699	45,644,494	8,131,795	82.2	305,271	3.93
10/1/2001	160	68	9,295,368	40,151,353	48,341,005	8,189,652	83.1	616,612	6.63
10/1/2002	159	72	9,383,281	39,137,722	47,650,933	8,513,211	82.1	966,444	10.30
10/1/2003 ²	162	73	10,210,382	40,274,122	47,662,496	7,388,374	84.5	1,008,913	9.88
10/1/2004	163	73	10,894,352	41,494,126	48,949,314	7,455,188	84.8	1,328,531	12.19
10/1/2005	158	75	11,323,389	42,540,854	57,715,082	15,174,228	73.7	1,983,928	17.52
10/1/2006 ³	154	86	11,686,231	45,227,418	61,786,401	16,558,983	73.2	2,556,952	21.88
10/1/2007	158	90	12,497,032	50,977,275	67,462,013	16,484,738	75.6	2,800,876	22.41
10/1/2008	157	97	13,475,617	54,724,468	72,562,321	17,837,853	75.4	3,738,725	27.74
10/1/2009	154	103	13,936,365	50,805,922	97,672,897	46,866,975	52.0	2,287,840	16.42
10/1/2010 ⁴	142	112	13,027,405	57,735,928	107,600,348	49,864,420	53.7	2,265,775	17.39
10/1/2011	139	118	13,521,139	64,270,627	120,138,527	55,867,900	53.5	2,486,192	18.39
10/1/2012	139	127	13,359,510	72,267,056	131,526,358	59,259,302	54.9	2,609,560	19.53
10/1/2013	135	131	13,292,908	81,989,315	142,425,301	60,435,986	57.6	2,703,037	20.33
10/1/2014	145	133	14,122,280	92,954,855	157,303,477	64,348,622	59.1	2,925,989	20.72
10/1/2015	150	133	15,202,411	103,842,431	167,636,562	63,794,131	61.9	3,146,299	20.70
10/1/2016 ⁵	153	140	16,027,155	117,355,366	178,760,380	61,405,014	65.6	3,271,107	20.41
10/1/2017	155	144	17,307,895	131,075,199	194,787,079	63,711,880	67.3	3,555,123	20.54
10/1/2018	158	157	17,956,093	144,174,690	211,527,397	67,352,707	68.2	3,663,076	20.40
10/1/2019	159	162	18,311,408	157,265,348	226,753,357	69,488,009	69.4	3,965,263	21.66

- ¹ From 6/30/2001 Actuarial Impact Statement
- ² From 12/10/2004 Actuarial Impact Statement
- ³ From 1/10/2008 Actuarial Impact Statement
- ⁴ From 7/27/2011 Actuarial Impact Statement
- ⁵ From 9/6/2017 Actuarial Impact Statement



RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS

Valuation Date	End of Year To Which Valuation Applies	Required Contributions						Actual Contributions		
		Employer & State		Estimated State		Net Employer		Employer	State	Total
		Amount	% of Payroll	Amount	% of Payroll	Amount	% of Payroll			
10/1/1985	9/30/1986	\$407,519	13.22 %	\$103,616	3.36 %	\$303,903	9.86 %	\$387,854	\$124,762	\$512,616
10/1/1985	9/30/1987	407,519	13.22	103,616	3.36	303,903	9.86	358,170	152,810	510,980
10/1/1987	9/30/1988	385,876	12.07	152,810	4.78	233,066	7.29	280,715	172,641	453,356
10/1/1987	9/30/1989	385,876	12.07	152,810	4.78	233,066	7.29	307,860	184,331	492,191
10/1/1989	9/30/1990	615,410	13.73	184,331	4.11	431,079	9.62	426,236	198,379	624,615
10/1/1989	9/30/1991	615,410	13.73	184,331	4.11	431,079	9.62	480,918	205,525	686,443
10/1/1991	9/30/1992	730,550	13.74	205,525	3.87	525,025	9.88	533,717	215,510	749,227
10/1/1992	9/30/1993	796,196	13.63	215,510	3.69	580,686	9.94	580,815	222,772	803,587
10/1/1993	9/30/1994	814,782	13.00	222,772	3.55	592,010	9.45	588,409	235,414	823,823
10/1/1994	9/30/1995	828,505	12.69	226,212	3.46	602,293	9.22	580,795	257,223	838,018
10/1/1995 ¹	9/30/1996	860,550	12.69	257,223	3.79	603,327	9.22	597,981	281,695	879,676
10/1/1996	9/30/1997	623,056	9.42	281,695	4.26	341,361	5.16	343,282	311,098	654,380
10/1/1997	9/30/1998	723,467	10.09	311,098	4.34	412,369	5.75	413,775	307,312	721,087
10/1/1998	9/30/1999	573,363	7.32	307,312	3.92	266,051	3.40	277,685	295,625	573,310
10/1/1998	9/30/2000	1,010,905	13.33	307,312	4.05	703,593	9.28	746,594	264,311	1,010,905
10/1/1999	9/30/2001	916,278	11.85	295,625	3.82	620,653	8.03	652,379	280,803	933,182
10/1/2000 ²	9/30/2002	1,000,716	12.30	264,311	3.25	736,405	9.05	700,913	307,312	1,008,225
10/1/2001	9/30/2003	1,317,632	13.63	307,312	3.18	1,010,320	10.45	1,019,184	307,312	1,326,496
10/1/2002	9/30/2004	1,539,895	15.78	307,312	3.15	1,232,583	12.63	1,252,491	307,312	1,559,803
10/1/2003 ³	9/30/2005	1,694,795	15.96	352,973	3.32	1,341,822	12.64	1,341,822	352,973	1,694,795
10/1/2004	9/30/2006	2,017,275	17.81	352,973	3.12	1,664,302	14.69	1,664,302	352,973	2,017,275
10/1/2005 ⁴	9/30/2007	3,483,437	29.58	512,973	4.36	2,630,010	22.33	2,630,010	559,679	3,530,143
10/1/2006 ⁵	9/30/2008	4,227,050	34.78	559,679	4.60	3,507,371	28.86	3,452,721	567,623	4,180,344
10/1/2007	9/30/2009	4,547,620	34.99	559,679	4.31	3,987,941	30.68	3,968,694	578,926	4,547,620
10/1/2008	9/30/2010	5,705,361	40.71	552,722	3.94	5,152,639	36.77	5,152,639	552,722	5,705,361
10/1/2009	9/30/2011	6,462,794	44.59	552,722	3.81	5,910,072	40.78	5,954,543	508,251	6,462,794
10/1/2010 ⁶	9/30/2012	6,542,571	48.29	527,188	3.89	6,015,383	44.40	6,015,383	527,188	6,542,571
10/1/2011	9/30/2013	7,431,759	52.85	568,388	4.04	6,863,371	48.81	6,863,371	568,388	7,431,759
10/1/2012	9/30/2014	8,093,191	58.25	568,388	4.09	7,524,803	54.16	7,472,477	620,714	8,093,191
10/1/2013	9/30/2015	8,833,935	66.45	639,176	4.62	8,194,759	61.83	8,194,759	639,176	8,833,935
10/1/2014	9/30/2016	9,527,596	68.06	639,176	4.39	8,888,420	63.67	8,834,348	693,248	9,527,596
10/1/2015	9/30/2017	9,924,347	63.38	693,248	4.43	9,231,099	58.95	9,199,456	724,891	9,924,347
10/1/2016 ⁷	9/30/2018	10,216,783	61.89	724,891	4.39	9,491,892	57.50	9,431,736	785,047	10,216,783
10/1/2017	9/30/2019	11,065,301	62.07	785,047	4.40	10,280,254	57.67	10,207,194	858,107	11,065,301
10/1/2018	9/30/2020	12,504,318	67.61	858,107	4.64	11,646,211	62.97	---	---	---
10/1/2019	9/30/2021	11,625,766	61.64	858,107	4.55	10,767,659	57.09	---	---	---

¹ Rates from 10/1/1994 Valuation were applied to 10/1/1995 payroll

² From 6/20/2001 Actuarial Impact Statement

³ From 12/10/2004 Actuarial Impact Statement

⁴ Reflects change in member contribution rate from 10.15% to 9.84%; additional contribution of \$340,454 due to one-time use of State Reserve reflected in net employer contribution and actual total contribution but not shown separately

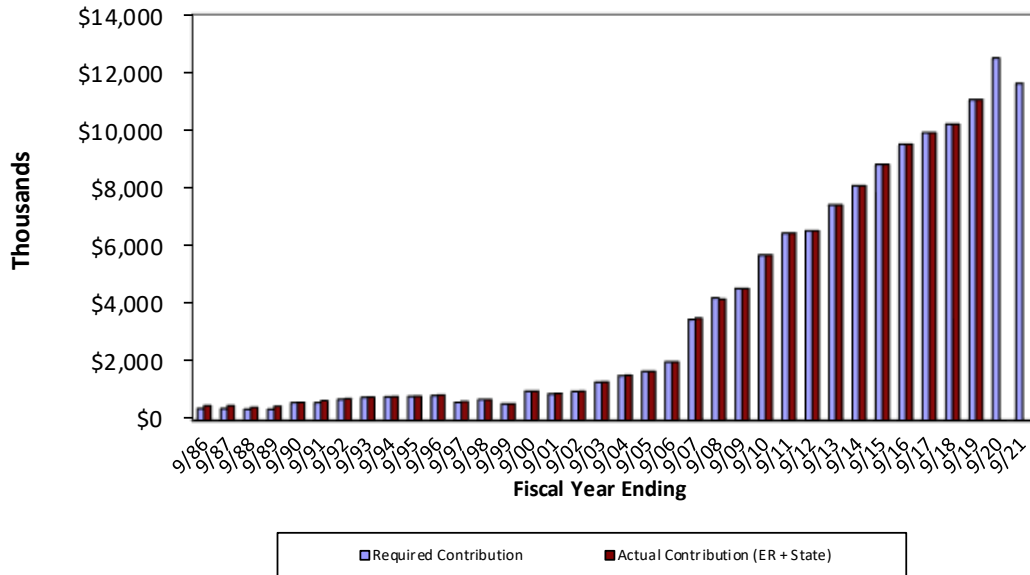
⁵ From 1/10/2008 Actuarial Impact Statement additional contribution of \$160,000 due to one-time use of State Reserve reflected in net required contribution and actual total contribution but not shown separately

⁶ From 7/27/2011 Actuarial Impact Statement

⁷ From 9/6/2017 Actuarial Impact Statement



Recent History of Required and Actual Contributions



ACTUARIAL ASSUMPTIONS AND COST METHOD

Valuation Methods

Actuarial Cost Method - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities - Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) percent-of-payroll contributions over a reasonable period of future years.

Actuarial Value of Assets - The Actuarial Value of Assets was written down to Market Value as of September 30, 2009.

Effective October 1, 2009, the Actuarial Value of Assets phases in the difference between the expected and actual return on actuarial value of assets at the rate of 20% per year. The Actuarial Value of Assets is further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

Valuation Assumptions

The actuarial assumptions used in the valuation are shown in this Section. Mortality is based on a commonly used fully generational mortality table and projection scale that is mandated by Florida Statutes. The investment return assumption, retirement rates, and salary scale have been updated in accordance with assumption analyses.

Economic Assumptions

The investment return rate assumed in the valuation is 7.35% per year, compounded annually (net after investment expenses).

The **Inflation Rate** assumed in this valuation is 2.5% per year. The Inflation Rate is defined to be the expected long-term rate of increases in the prices of goods and services.

The assumed **real rate of return** over inflation is defined to be the portion of total investment return that is more than the assumed inflation rate. Considering other economic assumptions, the 7.35% investment return rate translates to an assumed real rate of return over inflation of 4.85%.



The active member population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at 3% per year, limited to the average growth over the last ten years, which is 2.77%.

Pay increase assumptions for individual active members are shown below. Part of the assumption for each age is for merit and/or seniority increase, and the other 2.5% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

The rates of salary increase used are in accordance with the following table. This assumption is used to project a member’s current salary to the salaries upon which benefits will be based.

Age	% Increase in Salary		
	Merit and Seniority	Base (Economic)	Total Increase
20	5.0%	2.5%	7.5%
25	5.0%	2.5%	7.5%
30	4.8%	2.5%	7.3%
35	3.7%	2.5%	6.2%
40	1.7%	2.5%	4.2%
45	1.7%	2.5%	4.2%
50	1.7%	2.5%	4.2%
55	1.7%	2.5%	4.2%

Demographic Assumptions

The **mortality tables** are the PUB-2010 Headcount Weighted Safety Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same rates used for Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Sample Attained Ages (in 2019)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.42 %	0.20 %	32.31	36.15
55	0.56	0.36	27.54	31.12
60	0.93	0.61	22.97	26.35
65	1.32	0.92	18.73	21.86
70	2.10	1.46	14.74	17.61
75	3.58	2.47	11.15	13.69
80	6.41	4.23	8.09	10.25

This assumption is used to measure the probabilities of each benefit payment being made after retirement.



FRS Healthy Pre-Retirement Mortality for Special Risk Class Members

Sample Attained Ages (in 2019)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.17 %	0.11 %	35.50	39.43
55	0.26	0.16	30.41	34.29
60	0.43	0.22	25.47	29.23
65	0.69	0.30	20.73	24.22
70	1.18	0.55	16.22	19.32
75	2.11	1.09	11.99	14.63
80	6.41	4.23	8.09	10.25

This assumption is used to measure the probabilities of active members dying prior to retirement (75% of pre-retirement deaths are assumed to be service-connected).

For disabled retirees, the mortality tables used were 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Male Table and 20% of the Headcount Weighted Safety Disabled Retiree Male Table, and 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Female Table and 20% Headcount Weighted Safety Disabled Retiree Female Table, both with no provision being made for future mortality improvements. These are the same rates used for Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

FRS Disabled Mortality for Special Risk Class Members

Sample Attained Ages (in 2019)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	1.45 %	1.25 %	24.04	26.84
55	1.91	1.50	20.88	23.54
60	2.37	1.81	17.92	20.32
65	3.00	2.22	15.07	17.17
70	3.91	2.90	12.39	14.10
75	5.30	4.13	9.87	11.22
80	7.66	6.21	7.60	8.67



The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Annual Rate of Retirement for Those Eligible for Normal or Early Retirement

Retirement Rates

		Age															
		42 - 45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
S e r v i c e	10	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	25.0%	25.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	11	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	12	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	13	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	14	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	15	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	16	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	17	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	18	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	19	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	25.0%	35.0%	35.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	20	50.0%	60.0%	60.0%	60.0%	60.0%	60.0%	75.0%	75.0%	75.0%	75.0%	75.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	21	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	22	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	23	40.0%	40.0%	40.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	24	40.0%	40.0%	40.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	25	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	% of Active Members Separating Within Next Year
20	6.0 %
25	5.7
30	5.0
35	3.8
40	2.6
45	1.6
50	0.8
55	0.3

Rates of disability among active members (75% of disabilities are assumed to be service-connected).

Sample Ages	% Becoming Disabled Within Next Year
20	0.14 %
25	0.15
30	0.18
35	0.23
40	0.30
45	0.51
50	1.00
55	1.55



Miscellaneous and Technical Assumptions

<i>Administrative & Investment Expenses</i>	The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the average of the prior two years' expenses. Assumed administrative expenses are added to the Normal Cost.
<i>Benefit Service</i>	Service calculated based on completed months is used to determine the amount of benefit payable.
<i>Cost of Living Adjustment</i>	The cost of living adjustment for members who receive future normal retirement benefits is 2.5% starting 5 years after retirement.
<i>Decrement Operation</i>	Disability and mortality decrements operate during retirement eligibility.
<i>Decrement Timing</i>	Decrements of all types are assumed to occur at the beginning of the year.
<i>Eligibility Testing</i>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<i>Forfeitures</i>	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
<i>Incidence of Contributions</i>	Employer contributions are assumed to be made at the end of each biweekly pay period. Member contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
<i>Liability Load for Tier 2 Members</i>	Liabilities for Tier 2 members (members who enter the Plan after September 30, 2015) are loaded by 4% to approximate the impact of the 13 th Check.
<i>Marriage Assumption</i>	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
<i>Normal Form of Benefit</i>	A 10-year certain and life annuity is the normal form of benefit.



Pay Increase Timing

Beginning of fiscal year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

Service Credit Accruals

It is assumed that members accrue one year of service credit per year.

GLOSSARY

<i>Actuarial Accrued Liability (AAL)</i>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<i>Actuarial Assumptions</i>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
<i>Actuarial Cost Method</i>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<i>Actuarial Equivalent</i>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<i>Actuarial Present Value (APV)</i>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<i>Actuarial Present Value of Future Benefits (APVFB)</i>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<i>Actuarial Valuation</i>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67, such as the Funded Ratio and the Actuarially Determined Contribution (ADC).
<i>Actuarial Value of Assets</i>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution (ADC).



<i>Amortization Method</i>	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
<i>Amortization Payment</i>	That portion of the plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<i>Amortization Period</i>	The period used in calculating the Amortization Payment.
<i>Actuarially Determined Contribution (ADC)</i>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB No. 67. The ADC consists of the Employer Normal Cost and Amortization Payment.
<i>Closed Amortization Period</i>	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
<i>Employer Normal Cost</i>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<i>Equivalent Single Amortization Period</i>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<i>Experience Gain/Loss</i>	A measure of the difference between the normal cost rate from last year and the normal cost rate from this year.
<i>Funded Ratio</i>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
<i>GASB</i>	Governmental Accounting Standards Board.
<i>GASB No. 67 and GASB No. 68</i>	These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.



<i>Normal Cost</i>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<i>Open Amortization Period</i>	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
<i>Unfunded Actuarial Accrued Liability</i>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<i>Valuation Date</i>	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

SECTION C

PENSION FUND INFORMATION

Statement of Plan Assets at Market Value

Item	September 30	
	2019	2018
A. Cash and Cash Equivalents (Operating Cash)	\$ -	\$ -
B. Receivables		
1. Member Contributions	\$ 59,045	\$ 52,697
2. Employer Contributions	-	-
3. State Contributions	-	-
4. Investment Income and Other Receivables	980,157	1,245,215
5. Total Receivables	\$ 1,039,202	\$ 1,297,912
C. Investments		
1. Short Term Investments	\$ 2,020,964	\$ 1,553,813
2. Domestic Equities	80,617,866	82,231,577
3. International Equities	13,867,277	12,306,904
4. Domestic Fixed Income	48,520,212	42,461,225
5. International Fixed Income	-	-
6. Real Estate	12,749,281	11,892,269
7. Private Equity	-	-
8. Total Investments	\$ 157,775,600	\$ 150,445,788
D. Liabilities		
1. Benefits Payable	\$ -	\$ -
2. Accrued Expenses and Other Payables	(179,387)	(497,487)
3. Prepaid City Contribution	-	-
4. Total Liabilities	\$ (179,387)	\$ (497,487)
E. Total Market Value of Assets Available for Benefits	\$ 158,635,415	\$ 151,246,213
F. Reserves		
1. State Contribution Reserve	\$ -	\$ -
2. DROP Accounts	(4,630,821)	(5,396,421)
3. Total Reserves	\$ (4,630,821)	\$ (5,396,421)
G. Market Value Net of Reserves	\$ 154,004,594	\$ 145,849,792
H. Allocation of Investments		
1. Short Term Investments	1.3%	1.0%
2. Domestic Equities	51.0%	54.7%
3. International Equities	8.8%	8.2%
4. Domestic Fixed Income	30.8%	28.2%
5. International Fixed Income	0.0%	0.0%
6. Real Estate	8.1%	7.9%
7. Private Equity	0.0%	0.0%
8. Total Investments	100.0%	100.0%



Reconciliation of Plan Assets

Item	September 30	
	2019	2018
A. Market Value of Assets at Beginning of Year	\$ 151,246,213	\$ 138,217,216
B. Revenues and Expenditures		
1. Contributions		
a. Member Contributions	\$ 1,679,931	\$ 1,698,916
b. Employer Contributions	10,207,194	9,431,736
c. State Contributions	858,107	785,047
d. Purchased Service Credit	-	-
e. Total	<u>\$ 12,745,232</u>	<u>\$ 11,915,699</u>
2. Investment Income		
a. Interest, Dividends, and Other Income	\$ 3,769,516	\$ 3,190,826
b. Net Realized Gains/(Losses)*	-	-
c. Net Unrealized Gains/(Losses)*	1,980,974	8,686,798
d. Investment Expenses	<u>(528,897)</u>	<u>(492,699)</u>
e. Net Investment Income	\$ 5,221,593	\$ 11,384,925
3. Benefits and Refunds		
a. Regular Monthly Benefits	\$ (7,178,466)	\$ (6,653,662)
b. Refunds	(13,426)	(66,853)
c. Lump Sum Benefits Paid	-	-
d. DROP Distributions	<u>(3,092,882)</u>	<u>(3,271,195)</u>
e. Total	\$ (10,284,774)	\$ (9,991,710)
4. Administrative and Miscellaneous Expenses	\$ (292,849)	\$ (279,917)
5. Transfers	\$ -	\$ -
C. Market Value of Assets at End of Year	\$ 158,635,415	\$ 151,246,213
D. Reserves		
1. State Contribution Reserve	\$ -	\$ -
2. DROP Accounts	<u>(4,630,821)</u>	<u>(5,396,421)</u>
3. Total Reserves	\$ (4,630,821)	\$ (5,396,421)
E. Market Value Net of Reserves	\$ 154,004,594	\$ 145,849,792

* Breakdown between realized and unrealized gains (losses) were not available.



Reconciliation of DROP Accounts

Year Ended 9/30	Balance at Beginning of Year	Credits	Interest	Distributions	Adjustments	Balance at End of Year
2002	\$ -	\$ 148,006	\$ 5,101	\$ (16,178)	\$ -	\$ 136,929
2003	136,929	180,567	20,636	-	-	338,132
2004	338,132	180,567	38,421	-	-	557,120
2005	557,120	180,567	57,778	-	-	795,465
2006	795,465	422,350	69,061	(188,744)	-	1,098,132
2007	1,098,132	479,883	101,029	(1,020,132)	-	658,912
2008	658,912	682,875	78,772	(316,082)	-	1,104,477
2009	1,104,477	904,840	137,425	-	-	2,146,742
2010	2,146,742	1,428,932	249,854	(95,349)	-	3,730,179
2011	3,730,179	1,935,801	320,520	(197,552)	-	5,788,948
2012	5,788,948	2,219,679	476,027	(1,245,018)	-	7,239,636
2013	7,085,581 *	2,554,707	561,955	(1,311,925)	-	8,890,318
2014	8,890,318	2,155,050	565,597	(4,336,905)	-	7,274,060
2015	7,274,060	1,910,469	515,300	(1,010,331)	-	8,689,498
2016	8,689,498	1,722,820	685,629	(3,172,610)	-	7,925,337
2017	7,925,337	1,551,907	419,662	(3,891,548)	-	6,005,358
2018	6,005,358	1,771,098	377,019	(3,271,195)	514,141	5,396,421
2019	5,396,421	2,005,253	322,029	(3,092,882)	-	4,630,821

* Beginning of Year balance adjusted to match client's reconciliation and financial statements.



Actuarial Value of Assets

Valuation Date – September 30	2018	2019	2020	2021	2022	2023
A. Actuarial Value of Assets Beginning of Year*	\$ 137,080,557	\$ 149,571,111				
B. Market Value End of Year*	151,246,213	158,635,415				
C. Market Value Beginning of Year*	138,217,216	151,246,213				
D. Non-Investment/Administrative Net Cash Flow	1,644,072	2,167,609				
E. Investment Income						
E1. Actual Market Total: B-C-D	11,384,925	5,221,593				
E2. Assumed Rate of Return	7.70%	7.65%	7.05%	7.05%	7.05%	7.05%
E3. Assumed Amount of Return	10,981,621	11,915,526				
E4. Amount Subject to Phase-In: E1-E3	403,304	(6,693,933)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.2 x E4	80,661	(1,338,787)				
F2. First Prior Year	828,404	80,661	(1,338,787)			
F3. Second Prior Year	195,600	828,404	80,661	(1,338,787)		
F4. Third Prior Year	(1,523,955)	195,600	828,404	80,661	(1,338,787)	
F5. Fourth Prior Year	284,151	(1,523,955)	195,600	828,404	80,661	(1,338,787)
F6. Total Phase-Ins	(135,139)	(1,758,077)	(234,122)	(429,722)	(1,258,126)	(1,338,787)
G. Actuarial Value of Assets End of Year						
G1. Preliminary Actuarial Value of Assets End of Year: A+D+E3+F6	149,571,111	161,896,169				
G2. Upper Corridor Limit: 120%*B	181,495,456	190,362,498				
G3. Lower Corridor Limit: 80%*B	120,996,970	126,908,332				
G4. Actuarial Value of Assets End of Year	149,571,111	161,896,169				
G5. State Contribution Reserve	-	-				
G6. DROP Accounts	(5,396,421)	(4,630,821)				
G7. Final Actuarial Value of Assets End of Year	144,174,690	157,265,348				
H. Difference between Market & Actuarial Value of Assets	1,675,102	(3,260,754)				
I. Actuarial Rate of Return	7.6%	6.5%				
J. Market Value Rate of Return	7.9%	3.3%				
K. Ratio of Actuarial Value of Assets to Market Value	98.9%	102.1%				

* Before offset of State Contribution Reserve and DROP Accounts.

The Actuarial Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment income (Line E4) are phased-in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than Market Value. If assumed rates are exactly realized for 5 consecutive years, Actuarial Value of Assets will become equal to Market Value.



Year Ending September 30th	Investment Rate of Return	
	Market Value *	Actuarial Value
1978	7.2 %	7.2 %
1979	8.6	8.6
1980	9.7	9.7
1981	10.3	10.3
1982	11.6	11.6
1983	11.3	11.3
1984	11.4	11.4
1985	9.7	9.7
1986	17.8	17.8
1987	6.3	6.3
1988	8.3	8.3
1989	10.7	10.7
1990	5.8	5.8
1991	13.8	13.8
1992	15.0	15.0
1993	11.4	10.8
1994	3.0	2.6
1995	15.8	15.2
1996	13.0	12.4
1997	27.7	12.9
1998	10.3	12.9
1999	13.5	13.6
2000	11.8	14.0
2001	(9.8)	9.2
2002	(6.9)	(0.8)
2003	14.6	3.9
2004	7.9	2.8
2005	9.0	2.3
2006	6.4	5.5
2007	11.9	8.9
2008	(11.7)	4.3
2009	1.2	3.4
2010	9.9	8.7
2011	(0.3)	6.8
2012	21.6	9.3
2013	11.3	9.8
2014	9.0	9.9
2015	0.3	7.8
2016	8.8	8.9
2017	11.1	8.0
2018	7.9	7.6
2019	3.3	6.5
Average Returns:		
Last 5 Years	6.2 %	7.8 %
Last 10 Years	8.1 %	8.3 %
All Years	8.6 %	8.9 %

**Net of investment expenses starting in 2006.*

The above rates are based on the retirement system's financial information reported to the actuary. They may differ from figures that the investment consultant reports, in part because of differences in the handling of administrative and investment expenses, and in part because of differences in the handling of cash flows.



History of Premium Tax Refunds

Year Received	Amount
1973	\$ 162.73
1974	969.40
1975	5,140.84
1976	11,554.80
1977	29,468.92
1978	29,787.49
1979	32,251.00
1980	39,792.00
1981	45,645.00
1982	60,336.53
1983	72,150.14
1984	83,242.99
1985	103,615.68
1986	124,761.71
1987	152,810.22
1988	172,640.89
1989	184,331.26
1990	198,379.19
1991	205,524.75
1992	215,510.42
1993	222,771.55
1994	235,414.53
1995	257,223.00
1996	281,695.14
1997	311,097.66
1998	307,311.95
1999	295,625.18
2000	264,310.96
2001	280,803.49
2002	323,403.51
2003	374,159.74
2004	497,444.66
2005	503,294.47
2006	512,972.82
2007	559,678.84
2008	567,622.66
2009	578,925.89
2010	552,721.74
2011	508,250.66
2012	527,188.24
2013	568,387.94
2014	620,714.25
2015	639,175.78
2016	693,248.17
2017	724,891.12
2018	785,046.96
2019	<u>858,107.35</u>
	\$ 14,619,564.22



SECTION D

FINANCIAL ACCOUNTING INFORMATION

FASB NO. 35 INFORMATION

	October 1, 2019	October 1, 2018
A. Valuation Date		
B. Actuarial Present Value of Accumulated Plan Benefits		
1. Vested Benefits		
a. Members Currently Receiving Payments	\$ 129,490,693	\$ 122,305,376
b. Terminated Vested Members	325,738	0
c. Other Members	<u>78,188,363</u>	<u>68,907,661</u>
d. Total	208,004,794	191,213,037
2. Non-Vested Benefits	3,507,238	3,192,979
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	211,512,032	194,406,016
4. Accumulated Contributions of Active Members	14,372,873	13,508,857
C. Changes in the Actuarial Present Value of Accumulated Plan Benefits		
1. Total Value at Beginning of Year	194,406,016	177,528,839
2. Increase (Decrease) During the Period Attributable to:		
a. Plan Amendment	0	1,414,320
b. Change in Actuarial Assumptions	3,095,949	1,215,967
c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	23,207,212	22,738,503
d. Benefits Paid	<u>(9,197,145)</u>	<u>(8,491,613)</u>
e. Net Increase	17,106,016	16,877,177
3. Total Value at End of Period	211,512,032	194,406,016
D. Market Value of Assets	154,004,594	145,849,792
E. Actuarial Assumptions - See page entitled Actuarial Assumptions and Methods		

SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS GASB Statement No. 67

Fiscal year ending September 30,	2020*	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service Cost	\$ 5,139,970	\$ 4,985,444	\$ 4,857,819	\$ 4,599,186	\$ 4,415,243	\$ 4,068,061	\$ 3,784,863
Interest	17,458,076	16,247,834	15,162,272	14,481,168	13,727,142	12,756,539	12,056,017
Benefit Changes	-	1,620,550	-	-	-	-	-
Difference between actual & expected experience	(151,036)	3,218,834	4,093,499	2,023,747	560,558	(417,253)	(58,354)
Assumption Changes	3,066,971	1,367,814	1,265,641	(1,393,066)	-	6,918,969	-
Benefit Payments	(10,408,269)	(10,271,348)	(9,924,857)	(9,946,162)	(8,399,112)	(5,761,251)	(8,760,460)
Refunds	(98,330)	(13,426)	(66,853)	(29,030)	(65,487)	(56,610)	(40,078)
Net Change in Total Pension Liability	15,007,382	17,155,702	15,387,521	9,735,843	10,238,344	17,508,455	6,981,988
Total Pension Liability - Beginning	228,323,472	211,167,770	195,780,249	186,044,406	175,806,062	158,297,607	151,315,619
Total Pension Liability - Ending (a)	<u>\$ 243,330,854</u>	<u>\$ 228,323,472</u>	<u>\$ 211,167,770</u>	<u>\$ 195,780,249</u>	<u>\$ 186,044,406</u>	<u>\$ 175,806,062</u>	<u>\$ 158,297,607</u>
Plan Fiduciary Net Position							
Contributions - Employer	\$ 11,646,211	\$ 10,207,194	\$ 9,431,736	\$ 9,199,456	\$ 8,834,348	\$ 8,194,759	\$ 7,472,477
Contributions - Employer (from State)	858,107	858,107	785,047	724,891	693,248	639,176	620,714
Contributions - Non-Employer Contributing Entity	-	-	-	-	-	-	-
Contributions - Member	1,754,427	1,679,931	1,698,916	1,664,869	1,510,667	1,524,051	1,293,252
Net Investment Income	11,760,790	5,221,593	11,384,925	14,258,027	10,187,217	366,132	8,705,647
Benefit Payments	(10,408,269)	(10,271,348)	(9,924,857)	(9,946,162)	(8,399,112)	(5,761,251)	(8,760,460)
Refunds	(98,330)	(13,426)	(66,853)	(29,030)	(65,487)	(56,610)	(40,078)
Administrative Expense	(286,383)	(292,849)	(279,917)	(316,694)	(338,086)	(231,098)	(222,848)
Other	-	-	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	15,226,553	7,389,202	13,028,997	15,555,357	12,422,795	4,675,159	9,068,704
Plan Fiduciary Net Position - Beginning	158,635,415	151,246,213	138,217,216	122,661,859	110,239,064	105,563,905	96,495,201
Plan Fiduciary Net Position - Ending (b)	<u>\$ 173,861,968</u>	<u>\$ 158,635,415</u>	<u>\$ 151,246,213</u>	<u>\$ 138,217,216</u>	<u>\$ 122,661,859</u>	<u>\$ 110,239,064</u>	<u>\$ 105,563,905</u>
Net Pension Liability - Ending (a) - (b)	69,468,886	69,688,057	59,921,557	57,563,033	63,382,547	65,566,998	52,733,702
Plan Fiduciary Net Position as a Percentage							
of Total Pension Liability	71.45 %	69.48 %	71.62 %	70.60 %	65.93 %	62.70 %	66.69 %
Covered Payroll	\$ 18,311,408	\$ 17,491,218	\$ 17,508,583	\$ 16,985,178	\$ 15,886,876	\$ 15,488,323	\$ 13,142,805
Net Pension Liability as a Percentage							
of Covered Payroll	379.37 %	398.42 %	342.24 %	338.90 %	398.96 %	423.33 %	401.24 %

*These figures are estimates only. Actual figures will be provided after the end of the fiscal year.



SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY

GASB Statement No. 67

FY Ending September 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 158,297,607	\$ 105,563,905	\$ 52,733,702	66.69%	\$ 13,142,805	401.24%
2015	175,806,062	110,239,064	65,566,998	62.70%	15,488,323	423.33%
2016	186,044,406	122,661,859	63,382,547	65.93%	15,886,876	398.96%
2017	195,780,249	138,217,216	57,563,033	70.60%	16,985,178	338.90%
2018	211,167,770	151,246,213	59,921,557	71.62%	17,508,583	342.24%
2019	228,323,472	158,635,415	69,688,057	69.48%	17,491,218	398.42%
2020*	243,330,854	173,861,968	69,468,886	71.45%	18,311,408	379.37%

***These figures are estimates only. Actual figures will be provided after the end of the fiscal year.**

NOTES TO SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY

GASB Statement No. 67

Valuation Date: October 1, 2019
 Measurement Date: September 30, 2020

Methods and Assumptions Used to Determine Net Pension Liability:

Actuarial Cost Method	Entry Age Normal
Inflation	2.50%
Salary Increases	4.20% to 7.50% depending on age, including inflation
Investment Rate of Return	7.35%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.

Mortality

The **mortality tables** are the PUB-2010 Headcount Weighted Safety Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same rates used for Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

For disabled retirees, the mortality tables used were 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Male Table and 20% of the Headcount Weighted Safety Disabled Retiree Male Table, and 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Female Table and 20% Headcount Weighted Safety Disabled Retiree Female Table, both with no provision being made for future mortality improvements. These are the same rates used for Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

Other Information:

Notes

See Discussion of Valuation Results in the October 1, 2019 Actuarial Valuation Report. The investment rate of return was lowered from 7.65% to 7.05%. In addition, the mortality tables were updated from the mortality rates used by the Florida Retirement System (FRS) for Special Risk Class members in the July 1, 2018 FRS Actuarial Valuation to the rates used in the July 1, 2019 FRS Actuarial Valuation.



SCHEDULE OF CONTRIBUTIONS GASB Statement No. 67

FY Ending September 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2010	\$ 5,705,361	\$ 5,705,361	\$ -	\$ 13,254,411	43.04%
2011	6,462,794	6,462,794	-	13,147,856	49.15%
2012	6,542,571	6,542,571	-	12,896,026	50.73%
2013	7,431,759	7,431,759	-	12,810,274	58.01%
2014	8,093,191	8,093,191	-	13,142,805	61.58%
2015	8,833,935	8,833,935	-	15,488,323	57.04%
2016	9,527,596	9,527,596	-	15,886,876	59.97%
2017	9,924,347	9,924,347	-	16,985,178	58.43%
2018	10,216,783	10,216,783	-	17,508,583	58.35%
2019	11,065,301	11,065,301	-	17,491,218	63.26%
2020 *	12,504,318	12,504,318	-	18,311,408	68.29%

***These figures are estimates only. Actual figures will be provided after the end of the fiscal year.**



NOTES TO SCHEDULE OF CONTRIBUTIONS

GASB Statement No. 67

Valuation Date: October 1, 2018
Notes Actuarially determined contributions are calculated as of October 1, which is two years prior to the end of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Pay, Closed
Remaining Amortization Period	20 years
Asset Valuation Method	5-year smoothed market
Inflation	2.50%
Salary Increases	4.20% to 7.50% depending on age, including inflation
Investment Rate of Return	7.65%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality), with mortality improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2016 FRS Valuation, as mandated by Chapter 112.63, Florida Statutes.

Other Information:

Notes See Discussion of Valuation Results in the October 1, 2018 Actuarial Valuation Report. The investment rate of return was lowered from 7.70% to 7.65%. In addition, Ordinance Number 124-X-19-A amended the City of Sunrise Police Officers' Retirement System by increasing the monthly supplemental benefit payable before age 65 from \$25 per year of service (maximum of \$500) to \$35 per year of service (maximum of \$700). The monthly supplemental benefit payable at age 65 is unchanged.



SINGLE DISCOUNT RATE GASB Statement No. 67

A single discount rate of 7.35% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.35%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between the total actuarially determined contribution rates and the member rate. Based on these 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 plan investments (7.35%) was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan’s net pension liability, calculated using a single discount rate of 7.35%, as well as what the plan’s net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher.

Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption

1% Decrease	Current Single Discount Rate Assumption	1% Increase
6.35%	7.35%	8.35%
\$100,074,141	\$69,468,886	\$44,735,755

***These figures are estimates only. Actual figures will be provided after the end of the fiscal year.**

SECTION E

MISCELLANEOUS INFORMATION

RECONCILIATION OF MEMBERSHIP DATA		
	From 10/1/18 To 10/1/19	From 10/1/17 To 10/1/18
A. Active Members		
1. Number Included in Last Valuation	158	155
2. New Members Included in Current Valuation	11	10
3. Non-Vested Employment Terminations	(5)	(2)
4. Vested Employment Terminations	(1)	0
5. DROP Retirement	(4)	(9)
6. Service Retirements	0	(1)
7. Disability Retirements	0	0
8. Deaths	0	0
9. Other - Transfer/Rehire/Data Correction	<u>0</u>	<u>5</u>
10. Number Included in This Valuation	159	158
B. Terminated Vested Members		
1. Number Included in Last Valuation	0	0
2. Additions from Active Members	1	0
3. Lump Sum Payments/Refund of Contributions	0	0
4. Payments Commenced	0	0
5. Deaths	0	0
6. Other - Rehire	<u>0</u>	<u>0</u>
7. Number Included in This Valuation	1	0
C. DROP Plan Members		
1. Number Included in Last Valuation	23	20
2. Addition from Active Members	4	9
3. Retirements	(6)	(6)
4. Deaths Resulting in No Further Payments	0	0
5. Other	<u>0</u>	<u>0</u>
6. Number Included in This Valuation	21	23
D. Service Retirees, Disability Retirees and Beneficiaries		
1. Number Included in Last Valuation	134	124
2. Additions from Active Members	0	1
3. Additions from DROP	6	6
4. Additions from Terminated Vested Members	0	0
5. Deaths Resulting in No Further Payments	0	0
6. Deaths Resulting in New Survivor Benefits	(2)	(1)
7. End of Certain Period - No Further Payments	0	0
8. Other - beneficiaries of death benefits	<u>2</u>	<u>4</u>
9. Number Included in This Valuation	140	134



ACTIVE PARTICIPANT DISTRIBUTION

Age Group	Years of Service to Valuation Date										Totals
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25 & Up	
20-24 NO	2	-	1	-	-	-	-	-	-	-	3
TOT PAY	117,297	-	72,521	-	-	-	-	-	-	-	189,818
AVG PAY	58,649	-	72,521	-	-	-	-	-	-	-	63,273
25-29 NO	7	1	3	1	1	4	-	-	-	-	17
TOT PAY	410,539	71,137	228,501	78,529	105,115	416,521	-	-	-	-	1,310,342
AVG PAY	58,648	71,137	76,167	78,529	105,115	104,130	-	-	-	-	77,079
30-34 NO	2	4	4	4	3	16	-	-	-	-	33
TOT PAY	117,297	284,604	292,528	324,406	282,878	1,689,967	-	-	-	-	2,991,680
AVG PAY	58,649	71,151	73,132	81,102	94,293	105,623	-	-	-	-	90,657
35-39 NO	-	1	4	2	2	3	18	2	-	-	32
TOT PAY	-	74,642	302,201	138,191	194,774	300,012	2,176,352	309,898	-	-	3,496,070
AVG PAY	-	74,642	75,550	69,096	97,387	100,004	120,908	154,949	-	-	109,252
40-44 NO	-	-	-	2	-	4	10	19	1	-	36
TOT PAY	-	-	-	177,358	-	386,527	1,236,931	2,500,136	166,176	-	4,467,128
AVG PAY	-	-	-	88,679	-	96,632	123,693	131,586	166,176	-	124,087
45-49 NO	-	-	-	-	-	2	4	15	8	-	29
TOT PAY	-	-	-	-	-	208,284	434,273	1,988,400	1,217,557	-	3,848,514
AVG PAY	-	-	-	-	-	104,142	108,568	132,560	152,195	-	132,707
50-54 NO	-	-	-	-	-	-	2	4	3	-	9
TOT PAY	-	-	-	-	-	-	232,406	500,087	373,389	-	1,105,882
AVG PAY	-	-	-	-	-	-	116,203	125,022	124,463	-	122,876
55-59 NO	-	-	-	-	-	-	-	-	-	-	-
TOT PAY	-	-	-	-	-	-	-	-	-	-	-
AVG PAY	-	-	-	-	-	-	-	-	-	-	-
60-64 NO	-	-	-	-	-	-	-	-	-	-	-
TOT PAY	-	-	-	-	-	-	-	-	-	-	-
AVG PAY	-	-	-	-	-	-	-	-	-	-	-
65 & Up NO	-	-	-	-	-	-	-	-	-	-	-
TOT PAY	-	-	-	-	-	-	-	-	-	-	-
AVG PAY	-	-	-	-	-	-	-	-	-	-	-
TOT NO	11	6	12	9	6	29	34	40	12	-	159
TOT AMT	645,134	430,383	895,751	718,484	582,767	3,001,311	4,079,962	5,298,521	1,757,122	-	17,409,434
AVG AMT	58,649	71,731	74,646	79,832	97,128	103,493	119,999	132,463	146,427	-	109,493



INACTIVE PARTICIPANT DISTRIBUTION

Age	Terminated Vested		Disabled		Retired*		Beneficiaries		Grand Total	
	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits
Under 20	0	-	0	-	0	-	0	-	0	0
20 - 24	0	-	0	-	0	-	0	-	0	0
25 - 29	0	-	0	-	0	-	0	-	0	0
30 - 34	0	-	0	-	0	-	0	-	0	0
35 - 39	0	-	0	-	0	-	0	-	0	0
40 - 44	1	42,588	0	-	1	117,165	0	-	2	159,753
45 - 49	0	-	6	346,322	13	1,150,329	0	-	19	1,496,651
50 - 54	0	-	0	-	33	2,910,154	2	154,203	35	3,064,357
55 - 59	0	-	0	-	25	1,623,535	2	36,414	27	1,659,949
60 - 64	0	-	2	67,946	27	1,259,041	2	42,636	31	1,369,623
65 - 69	0	-	1	29,605	16	832,574	0	-	17	862,179
70 - 74	0	-	1	43,138	14	427,148	2	61,726	17	532,012
75 - 79	0	-	0	-	9	234,491	1	16,353	10	250,844
80 - 84	0	-	0	-	0	-	1	18,207	1	18,207
85 - 89	0	-	0	-	1	18,566	2	32,163	3	50,729
90 - 94	0	-	0	-	0	-	0	-	0	0
95 - 99	0	-	0	-	0	-	0	-	0	0
100 & Over	0	-	0	-	0	-	0	-	0	0
Total	1	42,588	10	487,011	139	8,573,003	12	361,702	162	9,464,304
Average Age		45		56		60		68		61

* Does not include deferred supplemental benefits for DROP members.



SECTION F

SUMMARY OF PLAN PROVISIONS

SUMMARY OF PLAN PROVISIONS

A. Ordinances

The Plan was established under the Code of Ordinances for the City of Sunrise, Florida, Chapter 11, Article II, and was most recently amended under Ordinance No. 124-X-19-A passed and adopted on its second reading on January 22, 2019. The Plan is also governed by certain provisions of Chapter 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

B. Effective Date

July 1, 1972

C. Plan Year

October 1 through September 30

D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes it is a single employer plan.

E. Eligibility Requirements

All full-time police officers participate as a condition of employment. The police chief may elect not to participate.

F. Credited Service

Years and completed months of full-time service with the City during which time prescribed employee contributions are made. Under certain conditions, military service is includable. No service is credited for any periods of employment for which the member received a refund of their contributions.

G. Compensation

For Members hired prior to September 30, 2015:

Compensation is the total actual fixed cash compensation including overtime, holiday and other payroll cash incentives and general monthly expense allowances, but excluding lump sum payouts of accrued benefits upon termination of employment, auto and uniform allowances, travel reimbursements and special detail pay. Effective August 9, 2011, overtime pay for hours earned after August 9, 2011 in excess of 300 hours of overtime per year is not included. Effective September 15, 2015, all payments for unused sick and annual leave are excluded.

For Members hired on or after September 30, 2015:

Compensation is the total actual fixed cash compensation including holiday and other payroll cash incentives and general monthly expense allowances, but excluding overtime pay, lump sum payouts of accrued benefits upon termination of employment, auto and uniform allowances, travel reimbursements, special detail pay and all payments for unused sick and annual leave.

H. Final Average Compensation (FAC)

For Members hired prior to September 30, 2015:

The average of Compensation over the highest 3 years of Credited Service.

For Members hired on or after September 30, 2015:

The average of Compensation over the highest 5 consecutive years out of the last 10 years of Credited Service.

I. Normal Retirement

For Members hired prior to September 30, 2015:

Eligibility: A member may retire on the first day of the month coincident with or next following the earlier of:

- (1) age 53 and 10 years of Credited Service, or
- (2) 20 years of Credited Service regardless of age.

Benefit: (a) 3.0% of FAC for each of the first 10 years of Credited Service, plus 4.0% of FAC for the next 10 years of Credited Service, plus 2.0% of FAC for each year of Credited Service thereafter; subject to a maximum benefit equal to 80% of FAC.

(b) Any Police Officer who was actively employed on October 1, 2003, and retires or enters the DROP on or after January 1, 2006 will receive the greater of (a) above and:

4.0% of FAC for each of first 10 years of Credited Service, plus 2.0% of FAC for each year thereafter. 2.0% of FAC will be added to the total percentage for officers who were vested as of January 1, 2006. An additional 2.0% of FAC will be added to the total percentage for officers who are actively employed until age 53 with 10 or more years of Credited Service.

(c) In addition, police officers who terminate and begin receiving Early or Normal Retirement Benefits will receive a monthly supplemental benefit payable for life and ceasing upon the retiree's death according to the following table:



Termination or DROP Exit Date	Monthly Supplemental Benefit	
	Until Age 65	Age 65 and later
8/14/01 – 12/31/05	\$10.00 * Service (max \$200)	\$6.25 * Service (max \$125)
1/1/06 – 9/30/07	\$16.25 * Service (max \$325)	\$10.00 * Service (max \$200)
10/1/07 – 1/21/19	\$25.00 * Service (max \$500)	\$15.00 * Service (max \$300)
On or after 1/22/19	\$35.00 * Service (max \$700)	\$15.00 * Service (max \$300)

Normal Form of Benefit: 10 Years Certain and Life thereafter; other options are also available.

COLA: Cost of living increases are paid according to the following table:

Termination or DROP Entry Date	Annual COLA ¹	COLA Start Date
Before 1/1/06	0.0%	No COLA is payable
1/1/06 – 9/30/08	2.0%	Fifth anniversary of the commencement date
On or after 10/1/08	2.5%	Fifth anniversary of the commencement date

¹ The COLA is payable for the lifetime of the retiree and continues to the retiree's survivor upon the retiree's death.

For Members hired on or after September 30, 2015:

Eligibility: A member may retire on the first day of the month coincident with or next following the earlier of:

- (1) age 55 and 10 years of Credited Service, or
- (2) age 52 with 25 years of Credited Service.

Benefit: 3.0% of FAC for each of the first 20 years of Credited Service, plus 2.0% of FAC for each year of Credited Service thereafter; subject to a maximum benefit equal to 70% of FAC. Benefit is guaranteed to be no less than 2.75% of FAC for each year of Credited Service.

Supplemental Benefit: None

Normal Form of Benefit: 10 Years Certain and Life thereafter; other options are also available.

COLA: None



J. Early Retirement

For Members hired prior to September 30, 2015:

Eligibility: A member may elect to retire earlier than the Normal Retirement Eligibility upon attainment of age 47 and 10 years of Credited Service.

Benefit: The Normal Retirement Benefit is reduced by 3.0% for each year by which the Early Retirement date precedes the Normal Retirement date. In addition, police officers who terminate and begin receiving Early Retirement Benefits will receive the monthly supplemental benefit.

Normal Form of Benefit: 10 Years Certain and Life thereafter; other options are also available.

COLA: None

For Members hired on or after September 30, 2015:

Eligibility: A member may elect to retire earlier than the Normal Retirement Eligibility upon attainment of age 50 and 10 years of Credited Service.

Benefit: The Normal Retirement Benefit is reduced by 3.0% for each year by which the Early Retirement date precedes age 55. There is no supplemental benefit.

Normal Form of Benefit: 10 Years Certain and Life thereafter; other options are also available.

COLA: None

K. Delayed Retirement

Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.

L. Service Connected Disability

For Members hired prior to September 30, 2015:

Eligibility: Any member who becomes totally and permanently disabled as a result of an act occurring in the performance of service for the City is immediately eligible for a disability benefit.



Benefit: The disability benefit is equal to 75% of the member's salary in effect on the date of disability subject to the offsets described below. However, the offsets shall not reduce the benefit below the greater of the member's accrued benefit or 42% of the member's FAC.

Offsets:

To determine whether there will be an offset against the disability benefit, the first step is to add the following four items for a particular year.

1. Service incurred disability benefit paid from the plan
2. Workers' compensation disability benefit
3. Any salary received in excess of \$50,000 as evidenced by federal tax returns
4. Any net earnings from self-employment in excess of \$50,000

If the sum of these four items is greater than the pre-disability salary, the service disability benefit shall be reduced. The annual reduction shall be equal to 50% of the first \$50,000 of excess plus 100% of the remaining excess, if any.

Normal Form of Benefit:

Payable until death or recovery from disability or until the member reaches Early or Normal Retirement Age and elects to receive Early or Normal Retirement Benefits in lieu of disability benefits. Other options are also available.

COLA: None

For Members hired on or after September 30, 2015:

Eligibility: Any member who becomes totally and permanently disabled as a result of an act occurring in the performance of service for the City is immediately eligible for a disability benefit.

Benefit: The disability benefit is equal to 70% of the member's salary in effect on the date of disability subject to the offsets described below. However, the offsets shall not reduce the benefit below the greater of the member's accrued benefit or 42% of the member's FAC.

Offsets:

To determine whether there will be an offset against the disability benefit, the first step is to add the following four items for a particular year.

1. Service incurred disability benefit paid from the plan
2. Workers' compensation disability benefit
3. Any salary received in excess of \$50,000 as evidenced by federal tax returns
4. Any net earnings from self-employment in excess of \$50,000

If the sum of these four items is greater than the pre-disability salary, the service disability benefit shall be reduced. The annual reduction shall be equal to 50% of the first \$50,000 of excess plus 100% of the remaining excess, if any.

Normal Form of Benefit: Payable until death or recovery from disability or until the member reaches Early or Normal Retirement Age and elects to receive Early or Normal Retirement Benefits in lieu of disability benefits. Other options are also available.

COLA: None

M. Non-Service Connected Disability

For Members hired prior to September 30, 2015:

Eligibility: Any member with 10 years of Credited Service who becomes totally and permanently disabled is immediately eligible for a disability benefit.

Benefit: The accrued Normal Retirement Benefit with a minimum equal to 25% of FAC and a maximum equal to 50% of FAC. If employed by the City on or after September 13, 2004 the 50% of FAC maximum is ignored.

Normal Form of Benefit: Payable until death or recovery from disability or until the member reaches Early or Normal Retirement Age and elects to receive Early or Normal Retirement Benefits in lieu of disability benefits. Other options are also available.

COLA: None

For Members hired on or after September 30, 2015:

Eligibility: Any member with 10 years of Credited Service who becomes totally and permanently disabled is immediately eligible for a disability benefit.

Benefit: The accrued Normal Retirement Benefit with a minimum equal to 25% of FAC and a maximum equal to 50% of FAC.

Normal Form of Benefit: Payable until death or recovery from disability or until the member reaches Early or Normal Retirement Age and elects to receive Early or Normal Retirement Benefits in lieu of disability benefits. Other options are also available.

COLA: None



N. Death in the Line of Duty

For Members hired prior to September 30, 2015:

- Eligibility: Any member whose death is determined to be the result of a service incurred injury is eligible for survivor benefits regardless of Credited Service.
- Benefit: Beneficiary will receive a benefit equal to the greater of 75% of the member's FAC or the accrued Normal Retirement Benefit.
- Normal Form of Benefit: Payable for the life of beneficiary, or if no designated beneficiary, payable for 10 years to the member's estate.
- COLA: None

For Members hired on or after September 30, 2015:

- Eligibility: Any member whose death is determined to be the result of a service incurred injury is eligible for survivor benefits regardless of Credited Service.
- Benefit: Beneficiary will receive a benefit equal to the accrued benefit up to 75% of the member's FAC actuarially adjusted for the beneficiary's age.
- Normal Form of Benefit: Payable for the life of beneficiary, or if no designated beneficiary, payable for 10 years to the member's estate.
- COLA: None

O. Other Pre-Retirement Death

For Members hired prior to September 30, 2015:

- Eligibility: Members are eligible for survivor benefits after the completion of 10 or more years of Credited Service.
- Benefit: The beneficiary shall be entitled to receive an amount equal to the benefit that would have been payable at early or normal retirement age based upon Credited Service and FAC on the date of death, but payable as if the member had died on the day after commencement of benefits. Benefits will be paid according to the member's written election of an optional form of payment and begin on the member's early or normal retirement date. If there is no designated beneficiary, benefits are paid to the member's estate.

Normal Form
of Benefit: Payable according to the option elected or, if there was no option elected, 10 years.

COLA: None

The beneficiary of a plan member with less than 10 years of Credited Service at the time of death will receive a refund of the member's regular contributions without interest.

For Members hired on or after September 30, 2015:

Eligibility: Members are eligible for survivor benefits after the completion of 10 or more years of Credited Service.

Benefit: The beneficiary shall be entitled to receive an amount equal to the member's accrued benefit on the date of death, actuarially adjusted for the beneficiary's age commencing on the date the member would have been eligible for Early or Normal Retirement.

Normal Form
of Benefit: Payable according to the option elected or, if there was no option elected, 10 years.

COLA: None

The beneficiary of a plan member with less than 10 years of Credited Service at the time of death will receive a refund of the member's regular contributions without interest.

P. Post Retirement Death

Benefit determined by the form of benefit elected upon retirement.

Q. Optional Forms

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are the life annuity and the 50%, 66 2/3%, 75% and 100% Joint and Survivor options with or without the pop-up feature.

R. Vested Termination

For Members hired prior to September 30, 2015:

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion of 10 years of Credited Service.



Benefit: The benefit is the member’s accrued Normal Retirement Benefit. Benefit begins on the date that would have been the member’s Normal Retirement date based on Credited Service at termination. Members can also elect a reduced Early Retirement Benefit any time after age 47.

Normal Form of Benefit: 10 Years Certain and Life thereafter; other options are also available.
COLA: Cost of living increases are paid according to the following table:

Termination or DROP Entry Date	Annual COLA¹	COLA Start Date
Before 1/1/06	0.0%	No COLA is payable
1/1/06 – 9/30/08	2.0%	Fifth anniversary of the commencement date
On or after 10/1/08	2.5%	Fifth anniversary of the commencement date

¹ The COLA is payable for the lifetime of the retiree and continues to the retiree’s survivor upon the retiree’s death.

For Members hired on or after September 30, 2015:

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion of 10 years of Credited Service.

Benefit: The benefit is the member’s accrued Normal Retirement Benefit. Benefit begins on the date that would have been the member’s Normal Retirement date based on Credited Service at termination. Members can also elect a reduced Early Retirement Benefit any time after age 50.

Normal Form of Benefit: 10 Years Certain and Life thereafter; other options are also available.

COLA: None

S. Refunds

Eligibility: All members terminating employment with less than 10 years of Credited Service are eligible.

Benefit: Refund of the member’s contributions without interest.



T. Member Contributions

9.84% of Compensation for members hired prior to September 30, 2015; and
8.00% of Compensation for members hired on or after September 30, 2015.

U. State Contributions

Chapter 185 Premium Tax Refunds.

V. Employer Contributions

Any additional amount determined by the actuary needed to fund the plan properly according to State laws.

W. Cost of Living Increases

For Members hired prior to September 30, 2015:

Cost of living increases are payable on Normal Retirement Benefits only, whether paid directly or through the DROP, and are paid according to the following table:

Termination or DROP Entry Date	Annual COLA ¹	COLA Start Date
Before 1/1/06	0.0%	No COLA is payable
1/1/06 – 9/30/08	2.0%	Fifth anniversary of the commencement date
On or after 10/1/08	2.5%	Fifth anniversary of the commencement date ²

¹ The COLA is payable for the lifetime of the retiree and continues to the retiree’s survivor upon the retiree’s death.

² For DROP members, the COLA will start on the later of the fifth anniversary of the commencement date or the first of the month following termination of employment and will continue annually on the anniversary of that date.

For Members hired on or after September 30, 2015:

None

X. 13th / 14th Check

For Members hired prior to September 30, 2015:

A 13th and/or 14th Check may be payable during years in which there is a net actuarial gain and cumulative gains since October 1, 2000. Members who terminated employment with immediate eligibility for early or normal retirement on or after August 14, 2001 and retired before December 13, 2004 are eligible for the 13th or 14th Check.



For Members hired on or after September 30, 2015:

A 13th check benefit will be paid to retirees when the Plan is 100% funded. The benefit will be the amount of investment earnings that exceeded the Plan's assumed rate of return for the plan year, but it cannot exceed 100% of the monthly retirement benefits of the eligible retirees.

Y. Deferred Retirement Option Plan

For Members hired prior to September 30, 2015:

- Eligibility: Plan members who have met one of the following criteria are eligible for the DROP:
- (1) age 53 with 10 years of Credited Service, or
 - (2) 20 years of Credited Service regardless of age.
- Members who meet eligibility must submit a written election to participate in the DROP.
- Benefit: The member's Credited Service and FAC are frozen upon entry into the DROP. The monthly retirement benefit as described under Normal Retirement is calculated based upon the frozen Credited Service and FAC. The monthly supplemental benefit is payable once DROP participation ends.
- Maximum DROP Period: 84 months; for DROP members as of August 9, 2011 who did not elect to extend the maximum DROP participation period, 72 months.
- Interest Credited: For members who enter the DROP on or after August 9, 2011, the member's DROP account is credited at a fixed rate of 6% per year. If the member elects a self-directed DROP, the investment return is determined by the self-directed investments. For DROP members as of August 9, 2011 who did not elect to extend the maximum period of DROP participation from 72 months to 84 months, the member's DROP account is credited at the same interest rate, compounded monthly, as the investment earnings assumption for the Pension Plan.
- Normal Form of Benefit: Lump Sum, Direct Rollover, or Partial Lump Sum with a Direct Rollover of remaining balance.



COLA: Cost of living increases are paid to DROP participants according to the following table:

Termination or DROP Entry Date	Annual COLA ¹	COLA Start Date
Before 1/1/06	0.0%	No COLA is payable
1/1/06 – 9/30/08	2.0%	Fifth anniversary of the commencement date
On or after 10/1/08	2.5%	Fifth anniversary of the commencement date ²

¹ The COLA is payable for the lifetime of the retiree and continues to the retiree's survivor upon the retiree's death.

² For DROP members, the COLA will start on the later of the fifth anniversary of the commencement date or the first of the month following termination of employment and will continue annually on the anniversary of that date.

For Members hired on or after September 30, 2015:

Eligibility: Plan members who have met one of the following criteria are eligible for the DROP:

- (1) age 55 with 10 years of Credited Service, or
- (2) age 52 with 25 years of Credited Service.

Members who meet eligibility must submit a written election to participate in the DROP within 6 months of being eligible for Normal Retirement.

Benefit: The member's Credited Service and FAC are frozen upon entry into the DROP. The monthly retirement benefit as described under Normal Retirement is calculated based upon the frozen Credited Service and FAC. The monthly supplemental benefit is payable once DROP participation ends.

Maximum DROP Period: 4 years

Interest Credited: 0% until the Pension Plan is 100% funded. If the Plan becomes 100% funded the DROP account is credited at the same interest rate, compounded monthly, as the investment earnings assumption for the Pension Plan with a minimum of 0% and a maximum of 4%.

Normal Form of Benefit: Lump Sum, Direct Rollover, or Partial Lump Sum with a Direct Rollover of remaining balance.

COLA: None



Z. Share Plan

Eligibility: All active plan members (including DROP participants) who have a least 1 full year of Credited Service on the last day of the fiscal year when funds are available to be shared. Share Plan funds are derived from any Chapter 185 revenue received by the City in excess of \$2,137,895 which will be held in reserve and may be used provide benefits. The City and the Fraternal Order of police will negotiate the use of the excess Chapter 185 revenue.

Benefit: Each eligible member's share account will be credited with an equal share of the available funds.

Normal Form of Benefit: A lump sum payment of the Share Plan account balance payable within 60 days following retirement. Non-vested members or any member who terminates employment and elects to take a refund of their employee contributions will forfeit their Share Plan account balance.

COLA: None

AA. Other Ancillary Benefits

There are no ancillary retirement type benefits not required by statutes but which might be deemed a City of Sunrise Police Officers' Retirement System liability if continued beyond the availability of funding by the current funding source.

BB. Changes from Previous Valuation

None