

# CITY OF ATLANTIC BEACH GENERAL EMPLOYEES' RETIREMENT SYSTEM

ANNUAL ACTUARIAL VALUATION AS OF OCTOBER 1, 2020



**ANNUAL EMPLOYER CONTRIBUTION  
IS DETERMINED BY THIS VALUATION**

**TO BE PAID IN THE EMPLOYER FISCAL YEAR ENDING  
SEPTEMBER 30, 2022**



June 11, 2021

Board of Trustees  
City of Atlantic Beach  
General Employees' Retirement System  
Atlantic Beach, Florida

**Re: City of Atlantic Beach General Employee's Retirement System  
Actuarial Valuation as of October 1, 2020 and Actuarial Disclosures**

Dear Board Members:

The results of the October 1, 2020 Annual Actuarial Valuation of the City of Atlantic Beach General Employees' 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 and to determine the employer contribution rate for the fiscal year ending September 30, 2022. 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 in Section A 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 and other information through September 30, 2020. 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 reasonability 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 investment return assumption was prescribed by the Board and the

assumed mortality rates detailed in the Actuarial Assumptions and Cost Method section were prescribed by the Florida Statutes in accordance with Florida Statutes Chapter 112.63. All actuarial assumptions used in this report are reasonable for purposes of this valuation.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

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 City of Atlantic Beach General Employee's 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.

Nicolas Lahaye and Dina Lerner 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 & COMPANY

By



Nicolas Lahaye, FSA, EA, MAAA, FCA  
Consultant & Actuary



Dina Lerner, ASA, EA, MAAA, FCA  
Consultant & Actuary

## Statement by Enrolled Actuary

This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate. In my 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.



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Signature

June 11, 2021

Date

20-07775

Enrollment Number

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## **SECTION A**

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### **EXECUTIVE SUMMARY**

## EXECUTIVE SUMMARY

### Closed Plan

In reviewing this Report, it is important to keep in mind that the System is closed to new entrants. One of the consequences of this closure is that the annual payment on the unfunded accrued liability for the City will continue to increase as a percentage of covered payroll as the number of active plan members and such payroll decreases from year to year. Therefore, the overall cost as a percentage of covered payroll will be increasing each year in the absence of significant actuarial gains.

### Required Employer Contributions

The following is a comparison of required contributions developed in this year's and the last actuarial valuations:

	For FYE 9/30/2022 Based on 10/1/2020 Valuation	For FYE 9/30/2021 Based on 10/1/2019 Valuation	Increase (Decrease)
Gross Contribution Requirement	\$ 1,185,394	\$ 1,347,158	\$ (161,764)
As % of Expected Payroll	83.17 %	82.02 %	1.15 %
Expected Employee Contribution	\$ 85,518	\$ 98,554	\$ (13,036)
As % of Covered Payroll	6.00 %	6.00 %	0.00 %
Required Employer Contribution (If Made in Equal Monthly Installments)	\$ 1,099,876	\$ 1,248,604	\$ (148,728)
As % of Covered Payroll	77.17 %	76.02 %	1.15 %
Required Employer Contribution (If Made in Whole at the Beginning of the Year)	\$ 1,061,080	1,204,562	(143,482)
As % of Covered Payroll	74.45 %	73.33 %	1.12 %

### Minimum Required Contribution

As illustrated in the preceding chart, the City contribution necessary to support the current benefits for the General Employees is \$1,099,876 for the fiscal year ending September 30, 2022. Please note that the Required Employer Contribution for that fiscal year is developed assuming it would be deposited in monthly intervals throughout the year. For completeness, we are also presenting an amount required to be contributed if deposited in a single sum at the beginning of the contribution year in lieu of periodic installments.

## **Revisions in Benefits**

Ordinance No. 58-20-45, adopted on October 26, 2020, amended the Plan by increasing the required minimum distribution age from 70½ to 72 for participants reaching age 70½ on or after January 1, 2020. This change was made to comply with Internal Revenue Code requirements and did not have an actuarial impact on the cost of the Plan for prefunding purposes.

## **Revisions in Actuarial Assumptions and Methods**

In compliance with Florida Statutes Chapter 112.63(1)(f) which mandates the use of the mortality tables used in either of the two most recently published actuarial valuation reports of the Florida Retirement System (FRS), the mortality tables and improvement scales were changed to reflect the updated mortality assumptions adopted by FRS after a 2019 experience study and used in the July 1, 2019 and July 1, 2020 FRS Actuarial Valuations.

The assumption change described above decreased the total required contribution by \$62,299, or 4.37% of covered payroll.

## **Actuarial Experience**

There was a net actuarial loss of \$226,116 for the year which means that actual experience was less favorable than expected. The actuarial loss was primarily due to more retirements than expected (5 actual vs. 3 assumed) and fewer deaths than expected. The net actuarial loss increased the total required contribution by \$32,987, or 2.31% of covered payroll.

## **Funded Ratio**

The funded ratio, one measure of the Plan's financial health, is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability. The funded ratio is 90.6% this year compared to 85.9% last year. The funded ratio would have been 89.2% prior to recognizing the assumption change.

## **Analysis of Change in Employer Contribution**

The components of change in the actuarially required contribution are as follows:

Contribution last year	\$ 1,248,604
Payment on UAAL	(88,563)
Experience (gain)/loss	32,987
Change in administrative expense	2,086
Change in normal cost before expenses	(32,939)
Revision in benefits	0
Revision in assumptions/methods	<u>(62,299)</u>
Contribution this year	\$ 1,099,876

## **Relationship to Market Value**

The actuarial value of assets exceeds the market value of assets by \$462,556 as of the valuation date (see Section C). This difference will be gradually recognized over the next three years causing the required contribution to increase, in the absence of offsetting gains. If the market value of assets had been used in the valuation instead of the actuarial value of assets, the City contribution would have been approximately \$1,170,000 (assuming payment is made in equal monthly installments throughout the year) and the funded ratio would have been 88.8%. The funded ratio based on the market value of assets was 85.0% last year.

## **Required Contributions in Future Years**

In the absence of future assumption changes or experience gains/losses, the required City contribution as a dollar amount is expected to remain in the \$1.0 to \$1.2 million range over the next two years, then decrease to a range of \$0.6 to \$0.8 million for the following few years.

Eventually, due to the Plan closure, the investment horizon of the Plan will become short enough and the cash demands large enough that the asset allocation will likely lean more towards fixed income and less towards equities or other volatile asset classes. This transition will eventually require further reductions in the assumed rate of investment return, and thus an increase in costs and liabilities.

## **Conclusion**

The remainder of this Report includes detailed actuarial valuation results, financial information, miscellaneous information and statistics, and a summary of plan provisions.

## RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARILY 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 shown on page A-1 may be considered as a minimum contribution 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>2020</u>	<u>2019</u>	<u>2018</u>
Ratio of the market value of assets to total payroll	15.2	12.5	10.4
Ratio of actuarial accrued liability to payroll	17.2	14.7	12.4
Ratio of actives to retirees and beneficiaries	0.3	0.4	0.5
Ratio of net cash flow to market value of assets	0.4%	0.8%	-0.4%
Duration of the actuarial accrued liability	10.5	10.9	11.1

### 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.

## **Duration of Actuarial Accrued Liability**

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

## **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.

## **SECTION B**

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### **VALUATION RESULTS**

PARTICIPANT DATA		
	October 1, 2020	October 1, 2019
<b>ACTIVE MEMBERS</b>		
Number	23	28
Covered Annual Payroll (non-DROP)	\$ 1,425,306	\$ 1,642,562
Average Annual Pay	\$ 61,970	\$ 58,663
Average Age	54.3	54.7
Average Past Service	20.7	19.4
Average Age at Hire	33.6	35.3
<b>RETIREES, BENEFICIARIES, &amp; DROP MEMBERS</b>		
Number	77	72
Annual Benefits	\$ 1,508,124	\$ 1,378,226
Average Annual Benefit	\$ 19,586	\$ 19,142
Average Age	69.8	69.7
<b>DISABILITY RETIREES</b>		
Number	3	3
Annual Benefits	\$ 46,861	\$ 46,861
Average Annual Benefit	\$ 15,620	\$ 15,620
Average Age	67.7	66.7
<b>TERMINATED VESTED MEMBERS</b>		
Number	6	7
Annual Benefits	\$ 43,649	\$ 57,365
Average Annual Benefit	\$ 7,275	\$ 8,195
Average Age	52.1	52.3

ACTUARILY DETERMINED CONTRIBUTION (ADC)				
	October 1, 2020 <i>After Assumption Change</i>	October 1, 2020 <i>Before Assumption Change</i>	October 1, 2019	
A. Valuation Date				
B. ADC to Be Paid During Fiscal Year Ending	9/30/2022	9/30/2022	9/30/2021	
C. Assumed Date(s) of Employer Contribution	Monthly	Monthly	Monthly	
D. Annual Payment to Amortize Unfunded Actuarial Liability if Paid on the Valuation Date	\$ 801,478	\$ 852,697	\$ 902,922	
E. Employer Normal Cost (including Administrative Expenses) if Paid on the Valuation Date	192,509	197,591	225,474	
F. ADC if Paid on the Valuation Date: D + E	993,987	1,050,288	1,128,396	
G. ADC Adjusted for Frequency of Payments and Interest to Required Time of Contribution	1,099,876	1,162,175	1,248,604	
H. Payroll Expected for Contribution Year	1,425,306	1,425,306	1,642,562	
I. ADC as % of Covered Payroll in Contribution Year: G ÷ H	77.17 %	81.54 %	76.02 %	
J. Actuarially Determined Contribution if Paid on the First Day of the Contribution Year	1,061,080	1,121,182	1,204,562	

ACTUARIAL VALUE OF BENEFITS AND ASSETS			
	October 1, 2020 <i>After Assumption Change</i>	October 1, 2020 <i>Before Assumption Change</i>	October 1, 2019
A. Valuation Date			
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$8,624,832	\$8,738,881	\$9,522,129
b. Vesting Benefits	221,245	231,921	261,622
c. Disability Benefits	120,833	116,786	131,847
d. Preretirement Death Benefits	165,047	226,876	246,917
e. Return of Member Contributions	5,842	8,003	8,941
f. Total	9,137,799	9,322,467	10,171,456
2. Inactive Members			
a. Service Retirees & Beneficiaries	16,087,473	16,304,718	14,904,520
b. Disability Retirees	433,204	437,119	445,554
c. Terminated Vested Members	253,612	264,618	437,746
d. Total	16,774,289	17,006,455	15,787,820
3. DROP Balances	171,937	171,937	19,065
4. Total for All Members*	26,084,025	26,500,859	25,978,341
C. Actuarial Accrued (Past Service) Liability (Entry Age Normal)*	24,471,452	24,859,951	24,104,940
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35*	22,496,159	22,844,000	21,947,846
E. Plan Assets			
1. Market Value*	21,719,136	21,719,136	20,497,952
2. Actuarial Value*	22,181,692	22,181,692	20,713,463
F. Unfunded Actuarial Accrued Liability (C - E2)	2,289,760	2,678,259	3,391,477
G. Actuarial Present Value of Projected Covered Payroll	10,375,078	10,332,308	11,585,667
H. Actuarial Present Value of Projected Member Contributions	622,505	619,939	695,140

\* Includes DROP balances for consistency with GASB Statements 67 and 68.

## FINANCIAL SOUNDNESS

The purpose of this portion of the Report is to provide certain measures which indicate the financial soundness of the program. These measures relate to short term solvency and long term solvency.

The various percentages listed in this Section as of a single valuation date are not that significant. What is significant, however, is the trend of the rates over a period of years. It is also important to keep in mind that each time benefits or assumptions are revised; actuarial liabilities are created or diminished. Any newly created liabilities are financed systematically over a period of future years. All actuarially computed values in this analysis are based on the actuarial assumptions utilized in the respective years' actuarial valuations.

### Short Term Solvency

The ultimate test of financial soundness is the program's ability to pay all promised benefits when due. The program's progress in accumulating assets to pay all promised benefits can be measured by comparing the market value of assets with:

1. The actuarial present value of projected benefits payable to those already receiving benefits and to vested terminations, and
2. The actuarial present value of accrued benefits payable to active participants. This amount is based on benefits earned to date without future credited service or salary increases.

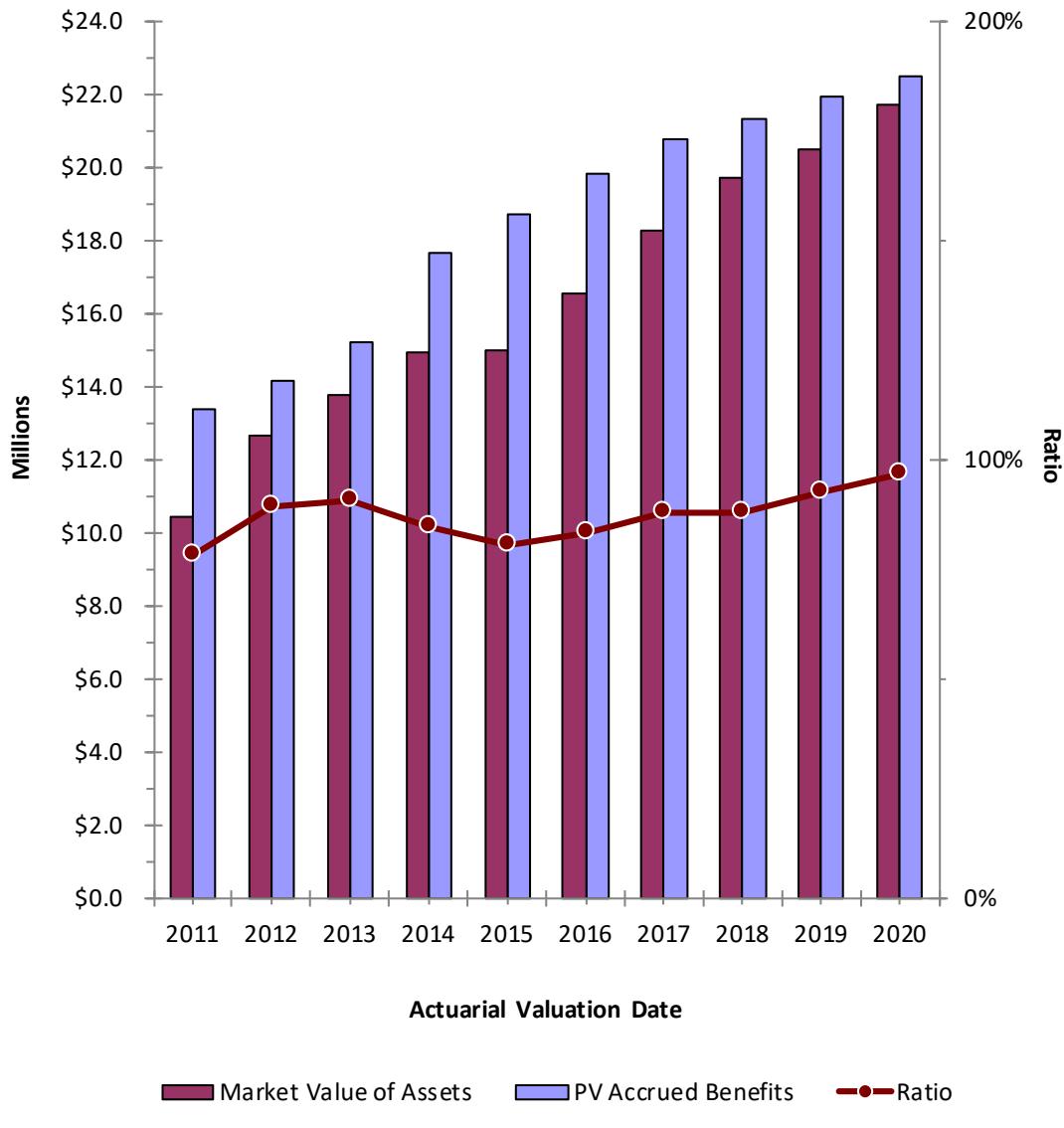
The total of the two items should generally be fully covered by assets. That portion of the total of the two items covered by assets should increase over time. Often assets continue to grow beyond the actuarial present value of these two items.

	General Employees		
	10/1/2020	10/1/2019	10/1/2018
1. Accumulated Contributions of Active Members	\$ 1,035,599	\$ 1,133,300	\$ 1,260,183
2. APV of Projected Benefits in Pay Status and for Vested Terminations <sup>1</sup>	16,946,226 <sup>2</sup>	15,806,885	14,507,759
3. APV of Accrued Benefits for Active Participants (Employer Portion)	<u>4,514,334</u> <sup>2</sup>	<u>5,007,661</u>	<u>5,567,191</u>
4. Total	22,496,159	21,947,846	21,335,133
5. Market Value of Assets <sup>1</sup>	21,719,136	20,497,952	19,714,297
6. Assets as % of Total	97 %	93 %	92 %

<sup>1</sup> DROP balances are included.

<sup>2</sup> Reflects changes in actuarial assumptions.

## Ratio of Market Value of Assets to Present Value of Accrued Benefits



Increases in benefits will, of course, adversely affect the trend in the years when such increases are first reflected in the actuarial values. Although different actuarial assumptions would be used in the event of a termination of the program, this test shows how much of the benefits accrued to date might be covered by assets in the event of a plan freeze using the valuation assumptions.

## Long Term Solvency

Over the longer term, the solvency of an ongoing plan can be measured by comparing the Actuarial Value of Assets to an amount known as the Actuarial Accrued Liability (AAL) under the Entry Age Actuarial Cost Method. This item has often been called the "past service liability". Its derivation differs from the short term solvency value derivation in several ways. The short term solvency liability number is based on the benefits accrued to date by the participants while the long term solvency liability number is based on the normal costs accrued to date by the employer. In addition, the short term solvency asset number is the market value, while the long term asset number is the actuarial value of assets. As in the case of the short term solvency values, the AAL is affected immediately by any revisions in benefits or assumptions. The accumulation of assets to equal the AAL can be considered a long range funding goal.

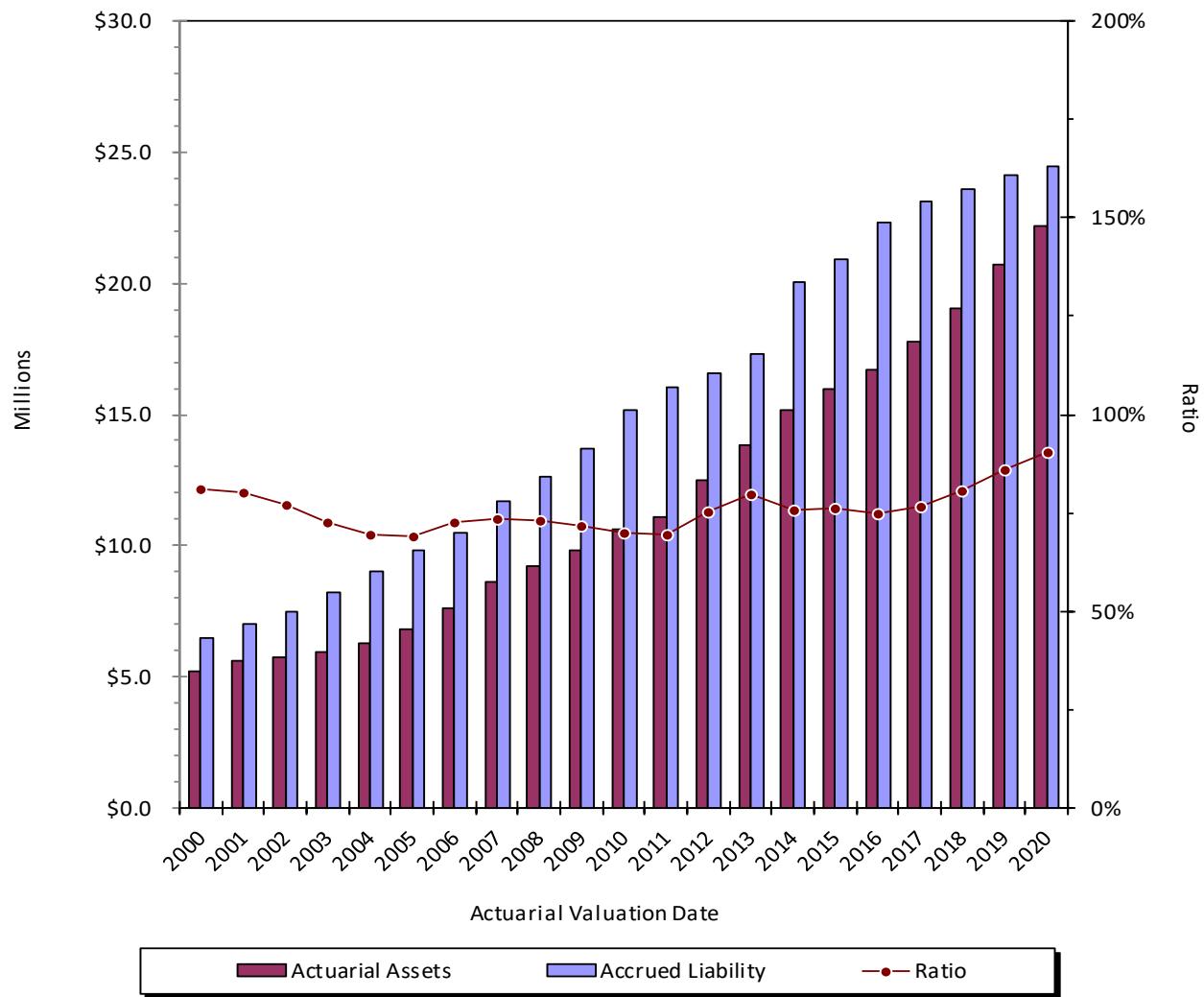
Valuation Date	Actuarial Value of Assets (in Thousands)	Actuarial Accrued Liability (in Thousands)	% of AAL Covered by Assets
9/30/00	5,229	6,462	81 %
9/30/01 *	5,587	6,986	80
9/30/02	5,747	7,479	77
9/30/03 *	5,951	8,186	73
9/30/04	6,273	9,005	70
9/30/05 *	6,802	9,822	69
9/30/06 *	7,609	10,505	72
9/30/07	8,594	11,668	74
9/30/08 *	9,209	12,624	73
9/30/09	9,841	13,682	72
9/30/10 *	10,618	15,180	70
9/30/11	11,119	16,053	69
9/30/12 **	12,465	16,599	75
9/30/13	13,816	17,282	80
9/30/14 * ,***	15,167	20,024	76
9/30/15 ***	15,959	20,942	76
9/30/16 * ,***	16,724	22,322	75
10/1/17 * ,***	17,752	23,141	77
10/1/18 ***	19,035	23,572	81
10/1/19 ***	20,713	24,105	86
10/1/20 * ,***	22,182	24,471	91

\* Reflects change in benefits, actuarial assumptions and/or asset method.

\*\* Reflects the Actuarial Impact Statement for Ordinance 58-13-37.

\*\*\* DROP balances are included in Actuarial Accrued Liability and in Plan Assets.

## Ratio of Actuarial Value of Assets to Actuarial Accrued Liability



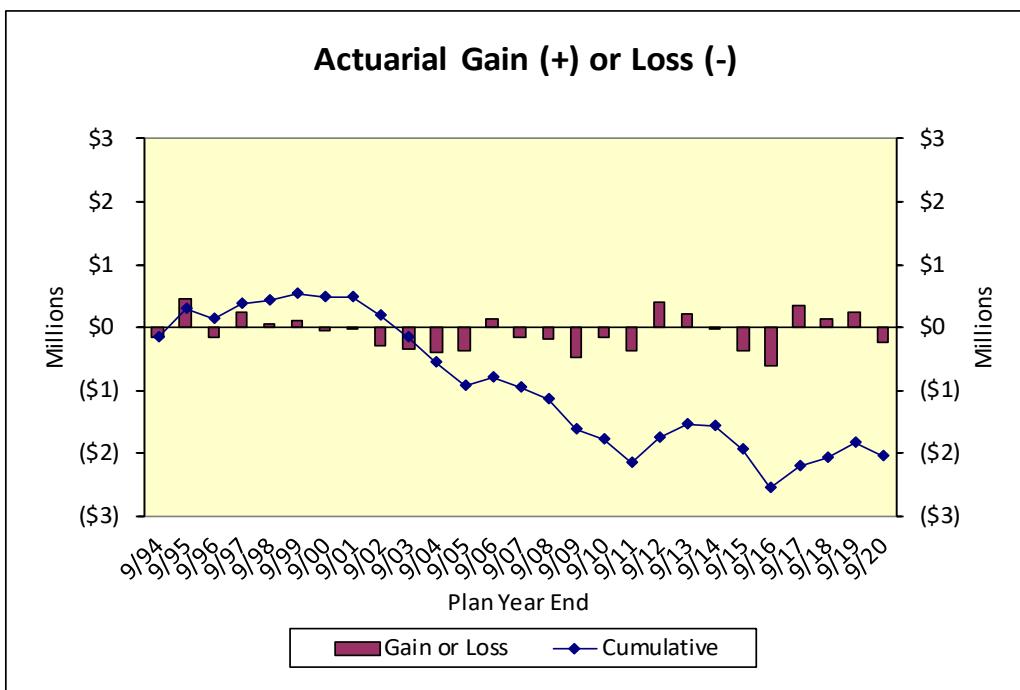
## ACTUARIAL GAINS AND LOSSES

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:

Derivation of Experience Gain (Loss)		
1.	Last Year's UAAL	\$3,391,477
2.	Last Year's Employer Normal Cost	225,474
3.	Last Year's Actual City Contribution	1,362,952
4.	Interest at the assumed rate on:	
	a. 1 for one year	228,925
	b. 2 for one year	15,219
	c. 3 from dates paid	46,000
	d. a + b - c	198,144
5.	This Year's Expected UAAL $1 + 2 - 3 + 4d$	2,452,143
6.	This Year's Actual UAAL (before any changes in benefits or assumptions)	2,678,259
7.	Net Actuarial Gain (Loss): (5) - (6)	(226,116)
8.	Gain (Loss) due to investments	(178)
9.	Gain (Loss) due to other sources	(225,938)
10.	Amortization Payment Due to (Gain) Loss	29,811

Net actuarial Gain (Loss) in previous years have been as follows:

Year Ended	Actuarial Gain (Loss)	Cumulative Gain (Loss)
9/30/1994	(157,358)	(157,358)
9/30/1995	447,291	289,933
9/30/1996	(162,663)	127,270
9/30/1997	252,238	379,508
9/30/1998	58,540	438,048
9/30/1999	108,195	546,243
9/30/2000	(55,470)	490,773
9/30/2001	(18,145)	472,628
9/30/2002	(280,151)	192,477
9/30/2003	(355,383)	(162,906)
9/30/2004	(395,109)	(558,015)
9/30/2005	(364,305)	(922,320)
9/30/2006	131,266	(791,054)
9/30/2007	(170,383)	(961,437)
9/30/2008	(178,856)	(1,140,293)
9/30/2009	(482,223)	(1,622,515)
9/30/2010	(171,358)	(1,793,873)
9/30/2011	(364,563)	(2,158,436)
9/30/2012	402,582	(1,755,854)
9/30/2013	208,109	(1,547,746)
9/30/2014	(13,100)	(1,560,846)
9/30/2015	(379,312)	(1,940,158)
9/30/2016	(621,358)	(2,561,516)
9/30/2017	343,244	(2,218,272)
9/30/2018	144,346	(2,073,926)
9/30/2019	240,169	(1,833,757)
9/30/2020	(226,116)	(2,059,873)

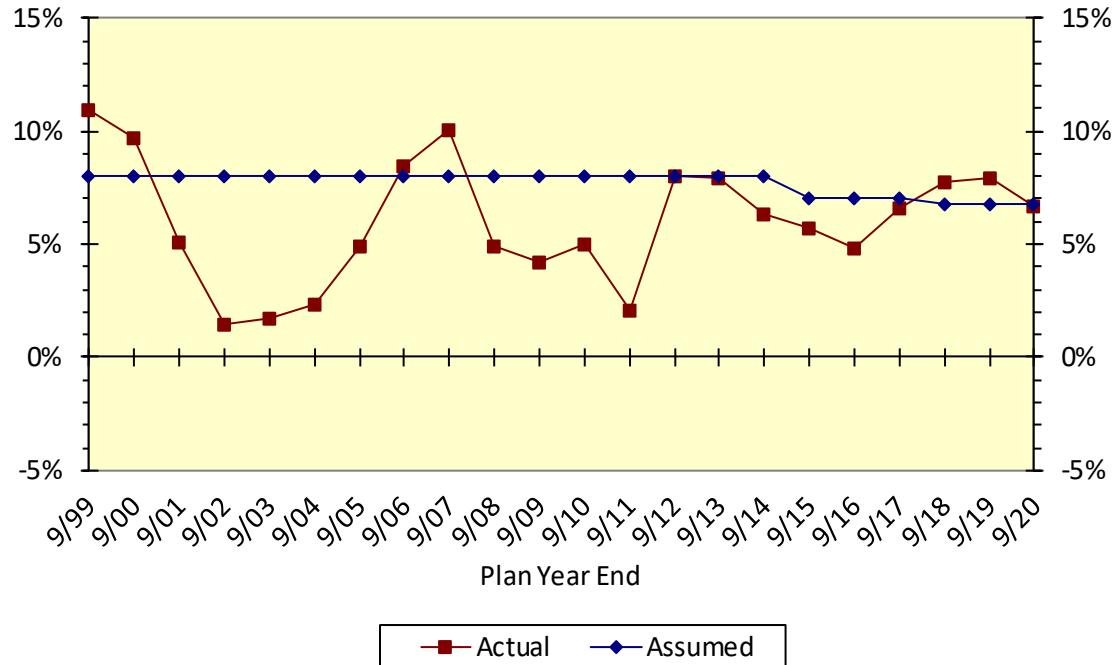


The fund earnings and salary increase assumptions have considerable impact on the cost of the Plan so it is important that they are in line with the actual experience. The following table shows the history of actuarial fund earnings and salary increase rates compared to the assumed rates:

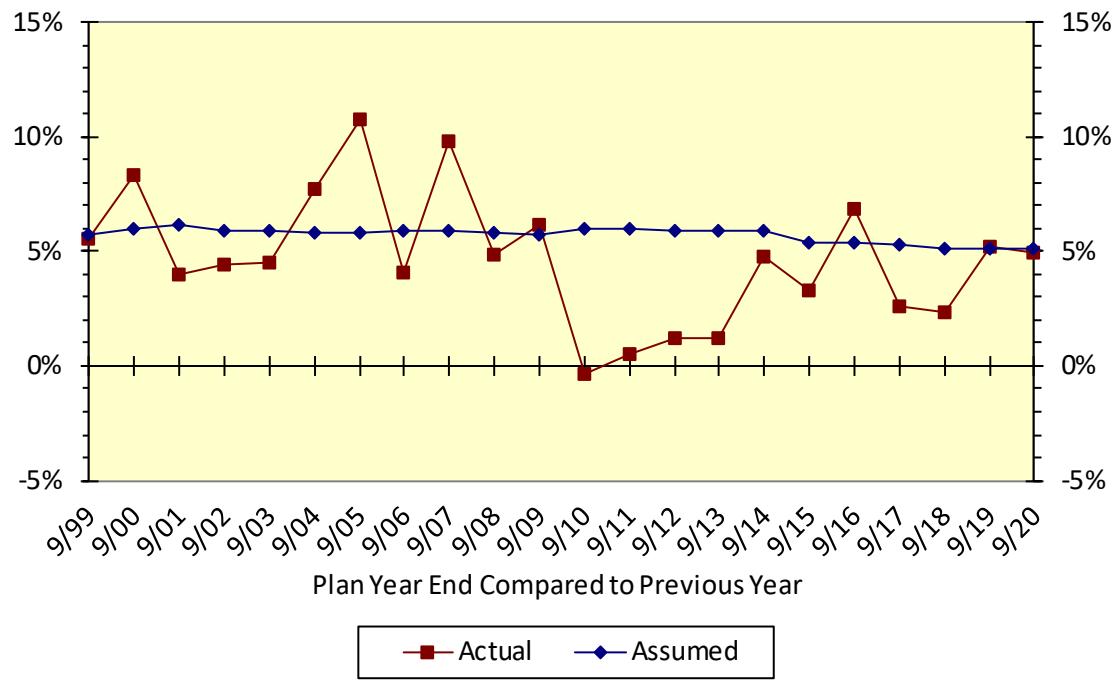
Year Ending	Investment Return (AVA)		Salary Increases	
	Actual	Assumed	Actual	Assumed
9/30/1999	11.0 %	8.0 %	5.6 %	5.7 %
9/30/2000	9.7	8.0	8.3	6.0
9/30/2001	5.1	8.0	4.0	6.2
9/30/2002	1.5	8.0	4.4	5.9
9/30/2003	1.7	8.0	4.5	5.9
9/30/2004	2.3	8.0	7.7	5.8
9/30/2005	4.9	8.0	10.8	5.8
9/30/2006	8.5	8.0	4.1	5.9
9/30/2007	10.0	8.0	9.8	5.9
9/30/2008	4.9	8.0	4.9	5.8
9/30/2009	4.2	8.0	6.1	5.7
9/30/2010	5.0	8.0	(0.4)	6.0
9/30/2011	2.1	8.0	0.5	6.0
9/30/2012	8.0	8.0	1.2	5.9
9/30/2013	8.0	8.0	1.3	5.9
9/30/2014	6.3	8.0	4.8	5.9
9/30/2015	5.7	7.0	3.3	5.4
9/30/2016	4.8	7.0	6.9	5.4
9/30/2017	6.6	7.0	2.6	5.3
9/30/2018	7.7	6.75	2.4	5.1
9/30/2019	7.9	6.75	5.2	5.1
9/30/2020	6.7	6.75	5.0	5.1
Average	6.0 %	---	4.6 %	---

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 the end of each year.

### History of Investment Return - Actuarial Value of Assets



### History of Salary Increases



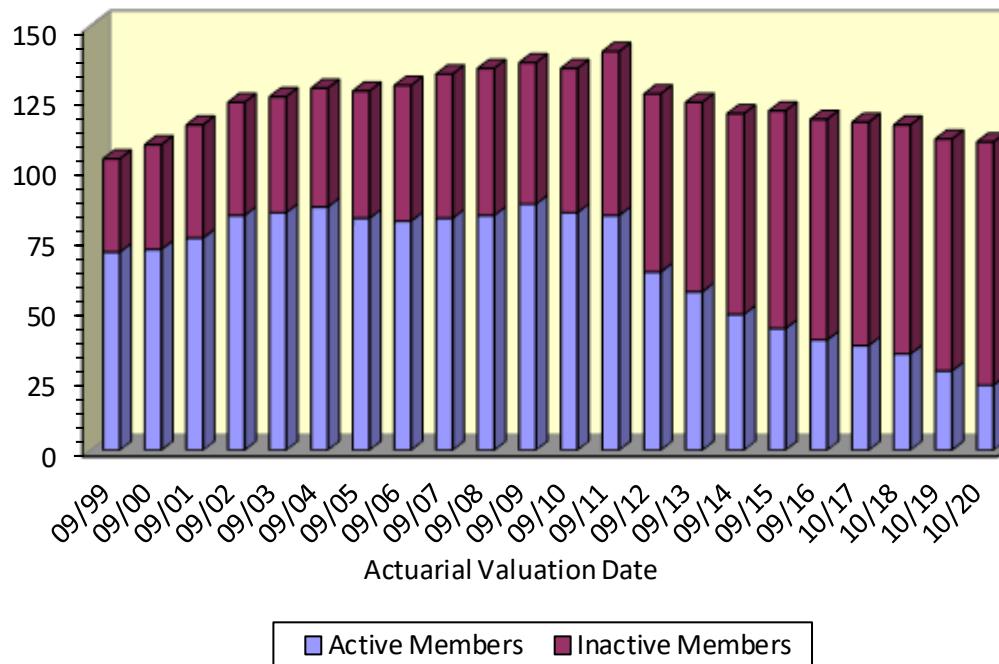
RECENT HISTORY OF VALUATION RESULTS								
Valuation Date	Number of Members		Reported Annual Payroll (in Thousands)	Actuarial Value of Assets (in Thousands)	UAAL (in Thousands)	Employer Normal Cost		
	Active Members	Inactive Members				Amount (in Thousands)	% of Payroll	
9/30/99	70	33	\$ 2,185	\$ 4,650	\$ 1,146	\$ 199	9.10	%
9/30/00	71	37	2,330	5,229	1,233	213	9.14	
9/30/01 *	75	40	2,462	5,587	1,399	226	9.17	
9/30/02	83	40	2,768	5,747	1,732	267	9.66	
9/30/03 *	84	41	2,856	5,951	2,235	284	9.93	
9/30/04	86	42	3,051	6,273	2,732	300	9.82	
9/30/05 *	82	45	3,182	6,802	3,020	235	7.37	
9/30/06 *	81	48	3,195	7,609	2,896	233	7.28	
9/30/07	82	51	3,476	8,594	3,074	252	7.26	
9/30/08 *	83	52	3,727	9,209	3,415	269	7.22	
9/30/09	87	50	4,019	9,841	3,841	314	7.82	
9/30/10 *	84	51	3,838	10,618	4,562	364	9.49	
9/30/11	83	58	3,738	11,119	4,934	367	9.82	
9/30/12 **	63	63	3,072	12,465	4,134	274	8.90	
9/30/13	56	67	2,733	13,816	3,466	251	9.17	
9/30/14 *	48	71	2,398	15,167	4,856	282	11.76	
9/30/15	43	77	2,075	15,959	4,983	259	12.50	
9/30/16 *	39	78	2,070	16,724	5,598	252	12.17	
10/1/17 *	37	79	2,037	17,752	5,389	287	14.07	
10/1/18	34	81	1,897	19,035	4,537	244	12.88	
10/1/19	28	82	1,643	20,713	3,391	225	13.73	
10/1/20 *	23	86	1,425	22,182	2,290	193	13.51	

\*Reflects a change in assumptions or benefits.

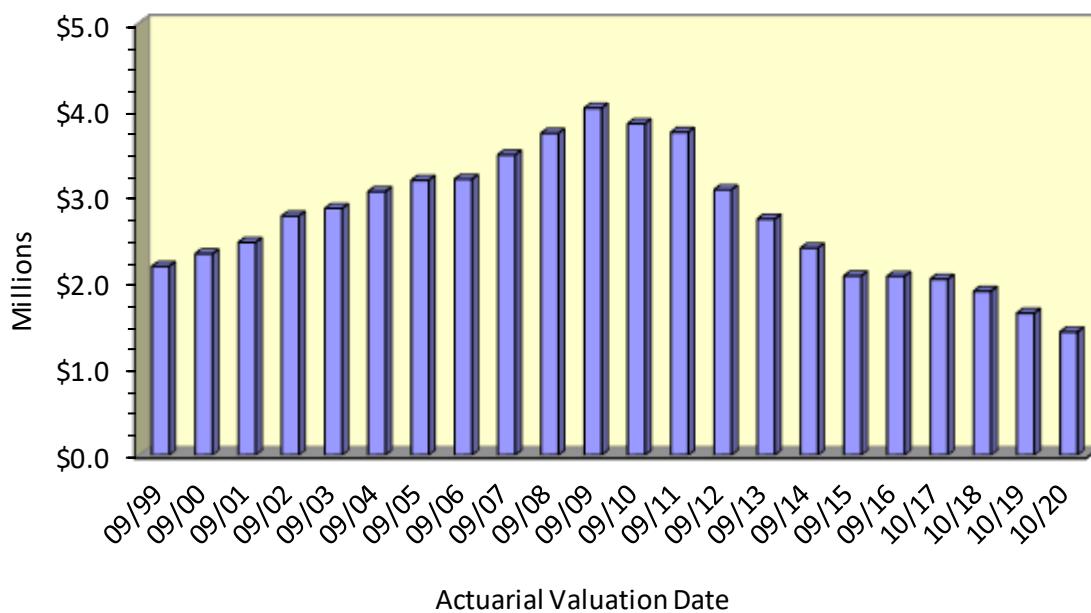
\*\*Reflects the Actuarial Impact Statement for Ordinance 58-13-37.



### Recent History of Number of Members



### Recent History of Covered Annual Payroll



RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS				
Valuation	End of Year To Which Valuation Applies	Required Employer Contributions		Actual Employer Contributions
		Amount	% of Expected Payroll	
9/30/03 *	9/30/05	\$ 464,893	15.02 %	\$ 464,893
9/30/04	9/30/06	480,029	16.09	480,029
9/30/05 *	9/30/07	482,364	13.99	482,363
9/30/06 *	9/30/08	456,965	13.62	457,005
9/30/07	9/30/09	528,428	14.03	528,426
9/30/08 *	9/30/10	599,292	14.84	599,292
9/30/09	9/30/11	722,769	16.60	722,769
9/30/10 *	9/30/12	998,516	24.53	998,516
9/30/11	9/30/13	1,044,392	26.34	1,044,392
9/30/12 **	9/30/14	950,980	29.19	950,980
9/30/13	9/30/15	863,613	31.59	863,613
9/30/14 *	9/30/16	1,112,344	46.39	1,112,344
9/30/15	9/30/17	1,175,572	56.66	1,175,572
9/30/16 *	9/30/18	1,332,118	64.35	1,332,119
10/1/17 *	9/30/19	1,424,479	69.92	1,424,479
10/1/18	9/30/20	1,355,973	71.49	1,362,952
10/1/19	9/30/21	1,248,604	76.02	---
10/1/20 *	9/30/22	1,099,876	77.17	---

\*Reflects a change in assumptions or benefits.

\*\*Reflects the Actuarial Impact Statement for Ordinance 58-13-37.

# ACTUARIAL ASSUMPTIONS AND COST METHOD

## Valuation Methods

**Actuarial Cost Method** - The actuarial cost method is a procedure for allocating the actuarial present value of benefits and expenses to time periods. Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using the **Entry-Age Actuarial Cost Method**. The entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's pensionable compensation between the entry age of the member and the estimated active status exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called the actuarial accrued liability. Deducting accrued assets from the actuarial accrued liability determines the unfunded actuarial accrued liability.

**Financing of Unfunded Actuarial Accrued Liabilities** - The unfunded actuarial accrued liability was financed as a level dollar.

**Actuarial Value of Assets** - The Actuarial Value of Assets phases in the difference between the expected and actual return on market value of assets at the rate of 25% per year. The Actuarial Value of Assets will be 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. With the exception of the mortality assumption, which is prescribed by Florida Statutes, all assumptions listed herein were established following the Assumption Study and Experience Review for the Seven Years Ended September 30, 2016, dated August 9, 2017.

## Economic Assumptions

The **investment return rate** assumed in the valuations is 6.75% per year, compounded annually (net of investment expenses).

The **price inflation rate** assumed in this valuation was 2.50% per year

The plan does not provide for automatic post-retirement **cost of living adjustments** (COLA) of retiree benefits. Ad-hoc COLA increases have been adopted in the past upon approval by the City. Most recently, such increases have been granted in 1987, 1996 and 2001. No assumptions are made regarding future adjustments. Any such increases will be recognized as they occur.

The **total rate of return** is defined as earnings resulting from interest, dividends, realized gains (losses) and unrealized appreciation (depreciation) less investment-related expenses, all divided by the beginning market value of the fund, adjusted for cash flow during the year. The total rate of return is assumed to be 6.75% per year, net of investment-related expenses.

The **rates of salary increases** used in the valuation are illustrated in the following table (rates below include 2.5% price inflation).

**Annual Rates for Salary Increase for Sample Ages**

Age:	20	30	40	50	60
Expected Increase	9.5%	7.9%	5.7%	5.3%	4.8%

## Demographic Assumptions

The **mortality tables** used in this valuation are based on the PUB-2010 Headcount Weighted Mortality Tables described below, with mortality improvements projected to all future years after 2010 using Scale MP-2018.

	<u>Pre-Retirement PUB-2010 Table</u>	<u>Post-Retirement PUB-2010 Table</u>
Female	Headcount Weighted General Below Median Employee Female Table	Headcount Weighted General Below Median Healthy Retiree Female Table
Male	Headcount Weighted General Below Median Employee Male Table, set back 1 year	Headcount Weighted General Below Median Healthy Retiree Male, set back 1 year

These are the same rates as used by the Florida Retirement System (FRS) in their July 1, 2020 Actuarial Valuation Report for Regular (other than K-12 School Instructional Personnel) class members. Florida Statutes Chapter 112.63(1)(f) mandates the use of the mortality tables from either of the two most recently published actuarial valuation reports of FRS.

The following tables present post-retirement mortality rates and life expectancies at illustrative ages. These assumptions are used to measure the probabilities of each benefit payment being made after retirement.

### Health Post-Retirement Mortality

Sample Attained Ages (in 2020)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
	50	0.19 %	0.58 %	33.04
55	0.97	0.58	28.67	32.42
60	1.15	0.60	24.59	27.89
65	1.29	0.69	20.55	23.32
70	1.80	1.10	16.55	18.85
75	2.88	1.90	12.85	14.66
80	4.87	3.44	9.58	10.92

The following tables present pre-retirement mortality rates and life expectancies at illustrative ages. These assumptions are used to measure the probabilities of active members dying prior to retirement.

### **Healthy Pre-Retirement Mortality**

<b>Sample Attained</b>	<b>Probability of Dying Next Year</b>		<b>Future Life Expectancy (years)</b>	
	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
<b>Ages (in 2020)</b>				
50	0.19 %	0.11 %	37.64	40.19
55	0.30	0.17	32.63	35.06
60	0.46	0.26	27.78	30.04
65	0.65	0.37	23.10	25.13
70	0.90	0.57	18.56	20.31
75	1.36	0.94	14.13	15.62
80	2.15	1.59	9.83	11.12

For disabled retirees, the mortality table is the PUB-2010 Headcount Weighted General Disabled Retiree Table with ages set forward 3 years for males and females, with no provision being made for future mortality improvements. These are the same rates in use for Regular class members of the FRS in the July 1, 2020 FRS Actuarial Valuation.

### **Disabled Mortality**

<b>Sample Attained</b>	<b>Probability of Dying Next Year</b>		<b>Future Life Expectancy (years)</b>	
	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
<b>Ages (in 2020)</b>				
50	2.02 %	1.64 %	20.99	23.92
55	2.53	1.91	18.18	20.88
60	3.08	2.27	15.50	17.88
65	3.93	2.83	12.94	14.91
70	5.08	3.79	10.53	12.07
75	6.98	5.46	8.29	9.45
80	10.12	8.31	6.33	7.19

**Rates of disability** among active members (0% of disabilities are assumed to be service-connected).

Sample Ages	Percent Becoming Disabled Within Next Year	
	Men	Women
20	0.07%	0.07%
25	0.09%	0.09%
30	0.10%	0.10%
35	0.14%	0.14%
40	0.21%	0.21%
45	0.32%	0.32%
50	0.52%	0.52%
55	0.92%	0.92%
60	1.53%	1.53%

The **rates of retirement** used to measure the probability of eligible members retiring under normal and early retirement eligibility during the next year were as shown below.

Normal or Early Retirement/DROP	
Retirement Ages	Percent of Eligible Employees Retiring
55	5%
56	5%
57	5%
58	10%
59	10%
60	30%
61	20%
62	15%
63	15%
64	15%
65	30%
66	40%
67	50%
68	50%
69	50%
70	100%

**Rates of separation from active membership** are 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 is used to yield the probabilities of members remaining in employment.

<b>Rates of Separation from Active Employment</b>		
<b>Sample</b>	<b>Years of Service</b>	<b>Assumptions</b>
<b>Ages</b>		
ALL	0	28.61%
	1	20.78%
	2	16.94%
	3	11.67%
	4	7.41%
Under 45	5 & Over	3.50%
45 - 49		3.00%
50 and up		2.00%

**Changes from previous valuation:** The mortality tables and improvement scales were updated to reflect the updated mortality assumptions used in the July 1, 2020 Florida Retirement System (FRS) Actuarial Valuation.

## Miscellaneous and Technical Assumptions

<b>Administrative &amp; Investment Expenses</b>	Annual administrative expenses are assumed to be equal to the actual expenses paid during the preceding fiscal year. Investment expenses are offset against gross investment income. Assumed administrative expenses are added to the Normal Cost.
<b>Benefit Service</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Decrement Operation</b>	Disability and mortality decrements do not operate during the first 5 years of service. Disability and separation do not operate during retirement eligibility.
<b>Decrement Timing</b>	Decrements of all types are assumed to occur at mid-year.
<b>Eligibility Testing</b>	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.
<b>Forfeitures</b>	Vested members who terminate with a benefit worth less than 100% of their own accumulated contributions were assumed to forfeit their vested benefit.
<b>Incidence of Contributions</b>	Employer contributions are assumed to be received in 12 equal monthly installments. 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.
<b>Marriage Assumption</b>	80% of members are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female participants and female spouses are assumed to be three years younger than male participants for active member valuation purposes.
<b>Normal Form of Benefit</b>	The normal form of benefit is a life annuity.
<b>Pay Increase Timing</b>	Beginning of fiscal year. This is equivalent to assuming that reported pays represent the actual amount paid during the previous fiscal year.
<b>Service Credit Accruals</b>	It is assumed that members accrue one year of service credit per year.

## GLOSSARY OF TERMS

<b>Actuarial Accrued Liability</b>	The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability.”
<b>Accrued Service</b>	The service credited under the plan which was rendered before the date of the actuarial valuation.
<b>Actuarial Assumptions</b>	Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”
<b>Actuarial Equivalent</b>	A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.
<b>Actuarial Present Value</b>	The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.
<b>Amortization</b>	Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.
<b>Experience Gain (Loss)</b>	A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.
<b>Normal Cost</b>	The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

<b>Reserve Account</b>	An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.
<b>Unfunded Actuarial Accrued Liability</b>	The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”
<b>Valuation Assets</b>	The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation.

## **SECTION C**

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### **PENSION FUND INFORMATION**

SUMMARY OF ASSETS		
	9/30/2020	9/30/2019
<b>Cash and Securities - Market Value</b>		
Cash and Cash Equivalents	\$ 72,186	\$ 127,085
Short Term Investments	458,973	331,052
Treasury and Agency Bonds & Notes	1,960,870	1,939,236
Corporate Bonds	2,171,516	1,971,682
Common & Preferred Stocks	8,832,404	7,208,860
Pooled Equity Funds	0	0
Mutual or Pooled Bond Funds	4,538,553	5,606,035
Mutual Equity Funds	3,679,755	3,427,463
Other Securities - Participant Directed	0	0
Total	21,714,257	20,611,413
<b>Receivables and Accruals</b>		
Member Contribution	0	0
Employer Contribution	0	0
Interest and Dividends	20,841	22,882
Interest Deposit for Late Contribution	0	0
Total	20,841	22,882
<b>Payables</b>		
Lump Sum Distributions	0	0
Expenses	0	0
Other	15,962	136,343
Total	15,962	136,343
<b>Net Assets - Market Value</b>	\$ 21,719,136	\$ 20,497,952

*Note: for consistency with GASB Statements 67 and 68 DROP balances are included in Plan Assets.*

**PENSION FUND INCOME AND DISBURSEMENTS**

	<b>Year Ending 9/30/2020</b>	<b>Year Ending 9/30/2019</b>
<b>Market Value at Beginning of Period</b>	\$ 20,497,952	\$ 19,714,297
<b>Beginning of Year Adjustment</b>	(5,640)	0
<b>Income</b>		
Member Contributions	96,921	107,745
State Contributions	0	0
Employer Contribution	1,362,952	1,424,479
Interest, Dividends, and Other Income	506,395	399,631
Realized and Unrealized Gain (Loss)	<u>708,008</u>	<u>291,527</u>
Total Income	2,674,276	2,223,382
<b>Disbursements</b>		
Monthly Benefit Payments	1,329,553	1,276,032
Lump Sum Distributions (from DROP)	0	51,129
Refund of Contributions	0	0
Investment Related Expenses	75,430	71,982
Other Administrative Expenses	<u>42,469</u>	<u>40,584</u>
Total Disbursements	1,447,452	1,439,727
<b>Net Increase During Period</b>	\$ 1,221,184	\$ 783,655
<b>Market Value at End of Period</b>	\$ 21,719,136	\$ 20,497,952

*Note: for consistency with GASB Statements 67 and 68 DROP balances are included in Plan Assets.*

## DEFERRED RETIREMENT OPTION PLAN (DROP) BENEFITS HELD IN RESERVE

A reconciliation of the accumulated DROP account balances is provided in the table below.

RECONCILIATION OF DROP ACCOUNTS		
Preliminary Value at beginning of year	\$ 19,065	
Beginning of Year Adjustment	- 0	
Final Value at beginning of year	\$ 19,065	
Payments credited to accounts	+ 141,216	
Investment Earnings credited	+ 11,656	
Withdrawals from accounts	- 0	
Value at end of year	171,937	

DROP PARTICIPATION ACTIVITY	
Number as of September 30, 2019	2
Number entered DROP during the year	5
Number exited DROP during the year	0
Number as of September 30, 2020	7
Average Monthly Benefit as of September 30, 2020	\$2,596

## ACTUARIAL VALUE OF ASSETS

### As of September 30, 2020

Valuation assets are calculated using a smoothed market value over a period of four (4) years, as prescribed under Internal Revenue Procedure 2000-40. The asset value determined under this method will be adjusted to be no greater than 120% and no less than 80% of the fair market value.

Under this method, the actuarial value of assets is equal to the market value of assets less a decreasing fraction (1/nth per year, where n equals the number of years in the smoothing period) of the gain or loss for each of the preceding 3 years.

Under this method, a gain or loss for a year is determined by calculating the difference between the expected market value of the assets at the valuation date and the actual market value of the assets at the valuation date. The expected value of the assets for the year is the market value of the assets at the valuation date for the prior year brought forward with interest at the valuation interest rate to the valuation date for the current year plus contributions minus disbursements (i.e., benefits paid and expenses), all adjusted with interest at the valuation rate to the valuation date for the current year. If the expected value is less than the market value, the difference is a gain. Conversely, if the expected value is greater than the market value, the difference is a loss.

Calculation of Valuation Assets is shown on the following page.

## DEVELOPMENT OF FUNDING VALUE OF ASSETS AS OF SEPTEMBER 30

	2019	2020	2021	2022	2023
A. Preliminary actuarial value from prior year	\$ 19,034,798	\$ 20,713,463	\$ 22,181,692		
B. Market value beginning of year	19,714,297	20,497,952	21,719,136		
C. Market value end of year	20,497,952	21,719,136			
D. Non-investment net cash flow [contributions-(benefits & expenses)]	164,479	82,211			
E. Investment return					
1. Actual market value return net of investment expenses: C - B - D	619,176	1,138,973			
2. Assumed Rate of Return	6.75%	6.75%	6.75%	6.75%	6.75%
3. Assumed Amount of Return	<u>1,336,266</u>	<u>1,386,196</u>			
4. Excess/(shortfall) to be phased-in: E1 - E3	(717,090)	(247,223)			
F. Phased-in recognition of investment return (4 Year Recognition)					
1. Current year: 25% of E4	(179,273)	(61,806)			
2. 25% of excess/(shortfall) from first prior year	81,404	(179,273)	(61,806)		
3. 25% of excess/(shortfall) from second prior year	159,499	81,404	(179,273)	(61,806)	
4. 25% of excess/(shortfall) from third prior year	116,290	159,497	81,405	(179,271)	(61,805)
5. Total phased-in recognition of investment return	<u>177,920</u>	<u>(178)</u>	<u>(159,674)</u>	<u>(241,077)</u>	<u>(61,805)</u>
G. Actuarial value end of year					
1. Preliminary actuarial value end of year:					
A + D + E3 + F5	20,713,463	22,181,692			
2. Upper corridor limit: 120% of C	24,597,542	26,062,963			
3. Lower corridor limit: 80% of C	16,398,362	17,375,309			
4. Actuarial value end of year	<b>20,713,463</b>	<b>22,181,692</b>			
H. Difference between market value and actuarial value	(215,511)	(462,556)			
I. Ratio of Funding Value to Market Value	101%	102%			

## INVESTMENT RATE OF RETURN

The investment rate of return has been calculated on the following bases:

Basis 1 - Market Value: Interest, dividends, realized gains (losses) and unrealized appreciation (depreciation) divided by the beginning market value of the fund, adjusted for cash flow during the year. This figure is normally called the Total Rate of Return.

Basis 2 - Actuarial Value: Investment earnings recognized in the Actuarial Value of Assets divided by the weighted average of the Actuarial Value of Assets during the year.

Year Ended	Investment Rate of Return	
	Market Value	Actuarial Value
9/30/99	8.0 %	11.0 %
9/30/00	4.3	9.7
9/30/01	(1.9)	5.1
9/30/02	(6.7)	1.5
9/30/03	10.1	1.7
9/30/04	7.2	2.3
9/30/05	9.4	4.9
9/30/06	9.7	8.5
9/30/07	14.7	10.0
9/30/08	(11.9)	4.9
9/30/09	9.7	4.2
9/30/10	9.9	5.0
9/30/11	(2.4)	2.1
9/30/12	16.4	8.0
9/30/13	5.7	8.0
9/30/14	4.9	6.3
9/30/15	1.1	5.7
9/30/16	10.1	4.8
9/30/17	10.9	6.6
9/30/18	8.5	7.7
9/30/19	3.1	7.9
9/30/20	5.5	6.7
Average		
Compounded Rate of Return for		
5 Years	7.6 %	6.7 %
10 Years	6.3 %	6.4 %
All Years	5.5 %	6.0 %

## **SECTION D**

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### **MISCELLANEOUS INFORMATION**

RECONCILIATION OF MEMBERSHIP DATA			
	From 10/01/19 To 10/01/20	From 10/01/18 To 10/01/19	
<b>A. Active Members</b>			
1. Number Included in Last Valuation	28	34	
2. New Members Included in Current Valuation	0	0	
3. Non-Vested Employment Terminations	0	0	
4. Vested Employment Terminations	0	(1)	
5. Service Retirements	0	(2)	
6. Disability Retirements	0	0	
7. Deaths	0	0	
8. DROP Retirement	(5)	(3)	
9. Number Included in This Valuation	<u>23</u>	<u>28</u>	
<b>B. Terminated Vested Members</b>			
1. Number Included in Last Valuation	7	7	
2. Additions from Active Members	0	1	
3. Lump Sum Payments/Withdrawals	0	0	
4. Payments Commenced	(1)	(1)	
5. Deaths	0	0	
6. Other	0	0	
7. Number Included in This Valuation	<u>6</u>	<u>7</u>	
<b>C. Service Retirees, Disability Retirees, Beneficiaries &amp; DROP</b>			
1. Number Included in Last Valuation	75	74	
2. Additions from Active Members	0	2	
3. Additions entering the DROP	5	3	
4. Additions from Terminated Vested Members	1	1	
5. Deaths Resulting in No Further Payments	(1)	(5)	
6. Deaths Resulting in New Survivor Benefits	(1)	(1)	
7. End of Certain Period - No Further Payments	0	0	
8. Other -- New Survivor Payments for Death	1	1	
9. Number Included in This Valuation	<u>80</u>	<u>75</u>	

## STATISTICAL DATA

### Active Members as of October 1, 2020

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	Total
20-24 NO.	0	0	0	0	0	0	0	0
25-29 NO.	0	0	0	0	0	0	0	0
30-34 NO.	0	0	0	0	0	0	0	0
35-39 NO.	0	0	1	0	0	0	0	1
40-44 NO.	0	0	0	0	0	0	0	0
45-49 NO.	0	0	2	2	0	1	0	5
50-54 NO.	0	0	2	2	0	1	2	7
55-59 NO.	0	0	1	0	1	1	1	4
60-64 NO.	0	0	2	1	0	0	1	4
65&UP NO.	0	0	0	2	0	0	0	2
TOT NO.	0	0	8	7	1	3	4	23

## NUMBER ADDED TO AND REMOVED FROM ACTIVE MEMBERSHIP

Year Ended	During Year	Number Added		Terminations During Year						Active Members		
		Service Retirement		Disability Retirement		Died-in Service		Withdrawal			End of Year	
		A	E	A	E	A	E	Vested	Other	Total		
September 30		A	E	A	E	A	E	A	A	A	E	
1997	12	11	1	0.5	1	0.2	0	0.2	2	7	9	8.2
1998	12	6	0	0.5	0	0.2	0	0.2	0	6	6	8.3
1999	14	17	1	0.8	1	0.2	0	0.2	0	15	15	8.3
2000	7	6	2	0.8	0	0.1	0	0.1	0	4	4	7.5
2001	9	8	1	1.2	0	0.1	1	0.1	1	5	6	7.6
2002	7	10	1	1.2	0	0.2	0	0.1	2	7	9	8.1
2003	12	11	2	0.8	0	0.2	0	0.1	0	9	9	10.8
2004	12	10	2	1.2	0	0.2	0	0.1	1	7	8	10
2005	10	14	2	0.8	0	0.2	0	0.2	1	11	12	9.42
2006	10	11	5	2.4	0	0.1	0	0.2	0	6	6	8.5
2007	8	7	1	1.8	1	0.2	0	0.2	1	4	5	8.1
2008	7	6	0	3.2	0	0.1	0	0.2	1	5	6	7.8
2009	6	2	0	3.8	0	0.13	0	0.21	1	1	2	6.94
2010	4	7	4	4.4	0	0.13	0	0.21	0	3	3	6.8
2011	6	7	5	5.3	1	0.14	0	0.25	1	0	1	5.69
2012	8	7	2	4.3	0	0.2	1	0.2	2	2	4	4.8
2013 *	0	0	5	4.6	0	0.2	0	0.2	0	2	2	5.1
2014 *	0	0	5	4.9	0	0.1	1	0.2	1	1	2	0.7
2015 *	0	0	4	3.9	0	0.1	0	0.1	1	0	1	0.6
2016 *	0	0	2	3.4	0	0.1	0	0.1	2	0	2	0.6
2017 *	0	0	0	2.7	0	0.1	0	0.1	2	0	2	0.5
2018 *	0	0	3	3.1	0	0.1	0	0.1	0	0	0	0.5
2019 *	0	0	5	3.6	0	0.1	0	0.1	1	0	1	0.4
2020 *	0	0	5	3.0	0	0.1	0	0.1	0	0	0	0.3
5-yr. Totals												
2016-2020	0	0	15	15.8	0	0.5	0	0.5		5	2.3	
Expected												
2021					2.3		0.1					0.3

A Represents actual number.

E Represents expected number.

\*Plan is closed to new entrants

**Retired Members and Beneficiary Data**  
**Historical Schedule**

<b>Year Ended</b>	<b>Added</b>		<b>Removed</b>		<b>Net Increase</b>		<b>End of Year</b>		<b>Expected Removals</b>	
	<b>September 30</b>	<b>No.</b>	<b>Annual Pensions</b>	<b>No.</b>						
2000	6	78,522	3	32,513	3	46,009	26	220,022	0.6	4,196
2001	1	17,716	*		1	17,716	27	237,738	0.6	4,543
2002	3	23,184	1	26,801	2	(3,617)	29	234,121	0.7	5,355
2003	2	32,159	1	5,889	1	26,270	30	260,391	0.9	6,159
2004	2	35,900	2	17,160		18,740	30	279,131	1.0	6,956
2005	3	47,505	1	5,774	2	41,730	32	320,861	1.0	7,331
2006	6	82,446	3	29,272	3	53,174	35	374,035	1.0	7,917
2007	3	51,425			3	51,425	38	425,460	1.1	8,798
2008	1	9,217	1	9,217			38	425,460	1.3	10,328
2009	2	17,424	2	5,992		11,432	38	436,892	1.3	11,534
2010	4	95,156	3	13,790	1	81,366	39	518,258	1.2	11,854
2011	9	105,409	1	14,326	8	91,083	47	609,341	1.2	12,414
2012	4	77,393	0	-	4	77,393	51	686,734	1.2	12,623
2013	6	160,587	1	12,284	5	148,303	56	834,402	1.3	14,605
2014	5	91,970	2	16,908	3	75,062	59	909,464	1.3	15,651
2015	5	162,151	0	-	5	162,151	64	1,071,615	1.3	15,644
2016	3	38,905	0	-	3	38,905	67	1,110,520	1.4	18,241
2017	2	24,679	0	-	2	24,679	69	1,135,199	1.5	20,268
2018	5	140,399	0	-	5	140,399	74	1,275,598	1.6	22,095
2019	7	214,213	6	64,724	1	149,489	75	1,425,087	1.8	25,258
2020	7	139,557	2	9,659	5	129,898	80	1,554,985	1.7	26,351
Expected for 2021									1.9	30,345

\* Includes a one-time 5.0% cost-of-living increase.

## **SECTION E**

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### **SUMMARY OF PLAN PROVISIONS**

**A. Ordinances:**

Plan established under the Code of Ordinances for the City of Atlantic Beach, Florida, Part II, Chapter 2, Article VI, Division 3 and was most recently amended under Ordinance No. 58-20-45 passed and adopted on October 26, 2020. The Plan is also governed by certain provisions of Part VII, Chapter 112, Florida Statutes (F.S.) and the Internal Revenue Code.

**B. Effective Date**

December 22, 1975

**C. Plan Year**

October 1 through September 30

**D. Type of Plan**

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

**E. Eligibility Requirements**

The plan is currently closed to new entrants.

Prior to closure, the plan included all City employees, other than police officers or firefighters, who normally worked more than 1,000 hours annually and who were not elected officials, temporary or contractual employees, or executives or departments heads that elected not to participate. They became members on the date of employment.

**F. Credited Service**

Service is measured as the total number of years and fractional parts of years. No service will be credited for any periods of employment for which the member received a refund of their employee contributions.

**G. Compensation**

Base salary or wages paid for services rendered to the City including longevity pay, overtime pay, cost of living payments, holidays and personal leave taken. Compensation excludes payments of unused personal leave, uniform or equipment allowances, or any reimbursement of expenses.

**H. Final Average Compensation (FAC)**

Average monthly rate of Compensation during the highest 60 consecutive months of Credited Service out of the last 120 months preceding the date of termination or retirement.

## **I. Normal Retirement**

Eligibility: A participant may retire on the first day of the month coincident with or next following age 60 with 5 or more years of Credited Service.

Benefit: For employees hired before April 24, 2005:

2.85% of FAC times Credited Service. Benefit is limited to 100% of FAC.

For employees hired on or after April 24, 2005:

2.50% of FAC times Credited Service. Benefit is limited to 100% of FAC.

Normal Form

of Benefit: Life Annuity; other options are also available.

## **J. Early Retirement**

Eligibility: A member may elect to retire earlier than the Normal Retirement Eligibility upon attainment of age 55 with 5 years of Credited Service.

Benefit: The Normal Retirement Benefit is actuarially reduced (at 6% per year) for each year by which the member's Early Retirement date precedes age 60.

Normal Form

of Benefit: Life Annuity; other options are also available.

## **K. Delayed Retirement**

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

## **L. Service Connected Disability**

Eligibility: Any member with 5 or more continuous years of Credited Service who becomes totally and permanently disabled and unable to render useful and efficient service to the City is eligible for a disability benefit.

Benefit: The benefit is calculated as if the member was eligible for Normal Retirement and is payable retroactively to the later of; the last day on payroll, or the date of application for disability benefits.

Normal Form

of Benefit: Life Annuity; other options are also available.

## **M. Non-Service Connected Disability**

**Eligibility:** Any member with 5 or more continuous years of Credited Service who becomes totally and permanently disabled and unable to render useful and efficient service to the City is eligible for a disability benefit.

**Benefit:** The benefit is calculated as if the member was eligible for Normal Retirement and is payable retroactively to the later of; the last day on payroll, or the date of application for disability benefits.

Normal Form

of Benefit: Life Annuity; other options are also available.

## **N. Pre-Retirement Death**

**Eligibility:** Any member with 5 or more years of Credited Service is eligible for a death benefit.

**Benefit:** Upon the death of a member, the designated beneficiary shall be paid an actuarially reduced benefit based on one hundred (100) percent survivor pension notwithstanding that the member may not have satisfied the conditions for retirement. If there are no beneficiaries designated by the member, then a benefit shall be paid to the surviving spouse or, if no surviving spouse, a reduced benefit will be paid to the member's unmarried children.

If spouse is receiving benefits described above, no children's benefits are payable.

If spouse is not receiving benefits, children under age 19, or age 23 if a fulltime student, will receive equal shares of 50% of the member's Normal Retirement Benefit under the Life Annuity option based upon service and FAC as of the date of death.

Normal Form

of Benefit: Payable for the life of the member's beneficiary or spouse. Children's benefits are payable until age 19 or age 23 if a fulltime student.

## **O. Post Retirement Death**

Benefit determined by the form of benefit elected upon retirement.

## **P. Optional Forms**

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are the 10 Years Certain and Life thereafter option, or 50%, 66 2/3%, 75% or 100% Joint and Survivor options. A Social Security option is also available for members retiring prior to the time they are eligible for Social Security retirement benefits.

## **Q. Vested Termination**

**Eligibility:** A participant has earned a non-forfeitable right to Plan benefits after the completion of 5 or more years of Credited Service.

**Benefit:** The benefit is the member's vested portion of the accrued Normal Retirement Benefit as of the date of termination. Benefit begins on the Normal or Early Retirement date.

**Normal Form**

**of Benefit:** Life Annuity; other options are also available.

## **R. Refunds**

**Eligibility:** Optionally, vested participants may also withdraw their contributions in lieu of the deferred benefits otherwise due.

**Benefit:** The member who terminates employment receives a lump-sum payment of their employee contributions with interest.

## **S. Member Contributions**

6% of Compensation

## **T. Employer Contributions**

The amount determined by the actuary to pay the normal cost and an amortization of the unfunded actuarial accrued liabilities, along with employee contributions. Following are contribution rates per recent valuations:

Year	Contribution		
	Beginning	City	Member
10/1/2009	14.84%	5.000%	19.84%
10/1/2010	16.60%	5.000%	21.60%
10/1/2011	24.53%	5.000%	29.53%
10/1/2012	26.34%	5.000%	31.34%
10/1/2013	29.19%	6.000%	35.19%
10/1/2014	31.59%	6.000%	37.59%
10/1/2015	46.39%	6.000%	52.39%
10/1/2016	56.66%	6.000%	62.66%
10/1/2017	64.35%	6.000%	70.35%
10/1/2018	69.92%	6.000%	75.92%
10/1/2019	71.49%	6.000%	77.49%
10/1/2020	76.02%	6.000%	82.02%
10/1/2021	77.17%	6.000%	83.17%

## **U. Cost of Living Increases**

The plan does not provide for automatic post-retirement cost of living adjustments (COLA) of retiree benefits.

## **V. Changes from Previous Valuation**

See the Discussion of Valuation Results Section of this report under the Revisions in Benefits heading.

## **W. Gain-sharing benefits**

Not applicable.

## **X. Deferred Retirement Option Plan**

**Eligibility:** Plan members are eligible for the DROP upon attainment of age 55 with 5 years of Credited Service.

All members must make 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. Benefits for members entering the DROP prior to age 60 will be actuarially reduced for Early Retirement.

Maximum

DROP Period: 60 months

Interest

**Credited:** Participants' DROP account balances will be credited in accordance with the self-directed options selected by the participant who entered the program prior to July 1, 2013. For all other participants, DROP account balances will be credited or debited quarterly with interest based on Plan's net investment earnings or losses for that quarter.

Normal Form

**of Benefit:** Lump Sum or roll-over to a qualified retirement account.

## **SECTION F**

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### **COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS**

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS	October 1, 2020 <i>After Changes</i>	October 1, 2020 <i>Before Changes</i>	October 1, 2019
<b>A. Participant Data</b>			
Number Included:			
Actives	23	23	28
Service Retirees & Beneficiaries	77	77	72
Disability Retirees	3	3	3
Terminated Vested Members	6	6	7
Total Members and Beneficiaries	109	109	110
Total Annual Payroll (Excluding DROP Participants)	\$1,425,306	\$1,425,306	\$1,642,562
Annual Valuation Payroll	1,425,306	1,425,306	1,642,562
Expected Annual Payroll in Contribution Year	1,425,306	1,425,306	1,642,562
Total Annualized Benefits			
Service Retirees & Beneficiaries	1,508,124	1,508,124	1,378,226
Disability Retirees	46,861	46,861	46,861
Terminated Vested Members	43,649	43,649	57,365
<b>B. Assets (Market Value)*</b>			
Cash and Short Term Investments	531,159	531,159	458,137
Treasury and Agency Bonds & Notes	1,960,870	1,960,870	1,939,236
Common and Preferred Stocks	8,832,404	8,832,404	7,208,860
Mutual Equity Funds	3,679,755	3,679,755	3,427,463
Mutual or Pooled Bond Funds	4,538,553	4,538,553	5,606,035
Corporate Bonds	2,171,516	2,171,516	1,971,682
Other Securities	0	0	0
Net Receivables & Payables	4,879	4,879	(113,461)
Total	21,719,136	21,719,136	20,497,952
Funding (Actuarial) Value	22,181,692	22,181,692	20,713,463
Assets include:			
Accumulated active member contributions (with interest if applicable)	1,035,599	1,035,599	1,133,300
<b>C. Actuarial present value of accrued benefits *</b>			
(i) Vested accrued benefits			
Retired members and beneficiaries (excl DROP balances)	16,520,677	16,741,837	15,350,074
Terminated members	253,612	264,618	437,746
DROP Balances	171,937	171,937	19,065
Active members (includes non-forfeitable members contributions of 1,035,599 and 1,133,300)	5,549,933	5,665,608	6,140,961
Total	22,496,159	22,844,000	21,947,846
(ii) Non-vested accrued benefits	0	0	0
(iii) Total actuarial p.v. of accrued benefits	22,496,159	22,844,000	21,947,846
(iv) Actuarial p.v. of accrued benefits at begin. of year	21,947,846	21,947,846	21,335,133
(v) Changes attributable to:			
Amendments	none	none	none
Assumptions	(347,841)	none	0
Operation of decrements	2,225,707	2,225,707	1,939,874
Benefit payments	(1,329,553)	(1,329,553)	(1,327,161)
Other	none	none	none
(vi) Net change (PVAB measurement Method Change)	548,313	896,154	612,713
(vii) Actuarial p.v. of accr. benefits at end of year	22,496,159	22,844,000	21,947,846

\* DROP balances are included.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS	October 1, 2020 <i>After Changes</i>	October 1, 2020 <i>Before Changes</i>	October 1, 2019
<b>D. Liabilities- Actuarial Present Value of Future Benefits</b>			
1. Active Members			
Service Retirement Benefits	\$8,624,832	\$8,738,881	\$9,522,129
Vesting Benefits	221,245	231,921	261,622
Disability Benefits	120,833	116,786	131,847
Preretirement Death Benefits	165,047	226,876	246,917
Return of Member Contributions	5,842	8,003	8,941
Total Actives	9,137,799	9,322,467	10,171,456
2. Inactive Members			
Service Retirees & Beneficiaries	16,087,473	16,304,718	14,904,520
Disability Retirees	433,204	437,119	445,554
Terminated Vested Members	253,612	264,618	437,746
Total Inactive Members	16,774,289	17,006,455	15,787,820
3. DROP Balances	171,937	171,937	19,065
4. Total Present Value for All Members	26,084,025	26,500,859	25,978,341
Total Present Value of:			
Future Salaries	10,375,078	10,332,308	11,585,667
Future Employee Contributions	622,505	619,939	695,140
Future Contributions from Other Sources	3,279,828	3,699,228	4,569,738
<b>Derivation of Current Employer Unfunded Actuarial Accrued Liability (UAAL)</b>			
a. Total UAAL for Prior Valuation Date	\$3,391,477	\$3,391,477	\$4,537,109
b. Employer Normal Cost for this period	225,474	225,474	244,344
c. Interest accrued on (a) and (b)	244,144	244,144	322,748
d. Contributions for this period	(1,362,952)	(1,362,952)	(1,424,479)
e. Interest accrued on (d)	(46,000)	(46,000)	(48,076)
f. Changes due to:			
Plan Amendment	0	0	0
Assumption Changes	(388,499)	0	0
Asset Method	0	0	0
Actuarial (Gain) Loss	226,116	226,116	(240,169)
g. Total Current UAAL: a+b+c+d+e+f	2,289,760	2,678,259	3,391,477

Original and Current Unfunded Actuarial Accrued Liabilities					
Date	Item Description	Years Remaining	Amortization Payment	Original Amount	Current Unfunded
9/30/2012	Original UAAL	2	\$437,895	\$4,133,993	\$848,102
9/30/2013	Experience Gain	3	(24,239)	(208,109)	(68,216)
9/30/2014	Experience Loss	4	1,630	13,100	5,929
9/30/2014	Assumption Changes	4	226,242	1,817,483	822,695
9/30/2015	Experience Loss	5	46,303	379,312	204,031
9/30/2016	Experience Loss	6	76,847	621,358	394,053
9/30/2016	Assumption Changes	6	64,146	518,668	328,929
10/1/2017	Experience Gain	7	(42,338)	(343,244)	(245,711)
10/1/2017	Assumption Changes	7	84,967	688,841	493,108
10/1/2018	Experience Gain	8	(17,923)	(144,346)	(115,364)
10/1/2019	Experience Gain	9	(30,644)	(240,169)	(215,413)
10/1/2020	Experience Loss	10	29,811	226,116	226,116
10/1/2020	Assumption Changes	10	(51,219)	(388,499)	(388,499)
<b>TOTAL</b>			<b>\$801,478</b>	<b>\$7,074,504</b>	<b>\$2,289,760</b>

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS	October 1, 2020 <i>After Changes</i>	October 1, 2020 <i>Before Changes</i>	October 1, 2019
<b>E. Pension Cost</b>			
Entry Age Normal Cost for:			
Service Retirement Benefits	\$188,254	\$191,162	\$229,367
Vesting Benefits	27,552	28,470	30,041
Disability Benefits	10,727	10,378	11,141
Preretirement Death Benefits	4,705	6,236	7,316
Return of Member Contributions	8,675	8,749	10,585
Total Actives	239,913	244,995	288,450
Administrative Expenses	42,469	42,469	40,584
Expected Member Contributions	89,873	89,873	103,560
Total Employer Normal Cost	192,509	197,591	225,474
Payment Required to Amortize Unfunded Actuarial Accrued Liability	801,478	852,697	902,922
Total Contribution at Valuation Date	993,987	1,050,288	1,128,396
Total Contribution Adjusted for Frequency of Payments and Interest to Next Following Fiscal Year	1,099,876	1,162,175	1,248,604
% of Expected Payroll	77.17%	81.54%	76.02%
Amount Expected to be Contributed by Members Next FY	85,518	85,518	98,554
% of Expected Payroll	6.00%	6.00%	6.00%
<b>F. Past Contributions- For the Fiscal Years Ended September 30 of 2019 and 2020</b>			
Required Contribution Determined in the Valuation as of for the Fiscal Year Ending	October 1, 2018 September 30, 2020	October 1, 2017 September 30, 2019	
by the Plan Sponsor	\$1,355,973	\$1,424,479	
by Members	\$113,808	\$122,233	
Actual Contribution for the Fiscal Year ended	September 30, 2020	September 30, 2019	
by the Plan Sponsor	\$1,362,952	\$1,424,479	
by Members	\$96,921	107,745	
<b>G. Net experience (gain) loss during year:</b>	\$226,116	(\$240,169)	
<b>H. 1. Plan to Amortize Unfunded Actuarial Accrued Liability</b>			
10 year funding of the Original Unfunded Actuarial Accrued Liability,			
10 year funding of any emerging Gains or Losses, or assumption changes.			
<b>2. Schedule Illustrating the Amortization of the Unfunded Actuarial Accrued Liability (UAAL)</b>			
	Year	Projected UAAL	
	2020	2,289,760	
	2021	1,588,742	
	2022	840,404	
	2023	509,006	
	2024	129,364	
	2025	0	
	2026	0	
	2027	0	
<b>3. Action taken since last actuarial valuation.</b>			
Contribution sufficient to satisfy the total required contribution.			

## COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

I. 1. Three-Year Comparison of Actual and Assumed Salary Increases (Annualized)

Year Ended	Actual	Assumed
9/30/2018	2.4 %	5.1%
9/30/2019	5.2 %	5.1%
9/30/2020	5.0 %	5.1%

2. Three-Year Comparison of Investment Return (Actuarial Value)

Year Ended	Actual	Assumed
9/30/2018	7.7%	6.75%
9/30/2019	7.9%	6.75%
9/30/2020	6.7%	6.75%

3. Average Annual Growth in Payroll, Last Ten Years (if applicable)

Valuation Date	Total Payroll
9/30/2010	3,837,512
9/30/2011	3,738,277
9/30/2012	3,713,609
9/30/2013	2,733,429
9/30/2014	2,397,875
9/30/2015	2,074,607
9/30/2016	2,070,021
10/1/2017	2,037,220
10/1/2018	1,896,794
10/1/2019	1,642,562
10/1/2020	1,425,306
Total % Increase Last Ten Years	(62.86)%
Annual % Increase	(9.43)%
Thirty-year Forecast	0.00%

J. Benefits and Expenses of Plan not Explicitly or Implicitly Provided in Valuation

NONE

K. Trends not taken into Account but which are likely to Result in Future Cost Increases

NONE