

Jacksonville Police and Fire Pension Fund

ACTUARIAL VALUATION REPORT AS OF
OCTOBER 1, 2021

ANNUAL EMPLOYER CONTRIBUTION FOR THE FISCAL YEAR
ENDING SEPTEMBER 30, 2023





May 17, 2022

Board of Trustees
Jacksonville Police and Fire Pension Fund
Jacksonville, Florida

Re: Jacksonville Police and Fire Pension Fund Actuarial Valuation as of October 1, 2021 and Actuarial Disclosures

Dear Trustees:

The results of the October 1, 2021 Annual Actuarial Valuation of the Jacksonville Police and Fire Pension Fund are presented in this report.

The computed contribution rates shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. Users of this report should be aware that contributions made at that rate do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the Fund in excess of those presented in this report be considered.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section B of this report. This report does not include a robust assessment of the risks of future experience not meeting the actuarial assumptions, as the assessment of these risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the Fund's financial condition.

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 Fund 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, 2023, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 67. 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 findings in this report are based on data through July 1, 2021 and financial information through September 30, 2021. 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; 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 Fund'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.

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 actuarial information for GASB Statement No. 67 is intended to assist in preparation of the financial statements of the Plan. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes. Our calculation of the Net Pension Liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement No. 67. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement No. 67 may produce significantly different results.

The valuation was based upon information furnished by the Executive Director concerning Retirement Plan 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 otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Executive Director.

In addition, this report was prepared using certain assumptions and methods approved by the Board and prescribed by the Florida Statutes as described in the section of this report entitled Actuarial Assumptions and Cost Methods. The prescribed assumptions are the assumed mortality rates detailed in the Actuarial Assumptions and Cost Methods section in accordance with Florida House Bill 1309 (codified in Chapter 2015-157). The prescribed methods include the use of an initial 30-year amortization period for amortizing the unfunded liability as required under Florida Statute 112.64(6)(a), the recognition of the present value of future Pension Liability Surtax proceeds as required by Florida Statute 112.64(6), and the use of a payroll growth assumption to amortize the unfunded liability as required under Florida Statute 112.64(6)(b). Additional information and disclosures regarding these prescribed methods can be found on pages 4 and 5 of this actuarial valuation report.

This report was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general



operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses.

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 Jacksonville Police and Fire Pension Fund 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.

Peter N. Strong and Jeffrey Amrose are members of the American Academy of Actuaries. These actuaries meet the Qualification Standards of the American Academy of Actuaries 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, with some exceptions noted on pages 4 and 5 under the section entitled "Disclosures Regarding the Pension Liability Surtax and Florida Statute 112.64(6)." There is no benefit or expense to be provided by the plan and/or paid from the Fund'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 report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY



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SECTION A

DISCUSSION OF VALUATION RESULTS

DISCUSSION OF VALUATION RESULTS

Closed Plan

In reviewing this Report, it is important for the reader to keep in mind that this Fund has been closed to new members since October 1, 2017. One consequence of this closure is that the annual payment on the unfunded accrued liability will tend to increase as a percentage of covered payroll over time, as such payroll decreases from year to year. Starting with the fiscal year ending September 30, 2018, it is our understanding that the Plan sponsor has been and will continue to be contributing the dollar amount of the calculated required employer contribution.

Comparison of Required Employer Contributions

The required employer contribution developed in this year's valuation is compared below to the last valuation.

	For FYE 9/30/23 Based on 10/1/2021 Valuation (if contributed on 12/1/2022)	For FYE 9/30/22 Based on 10/1/2020 Valuation (if contributed on 12/1/2021)
Required Employer Contribution* As % of Contribution Year Payroll	\$ 156,993,838 94.79 %	\$ 157,352,434 88.23 %

*This does not reflect the potential use of reserves that have been allocated to the City that may be used to offset the City's required contribution amount. Approximately \$6.3 million in reserves are available for use by the City as of October 1, 2021.

Payment of Required Contribution

The required employer contributions developed in this valuation have been calculated as though the payment is contributed on December 1.

The actual employer (City) contributions for the year ending September 30, 2021 were \$148,475,947, which includes the use of \$13,750,618 from the City's Contribution Reserve Account. The required employer contributions for the year ending September 30, 2021 were \$148,475,947.

Revisions in Benefits

There have been no changes in benefits since the previous valuation.

Revisions in Funding Policy

Effective for the employer contribution rate for the year ending September 30, 2023, contributions



from parking fines and court costs are excluded in the development of the City's required contribution.

There have been no other changes in funding policy since the previous valuation.

Revisions in Actuarial Assumptions and Methods

The amortization period for new amortization bases is reduced from 27 years to 26 years this year, and it will continue to be reduced by one year each year until reaching 15 years.

The assumed investment return assumption has been reduced by 0.275% from 6.9% per annum to 6.625% per annum, compounded annually. This assumption change caused the required City contribution for FY 2023 to increase by \$10,158,214.

Actuarial Experience

There were net actuarial experience gains totaling approximately \$147.8 million during the past year, which means that actual experience was more favorable than expected.

The majority of the experience gains was due to changes in the projected Pension Liability Surtax proceeds (of approximately \$94.3 million) caused by a 14.36% increase in actual surtax revenue from FY 2020 to FY 2021. The surtax revenue is assumed to increase by 4.25% per year. (The pro rata share of the Proceeds was unchanged since the previous valuation. The allocation percentage is updated each year by the City based on the relative unfunded actuarial liabilities for all of the City's pension plans. Based on each pension plans' respective October 1, 2020 actuarial valuation, the pro rata share of the Proceeds for the Jacksonville Police and Pension Fund is 58.3% as of October 1, 2021.) Overall changes in the projected Pension Liability Surtax caused the required City contribution to decrease by \$6,746,409.

Investment experience (on the Actuarial Value of Assets) resulted in an experience gain (net of reserves) of about \$56.8 million. The investment return on the smoothed Actuarial Value of Assets was 9.72% compared to the assumed annual investment return of 6.90%. (The net money-weighted investment return on the Market Value of Assets was 23.15%, as reported by the Plan's investment consultant.) Investment gains and losses are spread over a five-year smoothing period, with gains and losses from prior years being smoothed into the current year.

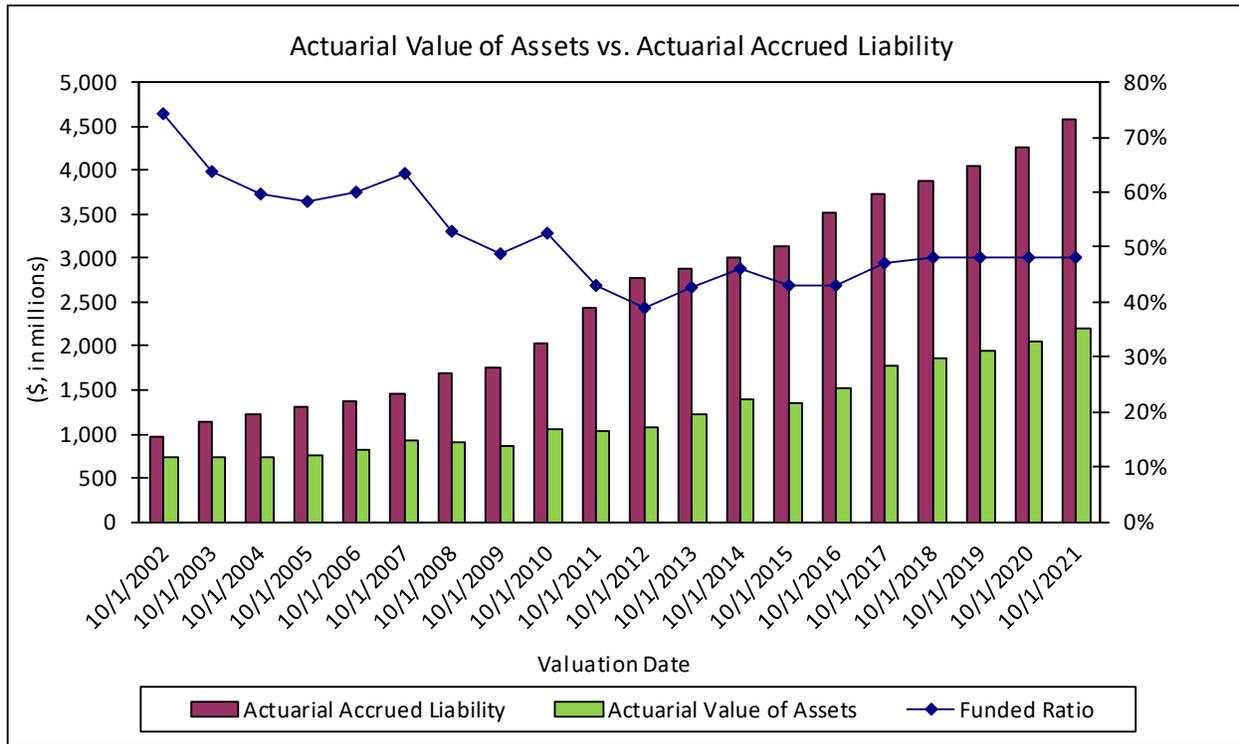
Experience from other sources resulted in a net experience loss of about \$3.2 million. There were demographic experience losses due to higher retirement experience than expected (145 actual retirements versus 115 expected), lower inactive mortality experience than expected (46 actual retiree deaths versus 59 expected), new retirees in receipt of higher than expected retirement benefits, and data adjustments (from service purchases). There were also some offsetting demographic experience gains due to lower salary increases than expected (2.3% actual versus 4.8% assumed) and higher turnover experience than expected (32 actual employment terminations versus 22 expected).

Overall, the net actuarial experience gain caused the required City contribution to decrease by \$10,576,423.



Funded Ratio

The funded ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability. This year's funded ratio is 48.06% compared to 47.98% last year. Prior to reflecting the assumption changes, the funded ratio would have been 49.83%. Below is a historical comparison of the total actuarial value of assets versus the total actuarial accrued liability:



Analysis of Employer Contribution

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

Required Contribution Payable December 1, 2021	\$ 157,352,434
Experience (Gains) or Losses	
Investment Experience	(4,062,459)
Change in Projected Pension Liability Surtax Experience	(6,746,409)
Other Sources Experience	232,445
Revision in Assumptions	10,158,214
Amortization Payment on UAAL	1,106,596
Change in Net Employer Normal Cost	(3,828,799)
Administrative/Investment Expenses	2,250,235
Court Fines	531,581
Benefit Changes	0
Required Contribution Payable December 1, 2022	\$ 156,993,838

The change in the contribution rate attributed to the Amortization Payment on the UAAL was caused by the 1.25% payroll growth rate used in the UAAL amortization (UAAL payments are scheduled to increase by 1.25% per year) and the contribution lag (the contribution rate determined in the October 1, 2019 actuarial valuation was contributed during the fiscal year ending September 30, 2021, and this contribution rate was lower than the contribution rate calculated as of October 1, 2020).

Required Contributions in Later Years

It is important to keep in mind that under the asset smoothing method, gains and losses are recognized over five years. As of September 30, 2021, the market value of assets exceeded the actuarial value by \$261,929,355. This difference will be gradually recognized in the absence of offsetting losses. In turn, the computed employer contribution rate is expected to decrease by approximately \$18.3 million.

Relationship to Market Value

If Market Value had been the basis for the valuation, the required City contribution would have been \$138,719,204 and the funded ratio would have been 53.79%. In the absence of other gains and losses or other changes, the City contribution rate is expected to decrease towards this level over the next few years.

Disclosures Regarding the Pension Liability Surtax and Florida Statute 112.64(6)

The annual pension liability surtax revenue is projected to increase 4.25% annually from calendar year 2021 to calendar year 2060. This assumption was set by the City of Jacksonville. Assumptions regarding future growth in municipal sales tax revenues fall outside of our area of expertise. Since municipal finance projections fall outside of our area of expertise, we are unable to assess the reasonableness of the City's 4.25% annual surtax growth assumption. However, it should be noted that actual surtax revenue growth over the past five years has exceeded this assumption (averaging 5.28% per year).

Ordinance 2017-257 implemented changes required to reflect the present value of the City of Jacksonville's pension liability surtax, in accordance with Florida Statute 112.64(6). Reflecting the pension liability surtax offsets the Fund's current UAAL by the present value of a future revenue stream (generated by the pension liability surtax) to be received by the Fund in calendar years 2031 through 2060. This delays the Fund's projected full funding date until almost the fiscal year 2060 and results in annual contributions to the Fund in fiscal years 2018 through 2030 which are significantly lower than the recommended contribution levels would be to ensure the Fund accumulates adequate assets to make all benefit payments (in the absence of the pension liability surtax). The maintenance of a minimum liquidity ratio (defined as the market value of assets divided by the annual benefit payments), as described in Ordinance 2017-259, will likely help prevent an insolvency in the event the Fund incurs adverse experience, but this is dependent upon the minimum liquidity ratio being adhered to. A full analysis of the impact of the liquidity ratio was outside of the scope of this assignment.

We are unable to assess the risk that the timing and/or amount of future pension liability surtax proceeds may significantly deviate from the projections (due to legal challenges, economic hardships, or any other reason). Any such deviations could have a significant impact on the required contribution amount shown herein and on the future solvency risk that the Fund's future assets may be insufficient to cover all future benefit payments.



The long-term payroll growth assumption for purposes of amortizing the UAAL and projecting the contribution amount to the contribution year (the year beginning one year after the valuation date) is 1.25%. For a closed pension fund, it is our recommendation to use a 0% payroll growth assumption. Based on our understanding, Florida Statute 112.64(6)(b) requires the future payroll of police officers and firefighters expected to be hired after October 1, 2017 (who will not become members of the Fund) to be included when setting this assumption. This is a prescribed method under Florida Statutes for setting this assumption which deviates from our recommended practice for closed pension funds. The 1.25% assumption was set based on the projected 10-year compound average payroll growth rate through 2021. Please refer to our experience study report on the payroll growth assumption dated April 4, 2017 for additional information and background on this assumption.

In conjunction with offsetting the UAAL by the present value of the pension liability surtax, Florida Statute 112.64(6)(a) requires the use of an initial 30-year amortization period for amortizing the UAAL. It is important to note that the average expected future service of current active members is 8.51 years, which is far less than the required initial 30-year amortization period. Though required, a long amortization period carries more risk, especially in a closed plan, and the funded status could deteriorate in the short run. Furthermore, amortizing the UAAL over an initial period of 30 years (currently 26 years) is likely to transfer costs to future taxpayers, which would deviate from language in Florida Statute 112.61 which says *“Accordingly, except as herein provided, it is the intent of this act to prohibit the use of any procedure, methodology, or assumptions the effect of which is to transfer to future taxpayers any portion of the costs which may reasonably have been expected to be paid by the current taxpayers.”* When combined with advance recognition of the pension liability surtax, it is our opinion that current costs are likely to be transferred to future taxpayers under this arrangement.

Conclusion

It is important to note that the Fund’s assets are insufficient to cover the actuarial liabilities for inactive members. As of October 1, 2021 the market value of assets, net of reserves, is approximately \$2.46 billion, and the actuarial liability for current inactive members is approximately \$3.46 billion. Given the low funded ratio and the fact that the pension liability surtax revenues will not be received until more than 9 years from now, it is advisable to consider making contributions to the Fund in excess of the minimum required contribution shown in this report.

In consideration of Actuarial Standard of Practice No. 51 regarding the assessment of risks, which is addressed on the next three pages, we recommend a numerical risk assessment to be conducted at least once every 3 to 5 years.

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



RISKS ASSOCIATED WITH THE 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. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. 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;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. 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>2021</u>	<u>2020</u>
Ratio of the net market value of assets to payroll	15.20	11.60
Ratio of actuarial accrued liability to payroll	28.27	24.42
Ratio of actives to retirees and beneficiaries	0.65	0.73
Ratio of net cash flow to market value of assets (net of reserves)	(1.8%)	(1.7%)
Duration of the actuarial accrued liability	14.80	14.54

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. We note that this ratio for the Jacksonville Police and Fire Pension Fund (15.20) is higher than it is for most other plans we work with, which means the required contributions as a percentage of payroll are more volatile than most other plans.

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. We note that this ratio for the Jacksonville Police and Fire Pension Fund (28.27) is significantly higher than it is for most of the plans we work with, which means the changes in liability and required contributions are more volatile than most other plans.

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. This ratio for the Jacksonville Police and Fire Pension Fund (0.65) is less than 1.0, indicating it is super-mature. The fact that the Fund is closed has not had much impact on this ratio yet.



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. In consideration of the size of the Jacksonville Police and Fire Pension Fund and the long-term manner in which it is being funded (in part by pension liability surtax proceeds through 2060), we recommend a numerical risk assessment be conducted at least once every 3 to 5 years.

ORIGINAL VERSUS CURRENT PROJECTION OF PENSION LIABILITY SURTAX

PENSION LIABILITY SURTAX ESTIMATES 4.25% GROWTH						
Fiscal Year	Original Projection of Pension Liability Surtax			Current Projection of Pension Liability Surtax		
	Projected Total 1/2-Penny Sales Tax*	Projected Pension Liability Surtax	63% of Revenue for Police and Fire Pension Fund	Projected Total 1/2-Penny Sales Tax*	Projected Pension Liability Surtax	58.3% of Revenue for Police and Fire Pension Fund
2016	\$ 82,875,723			\$ 82,875,723		
2017	<i>86,397,941</i>			86,148,000		
2018	<i>90,069,854</i>			91,529,277		
2019	<i>93,897,823</i>			95,804,756		
2020	<i>97,888,480</i>			93,742,144		
2021	<i>102,048,740</i>			107,207,059		
⋮	⋮			⋮		
⋮	⋮			⋮		
2031	<i>154,727,777</i>	\$ 116,045,832	\$ 73,108,874	162,548,894	\$ 121,911,670	\$ 71,074,504
2032	<i>161,303,707</i>	161,303,707	101,621,335	169,457,222	169,457,222	98,793,560
2033	<i>168,159,115</i>	168,159,115	105,940,242	176,659,154	176,659,154	102,992,287
⋮	⋮	⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮	⋮	⋮
2059	<i>496,247,197</i>	496,247,197	312,635,734	521,331,301	521,331,301	303,936,148
2060	<i>517,337,703</i>	517,337,703	325,922,753	543,487,881	543,487,881	316,853,435
2061	<i>539,324,556</i>	134,831,139	84,943,617	566,586,116	141,646,529	82,579,926
Total Proceeds from 1/1/31-12/31/60:		\$ 9,105,159,243	\$ 5,736,250,323		\$ 9,607,767,471	\$ 5,601,328,436
Net Present Value** of Proceeds as of 10/1/21:		\$ 1,844,660,805	\$ 1,162,136,307		\$ 1,937,903,976	\$ 1,129,798,018
<i>Change in Total Proceeds from Original to Current Projection:</i>					\$ 502,608,228	\$ (134,921,887)
<i>Change in Net Present Value of Proceeds from Original to Current Projection:</i>					\$ 93,243,171	\$ (32,338,289)

*Numbers in **bold** are actual numbers; numbers in *italics* are projected.

** The Present Value of the Original Projection of Pension Liability Surtax has been adjusted using 6.625% interest rate.

The actual surtax revenue has increased by an average of 5.28% per year from FY 2016 to FY 2021, which is trending higher than the 4.25% assumption. Also, the percentage of the Pension Liability Surtax (PLS) allocated to the Police and Fire Fund (versus the City's other two pension plans) has declined from 63.0% (initially) to 58.3% (currently). The impact of these two variables on the required City contribution and the percentage of the Actuarial Accrued Liability (AAL) covered by the sum of current assets and the present value of the PLS proceeds are shown below:

	If Original Projection Held (4.25%/yr Growth; 63.0% Allocation)	Reflecting Actual Surtax Growth (≈ 5.28%/yr); Original 63.0% Allocation	Reflecting Actual Surtax Growth (≈ 5.28%/yr); Actual 58.3% Allocation
Required City Contribution Payable			
December 1, 2022	\$ 154,737,617	\$ 150,639,144	\$ 156,993,838
<i>Impact of Change on Valuation Results</i>	\$ 2,256,221	\$ 6,354,694	N/A
Percentage of AAL covered by Assets and PLS	73.47 %	74.75 %	72.76 %
<i>Impact of Change on Valuation Results</i>	(0.71) %	(1.99) %	N/A



SECTION B

VALUATION RESULTS

PARTICIPANT DATA¹		
	October 1, 2021	October 1, 2020
ACTIVE MEMBERS		
Number	2,057	2,236
Annual Payroll	\$ 162,486,240	\$ 174,616,271
Average Annual Payroll	\$ 78,992	\$ 78,093
Average Age	41.5	41.0
Average Past Service	12.9	12.5
Average Age at Hire	28.6	28.5
RETIREES, BENEFICIARIES & DROP		
Number	3,140	3,021
Annual Benefits ²	\$ 192,052,407	\$ 179,768,850
Average Annual Benefit ²	\$ 61,163	\$ 59,506
Average Age	65.1	65.1
DISABILITY RETIREES		
Number	45	46
Annual Benefits	\$ 1,991,287	\$ 1,972,096
Average Annual Benefit	\$ 44,251	\$ 42,872
Average Age	63.9	63.3
TERMINATED VESTED MEMBERS		
Number	91	83
Annual Benefits	\$ 1,632,409	\$ 1,435,275
Average Annual Benefit	\$ 17,939	\$ 17,292
Average Age	44.0	44.1

¹Participant data is collected as of July 1.

²Not including distributions or installment payments from DROP accounts.



ACTUARIALLY DETERMINED CONTRIBUTION (ADC)			
A. Valuation Date	October 1, 2021 <i>After Assumption Changes</i>	October 1, 2021 <i>Before Changes</i>	October 1, 2020
B. ADC to Be Paid During Fiscal Year Ending	9/30/2023	9/30/2023	9/30/2022
C. Assumed Date of Employer Contributions	12/1/2022	12/1/2022	12/1/2021
D. Expected Covered Payroll for the Year Beginning on the Valuation Date	\$ 161,835,740	\$ 161,835,740	\$ 174,185,559
E. Annual Payment to Amortize Unfunded Actuarial Liability	86,469,709	81,689,679	90,939,160
F. Employer Normal Cost	66,937,017	61,729,352	63,271,186
G. ADC if Paid on the Valuation Date: E + F	153,406,726	143,419,031	154,210,346
H. Contributions from Court Fines	0	0	519,212
I. City Contribution: G - H as % of Covered Payroll	153,406,726 94.79 %	143,419,031 88.62 %	153,691,134 88.23 %
J. Actuarially Determined Contribution (ADC) in Contribution Year*	156,993,838	146,835,624	157,352,434

* = City Contribution (item G.) x (1+payroll growth of 1.25%) x (1+interest rate) ^ (2/12)



ACTUARIAL VALUE OF BENEFITS AND ASSETS			
A. Valuation Date	October 1, 2021 <i>After Assumption Changes</i>	October 1, 2021 <i>Before Changes</i>	October 1, 2020
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 1,590,230,118	1,491,272,614	\$ 1,590,209,562
b. Vesting Benefits	53,699,356	50,240,431	54,786,043
c. Disability Benefits	19,018,805	18,011,990	19,644,291
d. Preretirement Death Benefits	9,489,410	9,004,216	9,919,581
e. Return of Member Contributions	569,198	560,689	670,505
f. Total	<u>1,673,006,887</u>	<u>1,569,089,940</u>	<u>1,675,229,982</u>
2. Inactive Members			
a. Service Retirees	2,668,073,504	2,590,806,838	2,512,290,468
b. DROP Retirees	499,795,047	479,201,083	370,825,433
c. Disability Retirees	31,134,438	30,182,067	30,134,014
d. Beneficiaries	230,704,556	225,535,073	208,871,260
e. Terminated Vested Members	25,785,262	24,572,719	21,753,741
f. Total	<u>3,455,492,807</u>	<u>3,350,297,780</u>	<u>3,143,874,916</u>
3. Total for All Members	5,128,499,694	4,919,387,720	4,819,104,898
C. Actuarial Accrued (Past Service) Liability			
1. Active Members	1,118,840,768	1,061,943,127	1,109,650,498
2. Inactive Members	3,455,492,807	3,350,297,780	3,143,874,916
3. Total for All Members	<u>4,574,333,575</u>	<u>4,412,240,907</u>	<u>4,253,525,414</u>
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	4,433,476,462	4,274,035,113	4,082,580,032
E. Plan Assets			
1. Gross Market Value of Assets	2,487,628,465	2,487,628,465	2,054,799,648
2. Reserve Accounts, including Share Plan	(22,458,814)	(22,458,814)	(30,657,546)
3. Sr. Staff Plan Assets	(4,605,550)	(4,605,550)	(4,077,179)
4. Net Market Value of Assets	<u>2,460,564,101</u>	<u>2,460,564,101</u>	<u>2,020,064,923</u>
5. Actuarial Value of Assets	2,198,634,746	2,198,634,746	2,041,049,063
F. Total Unfunded Actuarial Accrued Liability: C3 - E5	2,375,698,829	2,213,606,161	2,212,476,351
G. Net Present Value of Total Pension Liability Surtax Proceeds According to Pro Rata Share	1,129,798,018	1,066,222,863	909,196,697
H. Net Unfunded Actuarial Accrued Liability: F - G	1,245,900,811	1,147,383,298	1,303,279,654
I. Actuarial Present Value of Projected Covered Payroll	1,244,602,525	1,227,984,564	1,371,738,900
J. Funded Ratio: E5 / C3	48.06%	49.83%	47.98%
K. Percent of Actuarial Accrued Liability Covered by Assets and Total Pension Liability Surtax Proceeds: (G + E5) / C3	72.76%	74.00%	69.36%
L. Liquidity Ratio			
1. DROP Balance as of Valuation Date	380,688,717	380,688,717	366,880,377
2. Net Market Value (Net of DROP): E4 - L1	2,079,875,384	2,079,875,384	1,653,184,546
3. Annual Benefit Payments in Pay Status	194,043,694	194,043,694	181,740,946
4. Ratio: L2 : L3	10.72 : 1	10.72 : 1	9.10 : 1



CALCULATION OF EMPLOYER NORMAL COST

A. Valuation Date	October 1, 2021 <i>After Assumption Changes</i>	October 1, 2021 <i>Before Changes</i>	October 1, 2020
B. Expected Covered Payroll for the Year Beginning on the Valuation Date	\$ 161,835,740	\$ 161,835,740	\$ 174,185,559
C. Normal Cost (Individual Entry Age) for			
1. Service Retirement Benefits	64,504,006	59,726,068	64,087,839
2. Vesting Benefits	4,835,535	4,518,014	4,832,866
3. Disability Benefits	1,417,872	1,345,702	1,439,433
4. Preretirement Death Benefits	916,137	874,773	937,929
5. Return of Member Contributions	143,260	144,588	149,975
6. Total for Future Benefits	<u>71,816,810</u>	<u>66,609,145</u>	<u>71,448,042</u>
7. Assumed Amount for Expenses	<u>11,979,262</u>	<u>11,979,262</u>	<u>9,781,386</u>
8. Total Normal Cost	83,796,072	78,588,407	81,229,428
D. Expected Member (including DROP) Contribution	16,859,055	16,859,055	17,958,242
E. Employer Normal Cost: C8 - D	66,937,017	61,729,352	63,271,186
F. Employer Normal Cost as a % of Covered Payroll: E / B	41.36%	38.14%	36.32%



**PENSION LIABILITY SURTAX ESTIMATES
4.25% GROWTH**

<u>Fiscal Year</u>	<u>Projected Total 1/2-Penny Sales Tax</u>	<u>Projected Pension Liability Surtax</u>	<u>58.3% of Revenue for Police and Fire Pension Fund</u>
2021	\$ 107,207,059		
2022	111,763,359		
2023	116,513,302		
2024	121,465,117		
2025	126,627,385		
2026	132,009,048		
2027	137,619,433		
2028	143,468,259		
2029	149,565,660		
2030	155,922,200		
2031	162,548,894	\$ 121,911,670	\$ 71,074,504
2032	169,457,222	169,457,222	98,793,560
2033	176,659,154	176,659,154	102,992,287
2034	184,167,168	184,167,168	107,369,459
2035	191,994,273	191,994,273	111,932,661
2036	200,154,029	200,154,029	116,689,799
2037	208,660,575	208,660,575	121,649,115
2038	217,528,650	217,528,650	126,819,203
2039	226,773,617	226,773,617	132,209,019
2040	236,411,496	236,411,496	137,827,902
2041	246,458,985	246,458,985	143,685,588
2042	256,933,492	256,933,492	149,792,226
2043	267,853,165	267,853,165	156,158,395
2044	279,236,925	279,236,925	162,795,127
2045	291,104,494	291,104,494	169,713,920
2046	303,476,435	303,476,435	176,926,761
2047	316,374,183	316,374,183	184,446,149
2048	329,820,086	329,820,086	192,285,110
2049	343,837,440	343,837,440	200,457,227
2050	358,450,531	358,450,531	208,976,660
2051	373,684,678	373,684,678	217,858,168
2052	389,566,277	389,566,277	227,117,140
2053	406,122,844	406,122,844	236,769,618
2054	423,383,065	423,383,065	246,832,327
2055	441,376,845	441,376,845	257,322,701
2056	460,135,361	460,135,361	268,258,916
2057	479,691,114	479,691,114	279,659,919
2058	500,077,986	500,077,986	291,545,466
2059	521,331,301	521,331,301	303,936,148
2060	543,487,881	543,487,881	316,853,435
2061	566,586,116	141,646,529	82,579,926
Total Proceeds from 2031-2061:		\$ 9,607,767,471	\$ 5,601,328,436
Net Present Value of Proceeds as of 10/1/21:			
Before Changes (at 6.9% interest):		\$ 1,828,855,683	\$ 1,066,222,863
After Changes (at 6.625% interest):		\$ 1,937,903,976	\$ 1,129,798,018



LIQUIDATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY

Before Changes

UAAL AMORTIZATION PERIOD AND PAYMENTS						
Original UAAL				Current UAAL*		
Date Established	Type of Amortization Base	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment
10/1/2016	Fresh Start	30	\$ 1,243,587,908	25	\$ 1,177,311,771	\$ 83,781,188
10/1/2017	Experience (Gain)/Loss	30	(102,449,877)	26	(101,319,832)	(7,080,591)
10/1/2017	Assumption Changes	30	67,640,845	26	66,894,753	4,674,843
10/1/2018	Experience (Gain)/Loss	30	(19,072,874)	26	(18,908,960)	(1,321,425)
10/1/2018	Method Change	29	15,507,222	26	15,373,952	1,074,386
10/1/2019	Experience (Gain)/Loss	28	33,690,255	26	33,353,664	2,330,873
10/1/2019	Benefit Change	28	2,158,327	26	2,136,764	149,325
10/1/2020	Experience (Gain)/Loss	27	84,589,421	26	84,162,332	5,881,563
10/1/2020	Assumption Changes	27	36,384,579	26	36,200,875	2,529,846
10/1/2021	Experience (Gain)/Loss	26	<u>(147,822,021)</u>	26	<u>(147,822,021)</u>	<u>(10,330,329)</u>
			1,214,213,785		1,147,383,298	81,689,679

After Assumption Changes

UAAL AMORTIZATION PERIOD AND PAYMENTS						
Original UAAL				Current UAAL*		
Date Established	Type of Amortization Base	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment
10/1/2016	Fresh Start	30	\$ 1,243,587,908	25	\$ 1,177,311,771	\$ 81,793,639
10/1/2017	Experience (Gain)/Loss	30	(102,449,877)	26	(101,319,832)	(6,907,498)
10/1/2017	Assumption Changes	30	67,640,845	26	66,894,753	4,560,562
10/1/2018	Experience (Gain)/Loss	30	(19,072,874)	26	(18,908,960)	(1,289,122)
10/1/2018	Method Change	29	15,507,222	26	15,373,952	1,048,122
10/1/2019	Experience (Gain)/Loss	28	33,690,255	26	33,353,664	2,273,892
10/1/2019	Benefit Change	28	2,158,327	26	2,136,764	145,674
10/1/2020	Experience (Gain)/Loss	27	84,589,421	26	84,162,332	5,737,783
10/1/2020	Assumption Changes	27	36,384,579	26	36,200,875	2,468,001
10/1/2021	Experience (Gain)/Loss	26	(147,822,021)	26	(147,822,021)	(10,077,794)
10/1/2021	Assumption Changes	26	<u>98,517,513</u>	26	<u>98,517,513</u>	<u>6,716,450</u>
			1,312,731,298		1,245,900,811	86,469,709

*Reflects an offset equal to the net present value of the total pension liability surtax proceeds based on a pro rata share of 58.3%.



Amortization Schedule

The UAAL is being amortized as a level percent of pay over the number of years remaining in each amortization period. The following schedule illustrates the expected amortization of the UAAL:

Amortization Schedule	
Year	Expected UAAL*
2021	\$ 1,245,900,811
2022	1,236,243,402
2023	1,224,793,722
2024	1,211,418,615
2025	1,195,975,935
2026	1,178,313,938
2031	1,050,647,087
2036	837,968,978
2041	505,778,917
2046	6,379,062
2047	-

*Reflects an offset equal to the net present value of the total pension liability surtax proceeds based on a pro rata share of 58.3%.

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. UAAL at 10/1/2020	\$ 1,303,279,654
2. 2020-21 Total Normal Cost for Benefits (BOY)	71,448,042
3. 2020-21 Contributions (net of Administrative Expenses)	166,079,995
4. Interest at the Assumed Rate on:	
a. 1 and 2 for one year	94,856,211
b. 3 from dates paid	<u>8,298,593</u>
c. a - b	86,557,618
5. Expected UAAL at 10/1/2021 (before changes): 1 + 2 - 3 + 4c	1,295,205,319
6. Actual UAAL at 10/1/2021 (before changes):	1,147,383,298
7. Net Actuarial Gain/(Loss):	147,822,021
8. Gain/(Loss) Due to Investments (net of reserves):	56,779,213
9. Gain/(Loss) Due to Changes in Projected Pension Liability Surtax Proceeds:	94,291,594
10. Gain/(Loss) Due to Other Sources:	(3,248,786)

The annual experience gains/(losses) in previous years have been as follows:

Year Ending	Experience Gain / (Loss)
9/30/2013	\$ 86,047,514
9/30/2014	34,912,618
9/30/2015	(182,600,912)
9/30/2016	45,616,836
9/30/2017	102,449,877
9/30/2018	19,072,874
9/30/2019	(33,690,255)
9/30/2020	(84,589,421)
9/30/2021	147,822,021

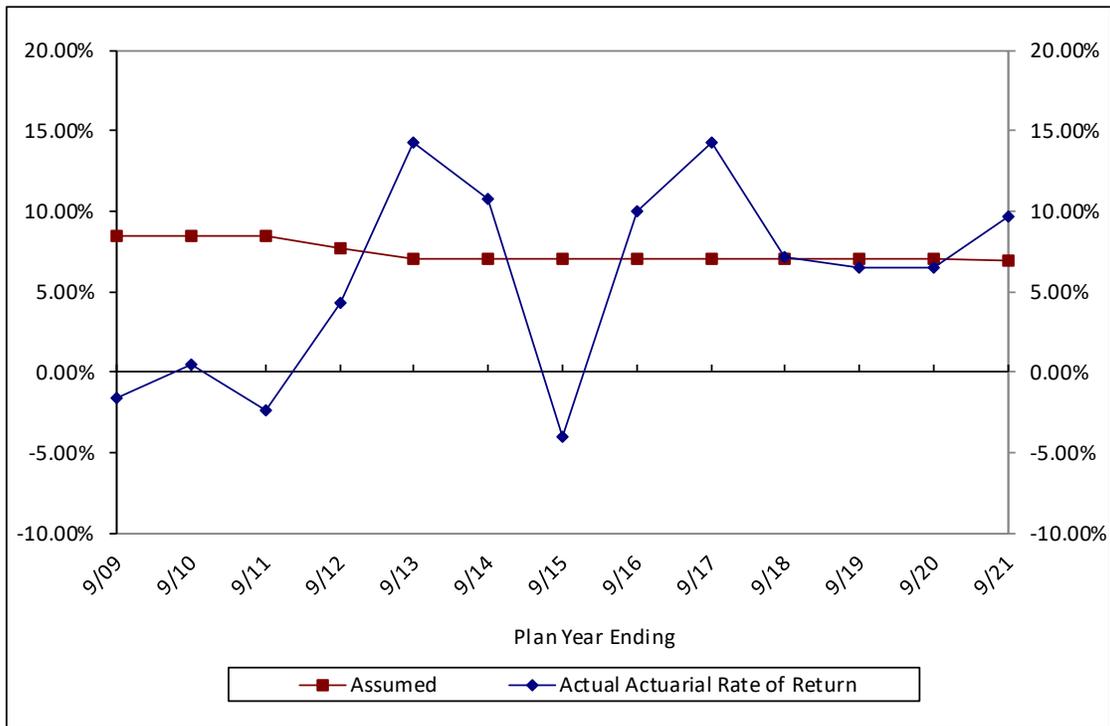
The fund earnings and salary increase assumptions have considerable impact on the cost of the plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last few years:

Period Ending	Investment Return		Salary Increases	
	Actual	Assumed	Actual*	Assumed*
9/30/2009	(1.63) %	8.50 %	7.0 %	5.5 %
9/30/2010	0.44	8.50	3.0	5.5
9/30/2011	(2.41)	8.50	2.5	5.5
9/30/2012	4.34	7.75	0.4	5.0
9/30/2013	14.29	7.00	2.9	4.0
9/30/2014	10.73	7.00	3.0	4.0
9/30/2015	(4.00)	7.00	3.8	3.5
9/30/2016	10.00	7.00	2.2	3.5
9/30/2017	14.27	7.00	12.1	10.0
9/30/2018	7.20	7.00	10.4	10.0
9/30/2019	6.46	7.00	11.6	10.5
9/30/2020	6.50	7.00	3.4	3.5
9/30/2021	9.72	6.90	2.3	4.8
Average	5.67 %	7.39 %	4.9 %	5.8 %

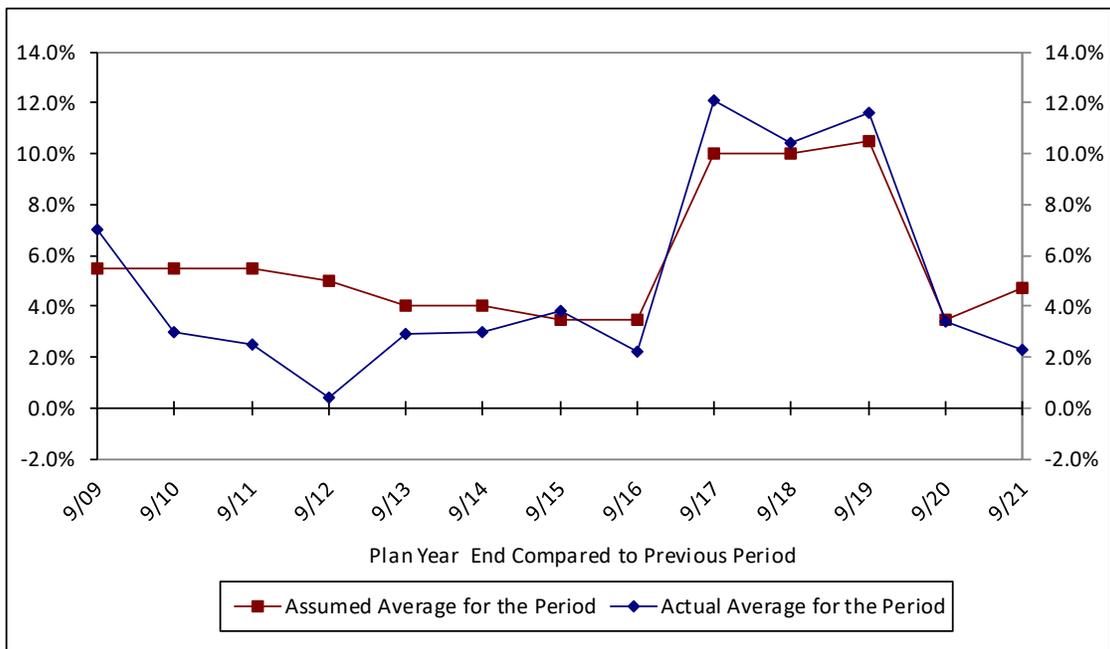
*Actual and assumed rates are based on average compound increases for the period.

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
Actual (A) Compared to Expected (E)**

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	E	A	E	A	E	A	E	A	A	A	E	
9/30/2017	231	163	110	107	2	3	4	3	16	31	47	25	2,362
9/30/2018	132	28	68	79	0	3	3	3	18	21	39	27	2,384
9/30/2019	0	0	50	87	2	3	2	3	16	13	29	27	2,301
9/30/2020	0	0	56	92	0	3	1	3	6 *	2	8	24	2,236
9/30/2021	0	0	145	115	0	2	2	3	22	10	32	22	2,057
5-Yr Total	363	191	429	480	4	14	12	15	78	77	155	125	

*Adjusted to reflect rehired vested terminated members.

Note: Participant data is collected as of July 1. The plan was closed to new members as of October 1, 2017.

RECENT HISTORY OF VALUATION RESULTS

Valuation Date	Number of		Covered Annual Payroll	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets	Funded Ratio	Unfunded AAL (UAAL)	UAAL as a % of Covered Payroll
	Active Members	Inactive Members						
10/1/2000	2,049	1,797	\$ 97,207	\$ 939,802	\$ 814,889	86.7 %	\$ 124,913	128.5 %
10/1/2001	2,037	1,883	96,199	927,625	790,823	85.3	136,802	142.2
10/1/2002	2,068	1,975	101,698	977,779	725,416	74.2	252,363	248.1
10/1/2003	2,182	1,994	109,637	1,146,459	732,526	63.9	413,933	377.6
10/1/2004	2,347	2,019	118,510	1,222,355	727,955	59.6	494,400	417.2
10/1/2005	2,450	2,046	130,392	1,314,424	765,180	58.2	549,244	421.2
10/1/2006	2,509	2,068	134,694	1,376,659	827,338	60.1	549,321	407.8
10/1/2007	2,541	2,117	143,006	1,464,508	930,454	63.5	534,054	373.4
10/1/2008	2,534	2,164	148,277	1,692,975	894,903	52.9	798,072	538.2
10/1/2009	2,583	2,278	155,558	1,753,946	855,997	48.8	897,949	577.2
10/1/2010	2,620	2,353	158,047	2,024,453	1,060,406	52.4	964,047	610.0
10/1/2011	2,451	2,481	148,968	2,427,198	1,039,894	42.8	1,387,304	931.3
10/1/2012	2,213	2,647	133,611	2,762,977	1,078,907	39.0	1,684,070	1,260.4
10/1/2013	2,150	2,725	130,972	2,876,606	1,228,131	42.7	1,648,475	1,258.6
10/1/2014	2,237	2,801	134,521	2,983,906	1,389,748	46.6	1,594,158	1,185.1
10/1/2015	2,202	2,906	132,735	3,142,228	1,354,405	43.1	1,787,823	1,346.9
10/1/2016	2,294	2,963	135,600	3,518,252	1,513,398	43.0	2,004,853	1,478.5
10/1/2017	2,362	3,055	149,490	3,736,610	1,765,159	47.2	1,971,451	1,318.8
10/1/2018	2,384	3,092	162,004	3,880,073	1,865,496	48.1	2,014,577	1,243.5
10/1/2019	2,301	3,127	174,125	4,036,925	1,946,967	48.2	2,089,958	1,200.3
10/1/2020	2,236	3,150	174,186	4,253,525	2,041,049	48.0	2,212,476	1,270.2
10/1/2021	2,057	3,276	161,836	4,574,334	2,198,635	48.1	2,375,699	1,468.0

Note: Dollar amounts are in thousands.



RECENT HISTORY OF REQUIRED AND ACTUAL CITY CONTRIBUTIONS							
Valuation Date	End of Year To Which Valuation Applies	Required Contributions		Actual Contributions			
		Amount	% of Payroll	City Contributions	Alotted from Reserves*	Total	% of Payroll
10/1/2003	9/30/2005	\$ 35,929	27.55 %	\$ 27,176	\$ 8,753	\$ 35,929	27.55 %
10/1/2003	9/30/2006	38,230	28.38	36,124	2,106	38,230	28.38
10/1/2003	9/30/2007	39,850	27.87	44,208	(4,358)	39,850	27.87
10/1/2006	9/30/2008	48,807	32.92	48,364	443	48,807	32.92
10/1/2006	9/30/2009	50,564	32.51	50,235	329	50,564	32.51
10/1/2008	9/30/2010	77,182	48.83	82,197	(5,015)	77,182	48.83
10/1/2008	9/30/2011	77,065	51.73	75,903	1,162	77,065	51.73
10/1/2008	9/30/2012	73,729	55.18	70,599	3,130	73,729	55.18
10/1/2011	9/30/2013	99,997	76.35	122,580	(22,583)	99,997	76.35
10/1/2012	9/30/2014	142,433	105.88	149,159	(6,726)	142,433	105.88
10/1/2013	9/30/2015	153,604	115.72	153,936	(332)	153,604	115.72
10/1/2014	9/30/2016	149,499	110.70	149,499	0	149,499	110.70
10/1/2015	9/30/2017	167,788	119.60	167,788	0	167,788	119.60
10/1/2016	9/30/2018	135,648	90.74	115,691	20,000	135,691	90.77
10/1/2017	9/30/2019	135,264	88.36	110,528	24,736	135,264	83.49
10/1/2018	9/30/2020	140,293	84.57	123,329	16,964	140,293	80.57
10/1/2019	9/30/2021	148,476	83.27	134,725	13,751	148,476	85.24
10/1/2020	9/30/2022	157,352	88.23	---	---	---	---
10/1/2021	9/30/2023	156,994	94.79	---	---	---	---

Note: Dollar amounts are in thousands.

*Actual contributions include the use of funds from the City Contribution reserve (or the City Budget Stabilization Account (CBSA) prior to fiscal year ending Spetember 30, 2016).



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 dates of expected 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 were amortized as a level (principal & interest combined) percent of payroll over a prescribed period of up to 26 years. *The maximum prescribed period was 27 years in the prior valuation.* This period will be reduced by 1 year in each future year until it reaches 15 years. The assumed payroll growth rate is 1.25%.

Actuarial Value of Assets - The Actuarial Value of Assets phase in the difference between the expected actuarial value and actual market value of assets at the rate of 20% 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.

Economic Assumptions

The **investment return rate** assumed in the valuation is 6.625% per year, compounded annually. *This rate was 6.90% in the previous valuation.*

The **inflation rate** assumed in this valuation was 2.25% per year.

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 6.625% investment return rate translates to an assumed real rate of return over inflation of 4.375%.



The ***rates of salary increase*** used are in accordance with the following tables below and are based on the Experience Study dated October 22, 2020. Part of the assumption is for merit and/or seniority service increase, and 2.25% recognizes inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

% Increase in Salary			
Years of Service	Merit and Seniority	Inflation	Total Increase
3	9.25%	2.25%	11.50%
4	7.50%	2.25%	9.75%
5	4.25%	2.25%	6.50%
6 - 7	2.75%	2.25%	5.00%
8 - 10	2.00%	2.25%	4.25%
11 - 14	1.40%	2.25%	3.65%
15 - 18	1.10%	2.25%	3.35%
19 & Over	0.50%	2.25%	2.75%

Note the plan is closed to new entrants effective October 1, 2017. As of October 1, 2020, active members have a minimum of 3 years of service.

Demographic Assumptions

The ***mortality table*** is the PUB-2010 Headcount Weighted Safety Healthy Employee Mortality Table (for pre-retirement mortality) and the PUB-2010 Headcount Weighted Safety Healthy Retiree Mortality Table (for postretirement mortality), with separate rates for males and females and ages set forward one year, with mortality improvements projected to all future years after 2010 using Scale MP-2018. For males, the base mortality rates for both pre-retirement and postretirement mortality are based on the Below Median Healthy tables. These are the same rates currently in use for Special Risk class members of the Florida Retirement System (FRS), as mandated by Chapter 112.63, Florida Statutes.

FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Sample Attained Ages in 2021	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
	50	0.42 %	0.20 %	32.50
55	0.56	0.36	27.73	31.30
60	0.92	0.61	23.14	26.51
65	1.32	0.92	18.87	22.00
70	2.08	1.45	14.86	17.74
75	3.54	2.42	11.27	13.82
80	6.30	4.16	8.19	10.35

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 2021	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.16 %	0.11 %	35.66	39.58
55	0.26	0.16	30.58	34.44
60	0.43	0.22	25.63	29.37
65	0.69	0.30	20.86	24.35
70	1.18	0.55	16.34	19.45
75	2.08	1.07	12.10	14.75
80	6.30	4.16	8.19	10.35

This assumption is used to measure the probabilities of active members dying prior to retirement.

For disabled retirees, the mortality table is 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, and 20% of the PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, both with separate rates for males and females, with no provision being made for future mortality improvements. These are the same rates currently in use for Special Risk class members of the Florida Retirement System (FRS), as mandated by Chapter 112.63, Florida Statutes.

FRS Disabled Mortality for Special Risk Class Members

Sample Attained Ages in 2021	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 and are based on the Experience Study dated October 22, 2020.

Service	Age	Service Retirement
20	Under 50	45.0%
	50 - 54	55.0
	55 - 59	60.0
	60 & Over	100.0
21	Under 50	25.0
	50 - 59	30.0
	60 & Over	50.0
22 - 23	Under 50	15.0
	50 - 59	30.0
	60 & Over	50.0
24 - 28	Under 60	25.0
	60 & Over	50.0
29	Any Age	50.0
30 & Over	Any Age	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) and are based on the Experience Study dated October 22, 2020. This assumption measures the probabilities of members separating from employment for reasons other than death, disability or retirement.

Sample Ages	% of Active Members Separating Within Next Year
20	1.6%
25	1.6
30	1.6
35	1.2
40	0.9
45	0.9
50	0.9
55	0.5

Rates of disability among active members are shown below and are based on the Experience Study dated October 22, 2020.

% Becoming Disabled Within Next Year

<u>Sample Ages</u>	<u>Male/Female</u>
20	0.025%
25	0.025
30	0.025
35	0.034
40	0.042
45	0.084
50	0.185
55	0.378
60	0.756
64	0.470

Miscellaneous and Technical Assumptions

<i>Administrative & Investment Expenses</i>	Annual administrative and investment expenses are assumed to be equal to the prior year's expenses. Assumed administrative and investment expenses are added to the Normal Cost.
<i>Benefit Service</i>	Exact fractional service is used to determine the amount of benefit payable. Actual credited service as of the July 1 st prior to the valuation date is used in the valuation.
<i>Decrement Operation</i>	Disability and mortality decrements operate during retirement eligibility.
<i>Decrement Relativity</i>	Decrement rates are used without adjustment for multiple decrement table effects.
<i>Decrement Timing</i>	Decrements of all types are assumed to occur at the beginning of the year.
<i>DROP Load</i>	Explicit valuation of the liabilities and costs associated with the actual DROP interest crediting rate using procedures described in the DROP Interest Study dated September 28, 2017.
<i>DROP Participation</i>	For purposes of the explicit valuation of the DROP Load, active members who choose to retire are assumed to elect to enter the DROP (as a Phase I member) 96% of the time (versus separating from employment). Members whose DROP entry dates are less than 18 months prior to the valuation date are assumed to remain employed (as a Phase I member) for an average total active DROP participation period of 4 years and 7 months. Phase I members whose DROP entry dates are 18 or more months prior to the valuation date are assumed to remain employed (as a Phase I member) for the 5-year maximum DROP participation period. At the end of the DROP participation period, Phase I members are assumed to elect a bi-weekly distribution (as a Phase II member) 95% of the time (versus electing a lump sum) over an assumed distribution period of 30 years.
<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>	No vested terminated refunds or disability recoveries are assumed to occur.

Incidence of Contributions

Member contributions are assumed to be received continuously throughout the year based upon the member contribution rate. Employer contributions are assumed to be received in full on December 1st and are assumed to be equal to the dollar amount shown.

Marriage and Survivor Assumption

For death-in-service, 50% of active member deaths are assumed to have a surviving spouse and an additional 20% of active member deaths are assumed to have an eligible orphaned child. Orphaned children of active members are assumed to be paid for a period of 10 years. For all retirees (current and future), 65% of males and 65% of females are assumed to be married and a 75% survivor benefit will be paid after the death of the retiree. Male members are assumed to be 5 years older than their surviving spouse and female members are assumed to be 5 years younger than their surviving spouse.

Normal Form of Benefit

A 75% joint and contingent life annuity is the normal form of benefit.

Pension Liability Surtax

58.3% of the total proceeds from the City of Jacksonville’s pension liability is assumed to be allocated to the Jacksonville Police and Fire Pension Fund beginning with fiscal year 2031. Sales tax revenue is projected to increase by 4.25% annually. In the previous valuation, the pro rata share of the total proceeds was 58.3%. This allocation percentage is updated each year by the City based on the relative unfunded actuarial liabilities for all three of the City’s pension plans.

Pay Increase Timing

Reported pays were assumed to be the pays for the current year beginning on the valuation date. Future pay increases are assumed to occur at the end of the year.

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.
<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>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. The ADC consists of the Employer Normal Cost and Amortization Payment.
<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>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 actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

<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>Normal Cost</i>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<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 Total Plan Assets at Market Value

Item	September 30	
	2021	2020
A. Cash and Short-Term Investments (Operating Cash)	\$ 27,436,489	\$ 26,165,409
B. Receivables:		
1. Accounts Receivable	\$ 81,351	\$ 81,351
2. Interest and Dividends	1,492,958	1,740,703
3. Employer Contribution	964,402	-
4. Employee Contribution	-	-
5. Prepaid Items and Recoverable Taxes	81,675	81,675
6. Securities Lending Collateral	89,580,224	73,125,949
7. Deferred Outflows	112,110	112,110
8. Total Receivables	<u>\$ 92,312,720</u>	<u>\$ 75,141,788</u>
C. Property, Plant and Equipment		
1. Furniture and Equipment	\$ 311,510	\$ 311,510
2. Accumulated Depreciation	<u>(311,510)</u>	<u>(311,510)</u>
3. Net Total	\$ 0	\$ 0
D. Investments		
1. Cash and Cash Equivalents	\$ 10,893,760	\$ 35,162,208
2. Domestic and International Equities	1,841,549,716	1,479,431,529
3. Fixed Income Securities	341,556,255	234,788,619
4. Real Estate	<u>274,371,010</u>	<u>286,385,219</u>
5. Total Investments	\$ 2,468,370,741	\$ 2,035,767,575
E. Liabilities		
1. Accounts Payable	\$ (10,691,600)	\$ (9,034,186)
2. Other Post Employment Benefits	-	-
3. Securities Lending Collateral	(89,580,224)	(73,125,949)
4. Other Liabilities and Deferred Inflows	<u>(219,661)</u>	<u>(114,989)</u>
5. Total Liabilities	\$ (100,491,485)	\$ (82,275,124)
F. Total Market Value of Assets	\$ 2,487,628,465	\$ 2,054,799,648
G. Allocation of Investments		
1. Cash and Cash Equivalents	0.5%	1.7%
2. Domestic and International Equities	74.6%	72.7%
3. Fixed Income Securities	13.8%	11.5%
4. Real Estate	<u>11.1%</u>	<u>14.1%</u>
5. Total Investments	100.0%	100.0%



Reconciliation of Plan Assets

Item	September 30	
	2021	2020
A. Market Value at Beginning of Year	\$ 2,054,799,648	\$ 1,958,615,310
B. Revenues and Expenditures		
1. Contributions		
a. Member Contributions	\$ 17,995,930	\$ 17,804,102
b. Plan Member Buybacks and Pension Transfers	1,122,389	1,231,331
c. Employer Contributions	134,725,329	123,328,488
d. State Contributions	14,306,665	13,888,871
e. Court Fines and Penalties	724,217	519,212
f. Supplemental Payment	-	-
g. Miscellaneous	(33,717)	124,613 *
h. Total	\$ 168,840,813	\$ 156,896,617
2. Investment Income		
a. Parking and Rental Revenue	\$ 695,577	\$ 669,949
b. Securities Lending Net Revenue	(38,107)	293,538
c. Investment Income and Realized Gains	139,972,136	94,992,081
d. Unrealized Gains/(Losses)	360,464,598	71,400,766
e. Investment Expenses	(9,774,491)	(7,596,632)
f. Net Investment Income	\$ 491,319,713	\$ 159,759,702
3. Benefits and Refunds		
a. Regular Monthly Benefits	\$ (166,933,156)	\$ (152,063,748)
b. Refunds	(1,387,209)	(715,829)
c. DROP Payments	(41,194,484)	(40,336,197)
d. Reserve Distributions	(15,612,089)	(25,171,453)
e. Total	\$ (225,126,938)	\$ (218,287,227)
4. Administrative and Miscellaneous Expenses	\$ (2,204,771)	\$ (2,184,754)
C. Market Value of Assets at End of Year	\$ 2,487,628,465	\$ 2,054,799,648

* For 2020, this amount reflects a reversal of the total \$548,230 contribution (due to the DOJ-COJ Settlement) that was actually paid and included in Miscellaneous contributions in FY 2019.



RESERVE ACCOUNT BALANCES AS OF SEPTEMBER 30, 2021

	City of Jacksonville Contribution <u>Reserve</u>	Balance to be Allocated to Police Officers and Firefighters <u>and Firefighters</u>	<u>TOTALS</u>
Account Value, 10/1/2020	\$ 16,288,020	\$ 2,532,385	\$ 18,820,405
Annual Retiree Bonus paid December 11, 2020		(2,642,806)	(2,642,806)
Annual Earnings (23.15%)	3,770,677	93,399	3,864,076
Allocated Towards Required City Contribution	(13,750,618)		(13,750,618)
Receipt of FY 2021 Chapter Funds		14,306,665	14,306,665
Partial Disbursement of FY 2021 Chapter Funds		(11,487,819)	(11,487,819)
Account Value, 9/30/2021	\$ 6,308,079	\$ 2,801,824	\$ 9,109,903

RECONCILIATION OF SHARE PLAN	
Account Value, 9/30/2020	\$ 11,837,141
Contributions credited to accounts	+ 0
Investment Earnings credited (23.15%)	+ 2,618,822 ¹
Payments from accounts	- <u>1,107,052</u>
Account Value, 9/30/2021	13,348,911

RECONCILIATION OF SENIOR STAFF RETIREMENT PLAN	
Account Value, 9/30/2020	\$ 4,077,179
Contributions credited to accounts	+ 0
Investment Earnings credited (23.15%)	+ 902,783 ¹
Payments from accounts	- <u>374,412</u>
Account Value, 9/30/2021	4,605,550

¹ 23.15% applied to beginning-of-year account value, and mid-year timing assumed on regular payments from accounts during the year.

Actuarial Value of Assets

Valuation Date - September 30	2020	2021	2022	2023	2024	2025
A. Actuarial Value of Assets Beginning of Year (adjusted)	\$ 2,006,229,480	\$ 2,075,783,788	\$ -	\$ -	\$ -	\$ -
B. Market Value End of Year	2,054,799,648	2,487,628,465	-	-	-	-
C. Market Value Beginning of Year	1,958,615,310	2,054,799,648	-	-	-	-
D. Non-Investment/Administrative Net Cash Flow	(63,575,364)	(58,490,896)	-	-	-	-
E. Investment Income						
E1. Actual Market Total: B-C-D	159,759,702	491,319,713	-	-	-	-
E2. Assumed Rate of Return	7.00%	6.90%	-	-	-	-
E3. Assumed Amount of Return ¹	140,140,089	146,440,865	-	-	-	-
E4. Amount Subject to Phase-In: E1-E3	19,619,613	344,878,848	-	-	-	-
F. Phase-In Recognition of Investment Income						
F1. Current Year: 0.2 x E4	3,923,923	68,975,770	-	-	-	-
F2. First Prior Year	(14,811,146)	3,923,923	68,975,770	-	-	-
F3. Second Prior Year	3,876,806	(14,811,146)	3,923,923	68,975,770	-	-
F4. Third Prior Year	-	3,876,806	(14,811,146)	3,923,923	68,975,770	-
F5. Fourth Prior Year	-	-	3,876,804	(14,811,148)	3,923,921	68,975,768
F6. Total Phase-Ins	(7,010,417)	61,965,353	61,965,351	58,088,545	72,899,691	68,975,768
G. Actuarial Value of Assets End of Year						
G1. Preliminary Actuarial Value of Assets End of Year	\$ 2,075,783,788	\$ 2,225,699,110	\$ -	\$ -	\$ -	\$ -
G2. Upper Corridor Limit: 120%*B	2,465,759,578	2,985,154,158	-	-	-	-
G3. Lower Corridor Limit: 80%*B	1,643,839,718	1,990,102,772	-	-	-	-
G4. Funding Value End of Year	2,075,783,788	2,225,699,110	-	-	-	-
G5. Less: Reserve Accounts, including Share Plan	(30,657,546)	(22,458,814)	-	-	-	-
G6. Less: Sr. Staff Plan Assets	(4,077,179)	(4,605,550)	-	-	-	-
G7. Final Funding Value End of Year	2,041,049,063	2,198,634,746	-	-	-	-
G8. Final Market Value End of Year	2,020,064,923	2,460,564,101	-	-	-	-
H. Difference between Market & Actuarial Value of Assets	(20,984,140)	261,929,355	-	-	-	-
I. Actuarial Rate of Return (net money-weighted)¹	6.50%	9.72%	0.00%	0.00%	0.00%	0.00%
J. Market Value Rate of Return (net money-weighted)	7.98%	23.15%	0.00%	0.00%	0.00%	0.00%
K. Ratio of Actuarial Value of Assets to Market Value	101.02%	89.47%	0.00%	0.00%	0.00%	0.00%

¹Derived based on the net money-weighted rate of return on the market value of assets provided by the Plan's investment consultant, which was 23.15% as of September 30, 2021 and 7.98% as of September 30, 2020.



Period Ending	Net Investment Rate of Return	
	Total Market Value	Total Actuarial Value
9/30/2008	(13.1) %	N/A
9/30/2009	(1.7)	(1.6) %
9/30/2010	8.5	0.4
9/30/2011	0.1	(2.4)
9/30/2012	18.3	4.3
9/30/2013	14.3	14.3 *
9/30/2014	10.7	10.7 *
9/30/2015	(4.0)	(4.0) *
9/30/2016	10.0	10.0 *
9/30/2017	14.3	14.3 *
9/30/2018	8.0	7.2 **
9/30/2019	3.0	6.5 **
9/30/2020	8.0	6.5 **
9/30/2021	23.2	9.7 **
Average Returns:		
Last 3 Years	11.1 %	7.6 %
Last 5 Years	11.1 %	8.8 %
Last 10 Years	10.3 %	7.8 %
All Years Shown Above	6.7 %	5.7 %

*For YE 9/30/2013 to YE 9/30/2017 the Actuarial Value is equal to the Market Value.

**Beginning 9/30/2018 the Actuarial Value of Assets uses a five-year smoothing method.

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.



SECTION D

FINANCIAL ACCOUNTING INFORMATION

FASB NO. 35 INFORMATION		
A. Valuation Date	October 1, 2021	October 1, 2020
B. Actuarial Present Value of Accumulated Plan Benefits		
1. Vested Benefits		
a. Members Currently Receiving Payments	\$ 3,429,707,545	\$ 3,122,121,175
b. Terminated Vested Members	25,785,262	21,753,741
c. Other Members	947,049,871	908,886,043
d. Total	<u>4,402,542,678</u>	<u>4,052,760,959</u>
2. Non-Vested Benefits	30,933,784	29,819,073
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	4,433,476,462	4,082,580,032
4. Accumulated Contributions of Active Members	126,675,159	125,887,582
C. Changes in the Actuarial Present Value of Accumulated Plan Benefits		
1. Total Value at Beginning of Year	4,082,580,032	3,805,435,833
2. Increase (Decrease) During the Period Attributable to:		
a. Plan Amendments	0	0
b. Change in Actuarial Assumptions	159,441,349	76,533,413
c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	400,969,930	393,726,560
d. Benefits Paid (Net of Reserves)	<u>(209,514,849)</u>	<u>(193,115,774)</u>
e. Net Increase	350,896,430	277,144,199
3. Total Value at End of Period	4,433,476,462	4,082,580,032
D. Net Market Value of Assets	2,460,564,101	2,020,064,923
E. Funded Ratio Using Net Market Value: D / C3	55.5%	49.5%
F. Actuarial Assumptions - See page entitled Actuarial Assumptions and Methods		

SUMMARY OF DISCLOSURES

GASB Statement No. 67

Actuarial Valuation Date September 30, 2021
Pension Plan's Fiscal Year Ending Date (Asset Measurement Date & Reporting Date) September 30, 2021

Membership

Number of	
- Retirees and Beneficiaries	3,185
- Inactive, Nonretired Members	91
- Active Members	2,057
- Total	5,333
Covered Payroll	\$ 161,835,740

Net Pension Liability

Total Pension Liability	\$ 4,596,792,389
Total Plan Fiduciary Net Position	2,483,022,915
City's Net Pension Liability	\$ 2,113,769,474
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	54.02%
Net Pension Liability as a Percentage of Covered Payroll	1,306.12%

Development of the Single Discount Rate

Single Discount Rate	6.625%
Long-Term Expected Rate of Return	6.625%
Long-Term Municipal Bond Rate*	2.19%
Last year ending September 30 in the 2022 to 2121 projection period for which projected benefit payments are fully funded	2121

* Source: Fidelity General Obligation AA rate as of September 30, 2021. This is the rate for Fixed Income Market Data/Yield Curve/Data Municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Investments' "20-Year Municipal GO AA Index." In describing this index, Fidelity notes that the municipal curves are constructed using option adjusted analytics of a diverse population of over 10,000 tax exempt securities.

SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS

GASB Statement No. 67

Fiscal year ending September 30,	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Total pension liability										
Service Cost	\$ 71,448,042	\$ 70,109,932	\$ 65,147,956	\$ 60,154,158	\$ 45,257,077	\$ 44,087,089	\$ 46,662,780	\$ 47,915,012	\$ 46,109,290	\$ 47,569,761
Interest on the Total Pension Liability	292,913,908	283,845,921	269,658,004	259,433,546	233,338,035	217,546,212	210,942,612	203,577,435	195,519,742	190,343,631
Benefit Changes	-	2,706,557	-	-	26,818,328	-	(28,684,960)	-	-	-
Difference between actual & expected experience	10,351,290	3,122,601	8,465,296	8,132,052	24,030,616	3,566,449	24,831,339	22,671,112	(4,675,994)	(12,512,641)
Assumption Changes	162,092,668	56,025,218	-	-	232,927,458	97,813,304	24,514,349	-	5,332,605	227,333,255
Benefit Payments	(208,127,640)	(192,399,945)	(188,392,606)	(183,474,634)	(170,465,766)	(159,726,007)	(148,628,476)	(138,179,183)	(128,655,957)	(116,955,126)
Refunds	(1,387,209)	(715,829)	(732,596)	(782,240)	(811,383)	-	-	-	-	-
Distributions from Reserve Accounts	(15,237,677)	(24,557,185)	(55,472,334)	-	-	-	-	-	-	-
Other (Adj. to Report on Gross Basis and Net Changes in Reserves)	556,047	(3,075,278)	110,374,742	-	-	-	-	-	-	-
Net Change in Total Pension Liability	312,609,429	195,061,992	209,048,462	143,462,882	391,094,365	203,287,047	129,637,644	135,984,376	113,629,686	335,778,880
Total Pension Liability - Beginning	4,284,182,960	4,089,120,968	3,880,072,506	3,736,609,624	3,345,515,259	3,142,228,212	3,012,590,568	2,876,606,192	2,762,976,506	2,427,197,626
Total Pension Liability - Ending (a)	\$ 4,596,792,389	\$ 4,284,182,960	\$ 4,089,120,968	\$ 3,880,072,506	\$ 3,736,609,624	\$ 3,345,515,259	\$ 3,142,228,212	\$ 3,012,590,568	\$ 2,876,606,192	\$ 2,762,976,506
Plan Fiduciary Net Position										
Contributions - Employer (City) (Including Buyback)	\$ 134,725,329	\$ 123,328,488	\$ 110,527,718	\$ 115,690,989	\$ 184,526,198	\$ 157,494,371	\$ 154,664,523	\$ 150,520,270	\$ 121,822,333	\$ 72,642,853
Contributions - Employer (State)	14,306,665	13,888,871	12,756,091	11,791,197	10,874,768	10,680,624	10,577,853	10,110,493	9,667,185	9,275,828
Contributions - Non-Employer Contributing Entity	-	-	-	-	-	-	-	-	-	-
Contributions - Employee (Including Buyback)	19,118,319	19,035,433	17,745,867	16,636,624	13,570,483	12,830,861	12,061,321	11,583,565	10,753,501	11,610,870
Net Investment Income, including Securities Lending	490,416,930	159,428,214	54,129,569	156,442,808	243,421,930	154,313,142	(62,884,634)	147,332,798	169,202,439	181,653,432
Benefit Payments	(208,127,640)	(192,399,945)	(188,392,606)	(183,474,634)	(170,465,766)	(159,726,007)	(148,628,476)	(138,179,183)	(128,655,957)	(116,955,126)
Distributions from Reserve Accounts	(15,237,677)	(24,557,185)	(55,472,334)	-	-	-	-	-	-	-
Refunds	(1,387,209)	(715,829)	(732,596)	(782,240)	(811,383)	-	-	-	-	-
Administrative Expense	(2,204,771)	(2,184,754)	(2,116,593)	(2,137,969)	(2,173,617)	(3,519,224)	(2,228,452)	(2,224,248)	(2,505,985)	(2,351,598)
Court Fines	724,217	519,212	701,652	775,741	759,291	832,536	920,774	881,291	757,984	770,125
Other	(33,717)	672,843	(3,261,537)	82,245	51,404	122,886	327,418	141,855	1,187,289	55,383
Net Change in Plan Fiduciary Net Position	432,300,446	97,015,348	(54,114,769)	115,024,761	279,753,308	173,029,189	(35,189,673)	180,166,841	182,228,789	156,701,767
Cummulative Effect of Change in Accounting Principle	-	-	-	-	-	2,238,000	-	-	-	-
Plan Fiduciary Net Position - Beginning (adjusted)	2,050,722,469	1,953,707,121	2,007,821,890	1,892,797,131	1,613,043,823	1,437,776,634	1,473,097,052	1,292,930,211	1,110,737,208	954,035,541
Plan Fiduciary Net Position - Ending	\$ 2,483,022,915	\$ 2,050,722,469	\$ 1,953,707,121	\$ 2,007,821,892	\$ 1,892,797,131	\$ 1,613,043,823	\$ 1,437,907,379	\$ 1,473,097,052	\$ 1,292,965,997	\$ 1,110,737,308
less Reserve Accounts and Sr. Staff Assets	-	-	-	(126,819,144)	(127,638,125)	(99,645,357)	(83,502,014)	(83,349,437)	(64,834,813)	(31,830,621)
Total Plan Fiduciary Net Position - Ending (b)	\$ 2,483,022,915	\$ 2,050,722,469	\$ 1,953,707,121	\$ 1,881,002,748	\$ 1,765,159,006	\$ 1,513,398,466	\$ 1,354,405,365	\$ 1,389,747,615	\$ 1,228,131,184	\$ 1,078,906,687
City's Net Pension Liability - Ending (a) - (b)	\$ 2,113,769,474	\$ 2,233,460,491	\$ 2,135,413,847	\$ 1,999,069,758	\$ 1,971,450,618	\$ 1,832,116,793	\$ 1,787,822,847	\$ 1,622,842,953	\$ 1,648,475,008	\$ 1,684,069,819
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	54.02 %	47.87 %	47.78 %	48.48 %	47.24 %	45.24 %	43.10 %	46.13 %	42.69 %	39.05 %
Covered Payroll	\$ 161,835,740	\$ 174,185,559	\$ 174,124,935	\$ 162,003,561	\$ 149,489,571	\$ 135,599,741	\$ 132,735,243	\$ 134,521,216	\$ 130,972,174	\$ 133,611,459
Net Pension Liability as a Percentage of Covered Payroll	1,306.12 %	1,282.23 %	1,226.37 %	1,233.97 %	1,318.79 %	1,351.12 %	1,346.91 %	1,206.38 %	1,258.65 %	1,260.42 %



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
2012	\$ 2,762,976,506	\$ 1,078,906,687	\$ 1,684,069,819	39.05%	\$ 133,611,459	1,260.42%
2013	2,876,606,192	1,228,131,184	1,648,475,008	42.69%	130,972,174	1,258.65%
2014	3,012,590,568	1,389,747,615	1,622,842,953	46.13%	134,521,216	1,206.38%
2015	3,142,228,212	1,354,405,365	1,787,822,847	43.10%	132,735,243	1,346.91%
2016	3,345,515,259	1,513,398,466	1,832,116,793	45.24%	135,599,741	1,351.12%
2017	3,736,609,624	1,765,159,006	1,971,450,618	47.24%	149,489,571	1,318.79%
2018	3,880,072,506	1,881,002,748	1,999,069,758	48.48%	162,003,561	1,233.97%
2019	4,089,120,968	1,953,707,121	2,135,413,847	47.78%	174,124,935	1,226.37%
2020	4,284,182,960	2,050,722,469	2,233,460,491	47.87%	174,185,559	1,282.23%
2021	4,596,792,389	2,483,022,915	2,113,769,474	54.02%	161,835,740	1,306.12%



NOTES TO NET PENSION LIABILITY

GASB Statement No. 67

Valuation Date: September 30, 2021
Measurement Date: September 30, 2021

Methods and Assumptions Used to Determine Net Pension Liability:

Actuarial Cost Method	Entry Age Normal
Inflation	2.25%
Salary Increases	A range of 2.75% to 11.50%, depending on completed years of service, including inflation.
Investment Rate of Return	6.625%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	PUB-2010 Headcount Weighted Safety Healthy Employee Mortality Table (for pre-retirement mortality) and the PUB-2010 Headcount Weighted Safety Healthy Retiree Mortality Table (for postretirement mortality), with separate rates for males and females and ages set forward one year, with mortality improvements projected to all future years after 2010 using Scale MP-2018. For males, the base mortality rates for both pre-retirement and post-retirement mortality are based on the Below Median Healthy tables. These are the same rates currently in use for Special Risk Class members of the Florida Retirement System (FRS), as mandated by Chapter 112.63, Florida Statutes.

Other Information:

Notes See Discussion of Valuation Results in the October 1, 2021 Actuarial Valuation Report.

Assumption changes reflect the investment return assumption change from 6.9% to 6.625%.



SCHEDULE OF CONTRIBUTIONS

GASB Statement No. 67

FY Ending September 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess) ¹	Covered Payroll	Actual Contribution as a % of Covered Payroll
2012	73,729,000	70,598,682	3,130,318	133,611,459	52.84%
2013	99,996,835	122,580,317	(22,583,482)	130,972,174	93.59%
2014	142,432,577	149,158,659	(6,726,082)	134,521,216	110.88%
2015	153,603,996	153,935,565	(331,569)	132,735,243	115.97%
2016	149,499,492	149,499,492 *	-	135,599,741	110.25%
2017	167,788,151	167,788,151 **	-	149,489,571	112.24%
2018	135,648,057	115,690,989	19,957,068 ***	162,003,561	71.41%
2019	135,264,010	110,527,718	24,736,292 ***	174,124,935	63.48%
2020	140,292,637	123,328,488	16,964,149 ***	174,185,559	70.80%
2021	148,475,947	134,725,329	13,750,618 ***	161,835,740	83.25%

¹Contribution deficiency (excess) was assigned to the City Budget Stabilization Account prior to fiscal year ending September 30, 2016.

*Plus \$5,000,000 Supplemental Payment

**Plus \$10,000,000 Supplemental Payment

***Contributions of \$20,000,000, \$24,736,292, \$16,964,149, and \$13,750,618 were allocated from the City Contribution Reserve (resulting from previous years' excess contributions) to fully meet the Actuarially Determined Contribution for fiscal year ending September 30, 2018, 2019, 2020 and 2021, respectively.



NOTES TO SCHEDULE OF CONTRIBUTIONS

GASB Statement No. 67

Valuation Date: October 1, 2019
Notes Actuarially determined contribution rates 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 Payroll, Closed
Remaining Amortization Period	28 years
Asset Valuation Method	5-year smoothed market
Inflation	2.50%
Salary Increases	10.5% in 2019 then 3.5% per year in 2020 and subsequent years, including inflation
Investment Rate of Return	7.00%
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 postretirement 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.

Other Information:

Notes See Discussion of Valuation Results in the October 1, 2019 Actuarial Valuation Report, dated February 28, 2020.



SINGLE DISCOUNT RATE

GASB Statement No. 67

A single discount rate of 6.625% 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 6.625%. 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 (6.625%) 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 6.625%, 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
5.625%	6.625%	7.625%
\$2,790,553,805	\$2,113,769,474	\$1,568,836,302

CALCULATION OF THE SINGLE DISCOUNT RATE

GASB Statement No. 67

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, future pension liability surtax revenue (using the prescribed annual increase assumption of 4.25%, which was set by the City of Jacksonville), employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

We are unable to assess the risk that the timing and/or amount of future pension liability surtax proceeds may significantly deviate from the projections (due to legal challenges, economic hardships, or any other reason). Any such deviations could have a significant impact on the required contribution amount shown herein and on the future solvency risk that the Fund’s future assets may be insufficient to cover all future benefit payments.

The *Single Discount Rate* (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on the Bond Buyer 20-Bond Index of general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.625%; the municipal bond rate is 2.19%; and the resulting single discount rate is 6.625%.

The tables in this section provide background for the development of the single discount rate.

The **Projection of Contributions** table shows the development of expected contributions in future years.

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The Present Values of Projected Benefit Payments table shows the development of the Single Discount Rate (SDR). It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.



SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF CONTRIBUTIONS ENDING SEPTEMBER 30 FOR 2022 TO 2071

Year	Payroll for Current	Contributions from	Service Cost and	UAL	Pension Liability	Additional	Total Contributions
	Employees	Current Employees	Expense Contributions	Contributions	Surtax Contributions	Contributions	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)=(b)+(c)+(d)+(e)+(f)
1	161,835,740	\$ 16,711,059	\$ 59,723,169	\$ 70,497,440	\$ -	\$ -	\$ 146,931,667
2	157,240,300	16,236,536	58,199,561	60,327,434	-	-	134,763,532
3	151,124,016	15,604,973	56,089,207	61,081,527	-	-	132,775,707
4	142,325,553	14,696,449	53,061,735	61,845,046	-	-	129,603,230
5	132,203,188	13,651,220	49,535,613	62,618,109	-	-	125,804,942
6	125,615,608	12,970,990	47,295,707	63,400,836	-	-	123,667,533
7	117,053,663	12,086,889	44,333,089	64,193,346	-	1,473,565	122,086,889
8	109,403,279	11,296,915	41,735,283	64,995,763	-	3,268,954	121,296,915
9	100,262,056	10,352,998	38,616,731	65,808,210	-	5,575,058	120,352,998
10	90,469,138	9,341,787	35,197,865	66,630,813	71,074,504	8,171,323	190,416,291
11	86,106,049	8,891,257	33,700,463	67,463,698	98,793,560	8,835,839	217,684,818
12	82,356,485	8,504,080	32,423,349	68,306,994	102,992,287	9,269,656	221,496,366
13	76,837,158	7,934,157	30,524,776	69,160,832	107,369,459	10,314,393	225,303,616
14	68,921,706	7,116,813	27,732,520	70,025,342	111,932,661	12,242,138	229,049,474
15	58,739,030	6,065,356	24,138,472	70,900,659	116,689,799	14,960,869	232,755,155
16	49,000,030	5,059,713	20,726,969	71,786,917	121,649,115	17,486,114	236,708,828
17	35,053,040	3,619,555	15,829,672	72,684,253	126,819,203	21,486,075	240,438,758
18	23,407,374	2,417,031	11,775,786	73,592,807	132,209,019	24,631,407	244,626,050
19	17,321,703	1,788,628	9,669,417	74,512,717	137,827,902	25,817,866	249,616,531
20	13,385,388	1,382,167	8,332,287	75,444,126	143,685,588	26,223,588	255,067,755
21	10,094,451	1,042,347	7,222,159	76,387,177	149,792,226	26,390,663	260,834,572
22	7,389,663	763,052	6,320,651	77,342,017	156,158,395	26,337,332	266,921,447
23	5,105,537	527,195	5,570,934	78,308,792	162,795,127	26,120,274	273,322,322
24	3,123,608	322,542	4,932,863	79,287,652	169,713,920	25,779,485	280,036,462
25	1,938,627	200,181	4,586,107	80,278,748	176,926,761	25,135,146	287,126,943
26	647,634	66,874	4,201,731	81,282,232	184,446,149	24,516,037	294,513,023
27	-	-	4,060,127	-	192,285,110	105,939,873	302,285,110
28	-	-	4,151,479	-	200,457,227	105,848,521	310,457,227
29	-	-	4,244,888	-	208,976,660	105,755,112	318,976,660
30	-	-	4,340,398	-	217,858,168	105,659,602	327,858,168
31	-	-	4,438,056	-	227,117,140	105,561,944	337,117,140
32	-	-	4,537,912	-	236,769,618	105,462,088	346,769,618
33	-	-	4,640,015	-	246,832,327	105,359,985	356,832,327
34	-	-	4,744,415	-	257,322,701	105,255,585	367,322,701
35	-	-	4,851,165	-	268,258,916	105,148,835	378,258,916
36	-	-	4,960,316	-	-	-	4,960,316
37	-	-	5,071,923	-	-	-	5,071,923
38	-	-	5,186,041	-	-	-	5,186,041
39	-	-	5,302,728	-	-	-	5,302,728
40	-	-	5,422,039	-	-	-	5,422,039
41	-	-	5,544,034	-	-	-	5,544,034
42	-	-	5,668,775	-	-	-	5,668,775
43	-	-	5,796,322	-	-	-	5,796,322
44	-	-	5,926,740	-	-	-	5,926,740
45	-	-	6,060,091	-	-	-	6,060,091
46	-	-	6,196,443	-	-	-	6,196,443
47	-	-	6,335,862	-	-	-	6,335,862
48	-	-	6,478,419	-	-	-	6,478,419
49	-	-	6,624,183	-	-	-	6,624,183
50	-	-	6,773,228	-	-	-	6,773,228



SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF CONTRIBUTIONS ENDING SEPTEMBER 30 FOR 2072 TO 2121

Year	Payroll for Current	Contributions from	Service Cost and	UAL	Pension Liability	Additional	Total Contributions
	Employees	Current Employees	Expense	Contributions	Surtax	Contributions	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)=(b)+(c)+(d)+(e)+(f)
51	-	-	6,925,625	-	-	-	6,925,625
52	-	-	7,081,452	-	-	-	7,081,452
53	-	-	7,240,784	-	-	-	7,240,784
54	-	-	7,403,702	-	-	-	7,403,702
55	-	-	7,570,285	-	-	-	7,570,285
56	-	-	7,740,617	-	-	-	7,740,617
57	-	-	7,914,780	-	-	-	7,914,780
58	-	-	8,092,862	-	-	-	8,092,862
59	-	-	8,274,952	-	-	-	8,274,952
60	-	-	8,461,138	-	-	-	8,461,138
61	-	-	8,651,513	-	-	-	8,651,513
62	-	-	8,846,172	-	-	-	8,846,172
63	-	-	9,045,211	-	-	-	9,045,211
64	-	-	9,248,728	-	-	-	9,248,728
65	-	-	9,456,825	-	-	-	9,456,825
66	-	-	9,669,603	-	-	-	9,669,603
67	-	-	9,887,169	-	-	-	9,887,169
68	-	-	10,109,630	-	-	-	10,109,630
69	-	-	10,337,097	-	-	-	10,337,097
70	-	-	10,569,682	-	-	-	10,569,682
71	-	-	10,807,500	-	-	-	10,807,500
72	-	-	11,050,668	-	-	-	11,050,668
73	-	-	11,299,309	-	-	-	11,299,309
74	-	-	11,553,544	-	-	-	11,553,544
75	-	-	11,813,498	-	-	-	11,813,498
76	-	-	12,079,302	-	-	-	12,079,302
77	-	-	12,351,086	-	-	-	12,351,086
78	-	-	12,628,986	-	-	-	12,628,986
79	-	-	12,913,138	-	-	-	12,913,138
80	-	-	13,203,684	-	-	-	13,203,684
81	-	-	13,500,767	-	-	-	13,500,767
82	-	-	13,804,534	-	-	-	13,804,534
83	-	-	14,115,136	-	-	-	14,115,136
84	-	-	14,432,727	-	-	-	14,432,727
85	-	-	14,757,463	-	-	-	14,757,463
86	-	-	15,089,506	-	-	-	15,089,506
87	-	-	15,429,020	-	-	-	15,429,020
88	-	-	15,776,173	-	-	-	15,776,173
89	-	-	16,131,136	-	-	-	16,131,136
90	-	-	16,494,087	-	-	-	16,494,087
91	-	-	16,865,204	-	-	-	16,865,204
92	-	-	17,244,671	-	-	-	17,244,671
93	-	-	17,632,676	-	-	-	17,632,676
94	-	-	18,029,411	-	-	-	18,029,411
95	-	-	18,435,073	-	-	-	18,435,073
96	-	-	18,849,862	-	-	-	18,849,862
97	-	-	19,273,983	-	-	-	19,273,983
98	-	-	19,707,648	-	-	-	19,707,648
99	-	-	20,151,069	-	-	-	20,151,069
100	-	-	20,604,469	-	-	-	20,604,469



SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF PLAN FIDUCIARY NET POSITION ENDING SEPTEMBER 30 FOR 2022 TO 2071

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.625%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 2,460,564,101	\$ 146,931,667	\$ 217,720,212	\$ 2,276,633	\$ 160,630,898	\$ 2,548,129,822
2	2,548,129,822	134,763,532	226,640,944	2,327,857	165,743,091	2,619,667,644
3	2,619,667,644	132,775,707	232,275,025	2,380,234	170,232,337	2,688,020,429
4	2,688,020,429	129,603,230	244,704,749	2,433,790	174,250,429	2,744,735,549
5	2,744,735,549	125,804,942	256,177,983	2,488,550	177,508,263	2,789,382,221
6	2,789,382,221	123,667,533	271,473,515	2,544,542	179,896,074	2,818,927,771
7	2,818,927,771	122,086,889	284,500,257	2,601,795	181,375,490	2,835,288,099
8	2,835,288,099	121,296,915	298,109,004	2,660,335	181,988,144	2,837,803,819
9	2,837,803,819	120,352,998	316,185,460	2,720,193	181,532,913	2,820,784,077
10	2,820,784,077	190,416,291	324,453,112	2,781,397	182,417,517	2,866,383,377
11	2,866,383,377	217,684,818	339,912,540	2,843,978	185,821,334	2,927,133,011
12	2,927,133,011	221,496,366	350,352,557	2,907,968	189,627,865	2,984,996,717
13	2,984,996,717	225,303,616	364,704,734	2,973,397	193,115,503	3,035,737,705
14	3,035,737,705	229,049,474	380,323,825	3,040,299	196,087,919	3,077,510,974
15	3,077,510,974	232,755,155	386,057,523	3,108,705	198,787,067	3,119,886,969
16	3,119,886,969	236,708,828	393,762,607	3,178,651	201,469,924	3,161,124,463
17	3,161,124,463	240,438,758	402,488,624	3,250,171	204,036,736	3,199,861,162
18	3,199,861,162	244,626,050	414,312,966	3,323,300	206,351,738	3,233,202,683
19	3,233,202,683	249,616,531	428,150,230	3,398,074	208,269,826	3,259,540,736
20	3,259,540,736	255,067,755	437,136,496	3,474,531	209,897,009	3,283,894,473
21	3,283,894,473	260,834,572	454,450,214	3,552,707	211,131,539	3,297,857,664
22	3,297,857,664	266,921,447	466,531,550	3,632,643	211,858,612	3,306,473,530
23	3,306,473,530	273,322,322	470,356,913	3,714,378	212,510,695	3,318,235,255
24	3,318,235,255	280,036,462	474,181,353	3,797,952	213,381,372	3,333,673,784
25	3,333,673,784	287,126,943	476,507,718	3,883,407	214,556,670	3,354,966,272
26	3,354,966,272	294,513,023	478,320,005	3,970,784	216,146,121	3,383,334,627
27	3,383,334,627	302,285,110	479,242,403	4,060,127	218,245,870	3,420,563,077
28	3,420,563,077	310,457,227	479,617,502	4,151,479	220,963,412	3,468,214,734
29	3,468,214,734	318,976,660	479,145,289	4,244,888	224,410,361	3,528,211,578
30	3,528,211,578	327,858,168	477,626,461	4,340,398	228,721,026	3,602,823,913
31	3,602,823,913	337,117,140	474,141,461	4,438,056	234,076,285	3,695,437,820
32	3,695,437,820	346,769,618	468,950,889	4,537,912	240,692,493	3,809,411,130
33	3,809,411,130	356,832,327	463,706,091	4,640,015	248,738,827	3,946,636,178
34	3,946,636,178	367,322,701	456,610,922	4,744,415	258,399,764	4,111,003,305
35	4,111,003,305	378,258,916	449,224,626	4,851,165	269,882,807	4,305,069,237
36	4,305,069,237	4,960,316	441,239,257	4,960,316	270,829,163	4,134,659,143
37	4,134,659,143	5,071,923	432,450,316	5,071,923	259,825,960	3,962,034,787
38	3,962,034,787	5,186,041	422,852,864	5,186,041	248,702,414	3,787,884,337
39	3,787,884,337	5,302,728	411,632,153	5,302,728	237,530,672	3,613,782,856
40	3,613,782,856	5,422,039	401,319,063	5,422,039	226,332,592	3,438,796,385
41	3,438,796,385	5,544,034	389,496,061	5,544,034	215,125,095	3,264,425,419
42	3,264,425,419	5,668,775	377,710,533	5,668,775	203,957,154	3,090,672,040
43	3,090,672,040	5,796,322	364,844,520	5,796,322	192,865,346	2,918,692,866
44	2,918,692,866	5,926,740	350,672,753	5,926,740	181,933,637	2,749,953,750
45	2,749,953,750	6,060,091	337,817,880	6,060,091	171,173,660	2,583,309,530
46	2,583,309,530	6,196,443	324,844,743	6,196,443	160,556,325	2,419,021,112
47	2,419,021,112	6,335,862	311,490,996	6,335,862	150,107,467	2,257,637,583
48	2,257,637,583	6,478,419	296,811,034	6,478,419	139,894,284	2,100,720,833
49	2,100,720,833	6,624,183	281,486,332	6,624,183	129,998,040	1,949,232,541
50	1,949,232,541	6,773,228	266,544,740	6,773,228	120,448,944	1,803,136,745

Reserve Accounts and Sr. Staff Plan Assets are excluded from the Plan Net Position for the purpose of this projection.



SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF PLAN FIDUCIARY NET POSITION ENDING SEPTEMBER 30 FOR 2072 TO 2121

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 6.625%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
51	1,803,136,745	6,925,625	249,958,022	6,925,625	111,310,722	1,664,489,445
52	1,664,489,445	7,081,452	233,935,191	7,081,452	102,647,584	1,533,201,838
53	1,533,201,838	7,240,784	219,708,227	7,240,784	94,413,491	1,407,907,102
54	1,407,907,102	7,403,702	206,019,662	7,403,702	86,558,877	1,288,446,317
55	1,288,446,317	7,570,285	192,763,851	7,570,285	79,076,658	1,174,759,124
56	1,174,759,124	7,740,617	179,835,552	7,740,617	71,966,264	1,066,889,836
57	1,066,889,836	7,914,780	167,242,790	7,914,780	65,230,370	964,877,416
58	964,877,416	8,092,862	154,976,566	8,092,862	58,871,850	868,772,700
59	868,772,700	8,274,952	143,113,952	8,274,952	52,891,561	778,550,309
60	778,550,309	8,461,138	131,678,983	8,461,138	47,287,037	694,158,363
61	694,158,363	8,651,513	120,619,751	8,651,513	42,056,533	615,595,145
62	615,595,145	8,846,172	110,107,142	8,846,172	37,194,366	542,682,369
63	542,682,369	9,045,211	100,093,167	9,045,211	32,690,288	475,279,490
64	475,279,490	9,248,728	90,475,439	9,248,728	28,538,326	413,342,377
65	413,342,377	9,456,825	81,281,435	9,456,825	24,734,660	356,795,602
66	356,795,602	9,669,603	72,537,236	9,669,603	21,273,443	305,531,809
67	305,531,809	9,887,169	64,269,336	9,887,169	18,146,699	259,409,172
68	259,409,172	10,109,630	56,502,092	10,109,630	15,344,239	218,251,319
69	218,251,319	10,337,097	49,255,983	10,337,097	12,853,709	181,849,045
70	181,849,045	10,569,682	42,549,021	10,569,682	10,660,664	149,960,688
71	149,960,688	10,807,500	36,395,797	10,807,500	8,748,617	122,313,508
72	122,313,508	11,050,668	30,806,008	11,050,668	7,099,184	98,606,684
73	98,606,684	11,299,309	25,782,037	11,299,309	5,692,358	78,517,005
74	78,517,005	11,553,544	21,318,333	11,553,544	4,506,906	61,705,578
75	61,705,578	11,813,498	17,401,183	11,813,498	3,520,824	47,825,219
76	47,825,219	12,079,302	14,009,810	12,079,302	2,711,788	36,527,197
77	36,527,197	12,351,086	11,115,703	12,351,086	2,057,624	27,469,118
78	27,469,118	12,628,986	8,683,949	12,628,986	1,536,786	20,321,956
79	20,321,956	12,913,138	6,673,876	12,913,138	1,128,802	14,776,882
80	14,776,882	13,203,684	5,040,943	13,203,684	814,665	10,550,604
81	10,550,604	13,500,767	3,738,314	13,500,767	577,132	7,389,421
82	7,389,421	13,804,534	2,718,975	13,804,534	400,927	5,071,373
83	5,071,373	14,115,136	1,937,372	14,115,136	272,832	3,406,833
84	3,406,833	14,432,727	1,350,875	14,432,727	181,672	2,237,630
85	2,237,630	14,757,463	920,527	14,757,463	118,239	1,435,342
86	1,435,342	15,089,506	612,242	15,089,506	75,136	898,236
87	898,236	15,429,020	396,860	15,429,020	46,573	547,949
88	547,949	15,776,173	250,458	15,776,173	28,138	325,629
89	325,629	16,131,136	153,799	16,131,136	16,560	188,390
90	188,390	16,494,087	91,873	16,494,087	9,486	106,003
91	106,003	16,865,204	53,366	16,865,204	5,283	57,920
92	57,920	17,244,671	30,079	17,244,671	2,857	30,698
93	30,698	17,632,676	16,469	17,632,676	1,497	15,726
94	15,726	18,029,411	8,742	18,029,411	757	7,741
95	7,741	18,435,073	4,487	18,435,073	367	3,622
96	3,622	18,849,862	2,213	18,849,862	168	1,577
97	1,577	19,273,983	1,021	19,273,983	71	627
98	627	19,707,648	433	19,707,648	27	221
99	221	20,151,069	166	20,151,069	9	64
100	64	20,604,469	64	20,604,469	2	2

Reserve Accounts and Sr. Staff Plan Assets are excluded from the Plan Net Position for the purpose of this projection.



SINGLE DISCOUNT RATE DEVELOPMENT PRESENT VALUES OF PROJECTED BENEFITS ENDING SEPTEMBER 30 FOR 2022 TO 2071

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ⁿ ((a)-.5)	(g)=(e)*vf ⁿ ((a)-.5)	(h)=((c)/(1+sdr) ⁿ ((a)-.5)
1	\$ 2,460,564,101	\$ 217,720,212	\$ 217,720,212	\$ -	\$ 210,847,874	\$ -	\$ 210,847,874
2	2,548,129,822	226,640,944	226,640,944	-	205,849,494	-	205,849,494
3	2,619,667,644	232,275,025	232,275,025	-	197,858,588	-	197,858,588
4	2,688,020,429	244,704,749	244,704,749	-	195,495,040	-	195,495,040
5	2,744,735,549	256,177,983	256,177,983	-	191,944,690	-	191,944,690
6	2,789,382,221	271,473,515	271,473,515	-	190,766,768	-	190,766,768
7	2,818,927,771	284,500,257	284,500,257	-	187,498,965	-	187,498,965
8	2,835,288,099	298,109,004	298,109,004	-	184,260,507	-	184,260,507
9	2,837,803,819	316,185,460	316,185,460	-	183,290,526	-	183,290,526
10	2,820,784,077	324,453,112	324,453,112	-	176,396,931	-	176,396,931
11	2,866,383,377	339,912,540	339,912,540	-	173,319,418	-	173,319,418
12	2,927,133,011	350,352,557	350,352,557	-	167,542,998	-	167,542,998
13	2,984,996,717	364,704,734	364,704,734	-	163,569,885	-	163,569,885
14	3,035,737,705	380,323,825	380,323,825	-	159,976,590	-	159,976,590
15	3,077,510,974	386,057,523	386,057,523	-	152,298,589	-	152,298,589
16	3,119,886,969	393,762,607	393,762,607	-	145,686,492	-	145,686,492
17	3,161,124,463	402,488,624	402,488,624	-	139,662,362	-	139,662,362
18	3,199,861,162	414,312,966	414,312,966	-	134,832,706	-	134,832,706
19	3,233,202,683	428,150,230	428,150,230	-	130,678,417	-	130,678,417
20	3,259,540,736	437,136,496	437,136,496	-	125,131,228	-	125,131,228
21	3,283,894,473	454,450,214	454,450,214	-	122,004,516	-	122,004,516
22	3,297,857,664	466,531,550	466,531,550	-	117,465,835	-	117,465,835
23	3,306,473,530	470,356,913	470,356,913	-	111,070,579	-	111,070,579
24	3,318,235,255	474,181,353	474,181,353	-	105,016,353	-	105,016,353
25	3,333,673,784	476,507,718	476,507,718	-	98,974,509	-	98,974,509
26	3,354,966,272	478,320,005	478,320,005	-	93,177,900	-	93,177,900
27	3,383,334,627	479,242,403	479,242,403	-	87,556,938	-	87,556,938
28	3,420,563,077	479,617,502	479,617,502	-	82,180,979	-	82,180,979
29	3,468,214,734	479,145,289	479,145,289	-	76,998,890	-	76,998,890
30	3,528,211,578	477,626,461	477,626,461	-	71,985,757	-	71,985,757
31	3,602,823,913	474,141,461	474,141,461	-	67,020,411	-	67,020,411
32	3,695,437,820	468,950,889	468,950,889	-	62,168,082	-	62,168,082
33	3,809,411,130	463,706,091	463,706,091	-	57,653,259	-	57,653,259
34	3,946,636,178	456,610,922	456,610,922	-	53,243,711	-	53,243,711
35	4,111,003,305	449,224,626	449,224,626	-	49,127,711	-	49,127,711
36	4,305,069,237	441,239,257	441,239,257	-	45,256,199	-	45,256,199
37	4,134,659,143	432,450,316	432,450,316	-	41,598,829	-	41,598,829
38	3,962,034,787	422,852,864	422,852,864	-	38,148,294	-	38,148,294
39	3,787,884,337	411,632,153	411,632,153	-	34,828,606	-	34,828,606
40	3,613,782,856	401,319,063	401,319,063	-	31,846,195	-	31,846,195
41	3,438,796,385	389,496,061	389,496,061	-	28,987,568	-	28,987,568
42	3,264,425,419	377,710,533	377,710,533	-	26,363,846	-	26,363,846
43	3,090,672,040	364,844,520	364,844,520	-	23,883,526	-	23,883,526
44	2,918,692,866	350,672,753	350,672,753	-	21,529,483	-	21,529,483
45	2,749,953,750	337,817,880	337,817,880	-	19,451,593	-	19,451,593
46	2,583,309,530	324,844,743	324,844,743	-	17,542,413	-	17,542,413
47	2,419,021,112	311,490,996	311,490,996	-	15,776,111	-	15,776,111
48	2,257,637,583	296,811,034	296,811,034	-	14,098,582	-	14,098,582
49	2,100,720,833	281,486,332	281,486,332	-	12,539,888	-	12,539,888
50	1,949,232,541	266,544,740	266,544,740	-	11,136,467	-	11,136,467

Reserve Accounts and Sr. Staff Plan Assets are excluded from the Plan Net Position for the purpose of this projection.



SINGLE DISCOUNT RATE DEVELOPMENT PRESENT VALUES OF PROJECTED BENEFITS ENDING SEPTEMBER 30 FOR 2072 TO 2121

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ⁿ ((a)-.5)	(g)=(e)*vf ⁿ ((a)-.5)	(h)=((c)/(1+sdr) ⁿ ((a)-.5)
51	\$ 1,803,136,745	\$ 249,958,022	\$ 249,958,022	\$ -	\$ 9,794,569	\$ -	\$ 9,794,569
52	1,664,489,445	233,935,191	233,935,191	-	8,597,156	-	8,597,156
53	1,533,201,838	219,708,227	219,708,227	-	7,572,626	-	7,572,626
54	1,407,907,102	206,019,662	206,019,662	-	6,659,626	-	6,659,626
55	1,288,446,317	192,763,851	192,763,851	-	5,843,966	-	5,843,966
56	1,174,759,124	179,835,552	179,835,552	-	5,113,269	-	5,113,269
57	1,066,889,836	167,242,790	167,242,790	-	4,459,759	-	4,459,759
58	964,877,416	154,976,566	154,976,566	-	3,875,886	-	3,875,886
59	868,772,700	143,113,952	143,113,952	-	3,356,819	-	3,356,819
60	778,550,309	131,678,983	131,678,983	-	2,896,699	-	2,896,699
61	694,158,363	120,619,751	120,619,751	-	2,488,549	-	2,488,549
62	615,595,145	110,107,142	110,107,142	-	2,130,513	-	2,130,513
63	542,682,369	100,093,167	100,093,167	-	1,816,411	-	1,816,411
64	475,279,490	90,475,439	90,475,439	-	1,539,861	-	1,539,861
65	413,342,377	81,281,435	81,281,435	-	1,297,427	-	1,297,427
66	356,795,602	72,537,236	72,537,236	-	1,085,909	-	1,085,909
67	305,531,809	64,269,336	64,269,336	-	902,355	-	902,355
68	259,409,172	56,502,092	56,502,092	-	744,010	-	744,010
69	218,251,319	49,255,983	49,255,983	-	608,295	-	608,295
70	181,849,045	42,549,021	42,549,021	-	492,817	-	492,817
71	149,960,688	36,395,797	36,395,797	-	395,356	-	395,356
72	122,313,508	30,806,008	30,806,008	-	313,844	-	313,844
73	98,606,684	25,782,037	25,782,037	-	246,341	-	246,341
74	78,517,005	21,318,333	21,318,333	-	191,035	-	191,035
75	61,705,578	17,401,183	17,401,183	-	146,245	-	146,245
76	47,825,219	14,009,810	14,009,810	-	110,427	-	110,427
77	36,527,197	11,115,703	11,115,703	-	82,171	-	82,171
78	27,469,118	8,683,949	8,683,949	-	60,206	-	60,206
79	20,321,956	6,673,876	6,673,876	-	43,395	-	43,395
80	14,776,882	5,040,943	5,040,943	-	30,741	-	30,741
81	10,550,604	3,738,314	3,738,314	-	21,381	-	21,381
82	7,389,421	2,718,975	2,718,975	-	14,585	-	14,585
83	5,071,373	1,937,372	1,937,372	-	9,746	-	9,746
84	3,406,833	1,350,875	1,350,875	-	6,374	-	6,374
85	2,237,630	920,527	920,527	-	4,073	-	4,073
86	1,435,342	612,242	612,242	-	2,541	-	2,541
87	898,236	396,860	396,860	-	1,545	-	1,545
88	547,949	250,458	250,458	-	914	-	914
89	325,629	153,799	153,799	-	527	-	527
90	188,390	91,873	91,873	-	295	-	295
91	106,003	53,366	53,366	-	161	-	161
92	57,920	30,079	30,079	-	85	-	85
93	30,698	16,469	16,469	-	44	-	44
94	15,726	8,742	8,742	-	22	-	22
95	7,741	4,487	4,487	-	10	-	10
96	3,622	2,213	2,213	-	5	-	5
97	1,577	1,021	1,021	-	2	-	2
98	627	433	433	-	1	-	1
99	221	166	166	-	0	-	0
100	64	64	64	-	0	-	0
Totals					\$ 5,128,499,694	\$ -	\$ 5,128,499,694

Reserve Accounts and Sr. Staff Plan Assets are excluded from the Plan Net Position for the purpose of this projection.



SECTION E

PROJECTION OF ASSETS, LIABILITIES AND CONTRIBUTION REQUIREMENTS

Jacksonville Police and Fire Pension Fund
40-Year Projection - Current Plan, Methods and Assumptions

Valuation Date	Covered October 1 Payroll	Actuarial Accrued Liability	Net Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Net Present Value of Future Pension Liability	Net Unfunded Actuarial Accrued Liability	Funded Ratio on Valuation Date	Total Contribution					
								Fiscal Year Ending	Pension Liability Contribution	% of Total Cont'n	Required City Contribution ¹²	% of Total Cont'n	Total Contribution
10/1/21	161,835,740	4,574,333,575	2,198,634,746	2,375,698,829	1,129,798,018	1,245,900,811	48.06%	2022	0	0.0%	157,352,434	100.0%	157,352,434
10/1/22	157,240,300	4,729,141,302	2,354,423,217	2,374,718,085	1,204,647,137	1,170,070,948	49.79%	2023	0	0.0%	156,993,838	100.0%	156,993,838
10/1/23	151,124,016	4,882,877,399	2,506,451,781	2,376,425,618	1,284,455,010	1,091,970,608	51.33%	2024	0	0.0%	151,944,004	100.0%	151,944,004
10/1/24	142,325,553	5,038,095,421	2,671,243,278	2,366,852,143	1,369,550,154	997,301,989	53.02%	2025	0	0.0%	146,228,418	100.0%	146,228,418
10/1/25	132,203,188	5,186,642,197	2,822,909,585	2,363,732,612	1,460,282,852	903,449,760	54.43%	2026	0	0.0%	138,289,578	100.0%	138,289,578
10/1/26	125,615,608	5,328,406,112	2,894,095,141	2,434,310,971	1,557,026,591	877,284,380	54.31%	2027	0	0.0%	129,683,961	100.0%	129,683,961
10/1/27	117,053,663	5,460,694,683	2,943,795,105	2,516,899,578	1,660,179,602	856,719,976	53.91%	2028	0	0.0%	127,807,841	100.0%	127,807,841
10/1/28	109,403,279	5,584,264,823	2,980,164,750	2,604,100,073	1,770,166,501	833,933,572	53.37%	2029	0	0.0%	125,521,208	100.0%	125,521,208
10/1/29	100,262,056	5,698,410,526	3,001,343,581	2,697,066,945	1,887,440,031	809,626,914	52.67%	2030	0	0.0%	123,588,115	100.0%	123,588,115
10/1/30	90,469,138	5,797,196,056	3,001,920,015	2,795,276,041	2,012,482,934	782,793,107	51.78%	2031	71,074,504	37.0%	121,172,825	63.0%	192,247,329
10/1/31	86,106,049	5,889,351,333	3,062,828,914	2,826,522,419	2,073,004,966	753,517,453	52.01%	2032	98,793,560	45.5%	118,452,133	54.5%	217,245,693
10/1/32	82,356,485	5,969,572,543	3,137,267,092	2,832,305,451	2,108,327,925	723,977,526	52.55%	2033	102,992,287	46.7%	117,621,664	53.3%	220,613,951
10/1/33	76,837,158	6,042,543,500	3,208,419,685	2,834,123,815	2,141,655,451	692,468,364	53.10%	2034	107,369,459	47.8%	117,289,138	52.2%	224,658,597
10/1/34	68,921,706	6,102,912,297	3,272,604,601	2,830,307,696	2,172,671,085	657,636,611	53.62%	2035	111,932,661	49.0%	116,336,149	51.0%	228,268,810
10/1/35	58,739,030	6,147,356,018	3,327,321,939	2,820,034,079	2,201,029,570	619,004,509	54.13%	2036	116,689,799	50.5%	114,415,486	49.5%	231,105,285
10/1/36	49,000,030	6,183,955,997	3,381,146,031	2,802,809,966	2,226,354,614	576,455,352	54.68%	2037	121,649,115	52.2%	111,492,264	47.8%	233,141,379
10/1/37	35,053,040	6,210,391,160	3,431,220,712	2,779,170,448	2,248,236,482	530,933,966	55.25%	2038	126,819,203	53.6%	110,000,000	46.4%	236,819,203
10/1/38	23,407,374	6,222,949,353	3,477,669,760	2,745,279,593	2,266,229,424	479,050,169	55.88%	2039	132,209,019	54.6%	110,000,000	45.4%	242,209,019
10/1/39	17,321,703	6,218,626,535	3,519,035,547	2,699,590,988	2,279,848,907	419,742,081	56.59%	2040	137,827,902	55.6%	110,000,000	44.4%	247,827,902
10/1/40	13,385,388	6,196,827,936	3,553,535,173	2,643,292,763	2,288,568,657	354,724,106	57.34%	2041	143,685,588	56.6%	110,000,000	43.4%	253,685,588
10/1/41	10,094,451	6,162,426,649	3,586,125,775	2,576,300,874	2,291,817,480	284,483,394	58.19%	2042	149,792,226	57.7%	110,000,000	42.3%	259,792,226
10/1/42	7,389,663	6,106,290,305	3,608,406,252	2,497,884,053	2,288,975,861	208,908,192	59.09%	2043	156,158,395	58.7%	110,000,000	41.3%	266,158,395
10/1/43	5,105,537	6,032,657,984	3,625,272,857	2,407,385,127	2,279,372,318	128,012,809	60.09%	2044	162,795,127	59.7%	110,000,000	40.3%	272,795,127
10/1/44	3,123,608	5,949,095,378	3,645,213,686	2,303,881,692	2,262,279,492	41,602,200	61.27%	2045	169,713,920	60.7%	110,000,000	39.3%	279,713,920
10/1/45	1,938,627	5,855,091,168	3,668,855,323	2,186,235,845	2,236,909,963	(50,674,118)	62.66%	2046	176,926,761	61.7%	110,000,000	38.3%	286,926,761
10/1/46	647,634	5,751,884,343	3,698,424,803	2,053,459,540	2,202,411,767	(148,952,227)	64.30%	2047	184,446,149	62.6%	110,000,000	37.4%	294,446,149
10/1/47	0	5,639,343,928	3,735,123,178	1,904,220,750	2,157,863,593	(253,642,843)	66.23%	2048	192,285,110	63.6%	110,000,000	36.4%	302,285,110
10/1/48	0	5,518,087,719	3,780,773,227	1,737,314,492	2,102,269,639	(364,955,147)	68.52%	2049	200,457,227	64.6%	110,000,000	35.4%	310,457,227
10/1/49	0	5,388,410,961	3,836,986,215	1,551,424,746	2,034,554,109	(483,129,363)	71.21%	2050	208,976,660	65.5%	110,000,000	34.5%	318,976,660
10/1/50	0	5,250,630,722	3,905,683,972	1,344,946,750	1,953,555,311	(608,608,561)	74.39%	2051	217,858,168	66.4%	110,000,000	33.6%	327,858,168
10/1/51	0	5,105,290,875	3,989,136,427	1,116,154,448	1,858,019,352	(741,864,904)	78.14%	2052	227,117,140	67.4%	110,000,000	32.6%	337,117,140
10/1/52	0	4,953,920,852	4,090,729,044	863,191,808	1,746,593,379	(883,401,571)	82.58%	2053	236,769,618	68.3%	110,000,000	31.7%	346,769,618
10/1/53	0	4,797,882,318	4,213,818,779	584,063,539	1,617,818,346	(1,033,754,807)	87.83%	2054	246,832,327	69.2%	110,000,000	30.8%	356,832,327
10/1/54	0	4,636,921,977	4,360,296,803	276,625,174	1,470,121,276	(1,193,496,102)	94.03%	2055	257,322,701	70.1%	110,000,000	29.9%	367,322,701
10/1/55	0	4,472,624,441	4,534,051,989	(61,427,548)	0	(61,427,548)	101.37%	2056	0	0.0%	25,548,047	100.0%	25,548,047
10/1/56	0	4,305,069,237	4,370,589,864	(65,520,627)	0	(65,520,627)	101.52%	2057	0	0.0%	26,122,878	100.0%	26,122,878
10/1/57	0	4,134,659,143	4,204,544,545	(69,885,402)	0	(69,885,402)	101.69%	2058	0	0.0%	26,710,643	100.0%	26,710,643
10/1/58	0	3,962,034,787	4,036,574,671	(74,539,884)	0	(74,539,884)	101.88%	2059	0	0.0%	27,311,633	100.0%	27,311,633
10/1/59	0	3,787,884,337	3,867,387,615	(79,503,278)	0	(79,503,278)	102.10%	2060	0	0.0%	27,926,144	100.0%	27,926,144
10/1/60	0	3,613,782,856	3,698,578,917	(84,796,061)	0	(84,796,061)	102.35%	2061	0	0.0%	28,554,483	100.0%	28,554,483
10/1/61	0	3,438,796,385	3,529,236,456	(90,440,071)	0	(90,440,071)	102.63%	2062	0	0.0%	29,196,959	100.0%	29,196,959
10/1/61	0	3,438,796,385	3,529,236,456	(90,440,071)	0	(90,440,071)	102.63%	2063	0	0.0%	29,853,891	100.0%	29,853,891
Total:									4,058,494,626	48.7%	4,275,413,734	51.3%	8,333,908,360
Total Present Value at 6.625%:									982,781,905	35.1%	1,818,452,503	64.9%	2,801,234,408

¹Future City contributions are assumed to be equal to the dollar amount of the calculated contribution, payable in December of the fiscal year beginning one year after the valuation date.

²Future City contributions does not reflect the potential use of reserves that have been allocated to the City that may be used to offset the City's required contribution amount. As of October 1, 2021, approximately \$6.3 million in reserves are available for use the by the City.

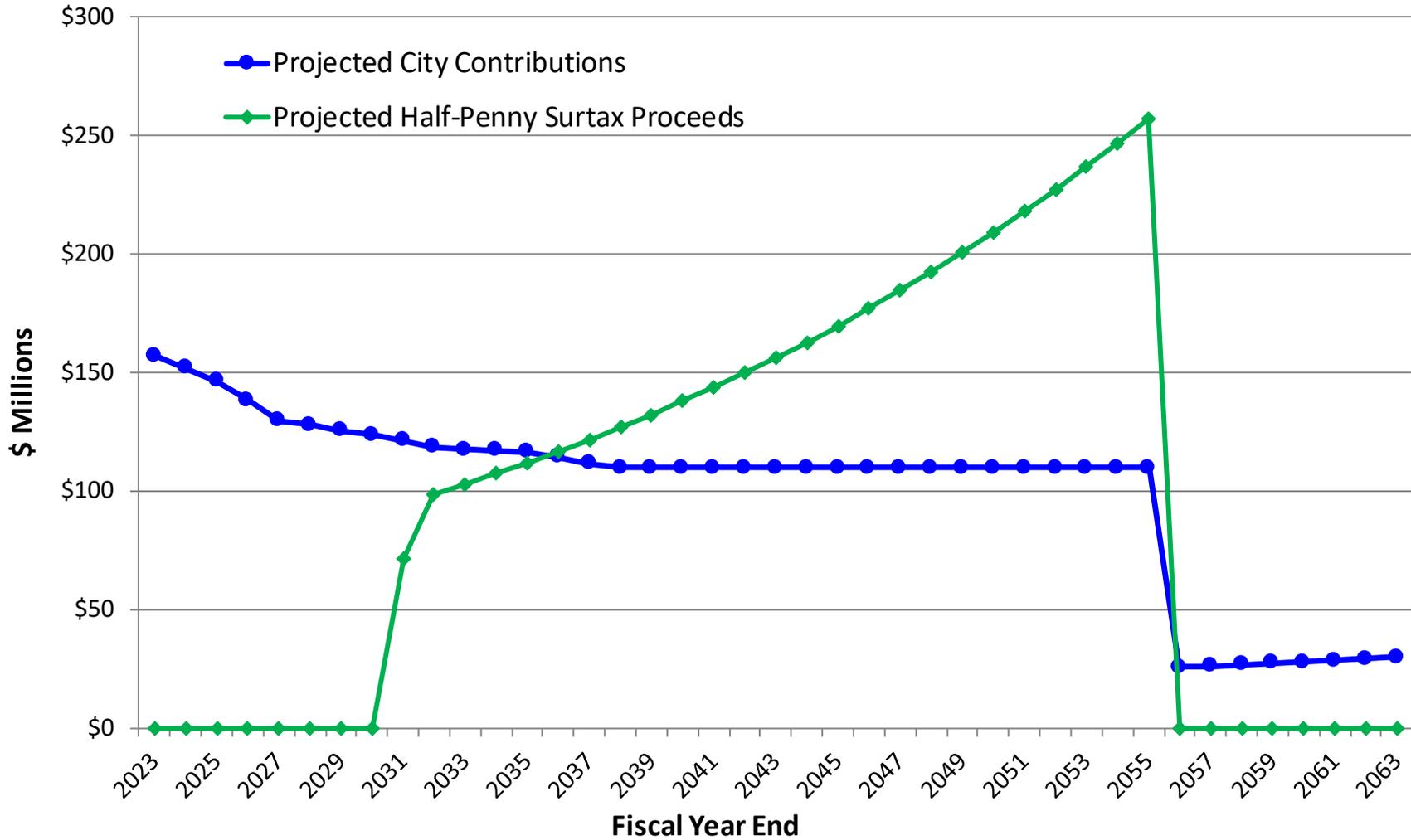
Assumptions

Investment Return Assumption:	6.625% per year
Actuarial Value of Assets:	5-Year Smoothed Market
Payroll Growth Rate Assumption:	1.25% per year
Pension Liability Surtax Proceeds:	58.3% of Total Revenue Allocated to Police and Fire Pension Fund; Projected to increase 4.25% annually
Annual Expenses:	Projected to increase 2.25% annually

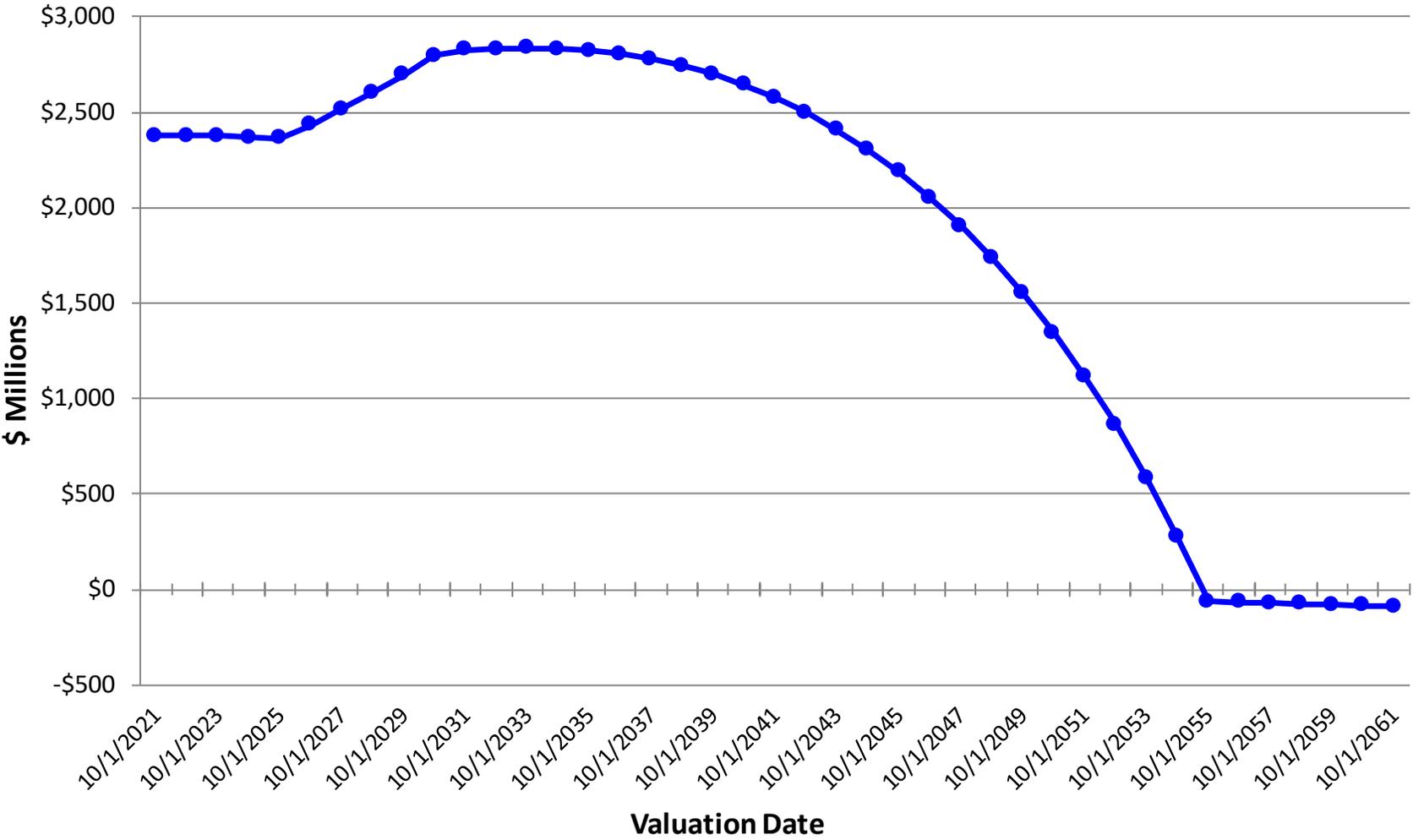
Future experience was assumed to be consistent with the aforementioned actuarial assumptions and methods. If experience differs from the actuarial assumptions or if the Board adopts different assumptions or methods, future results could be significantly different from the projected results above.



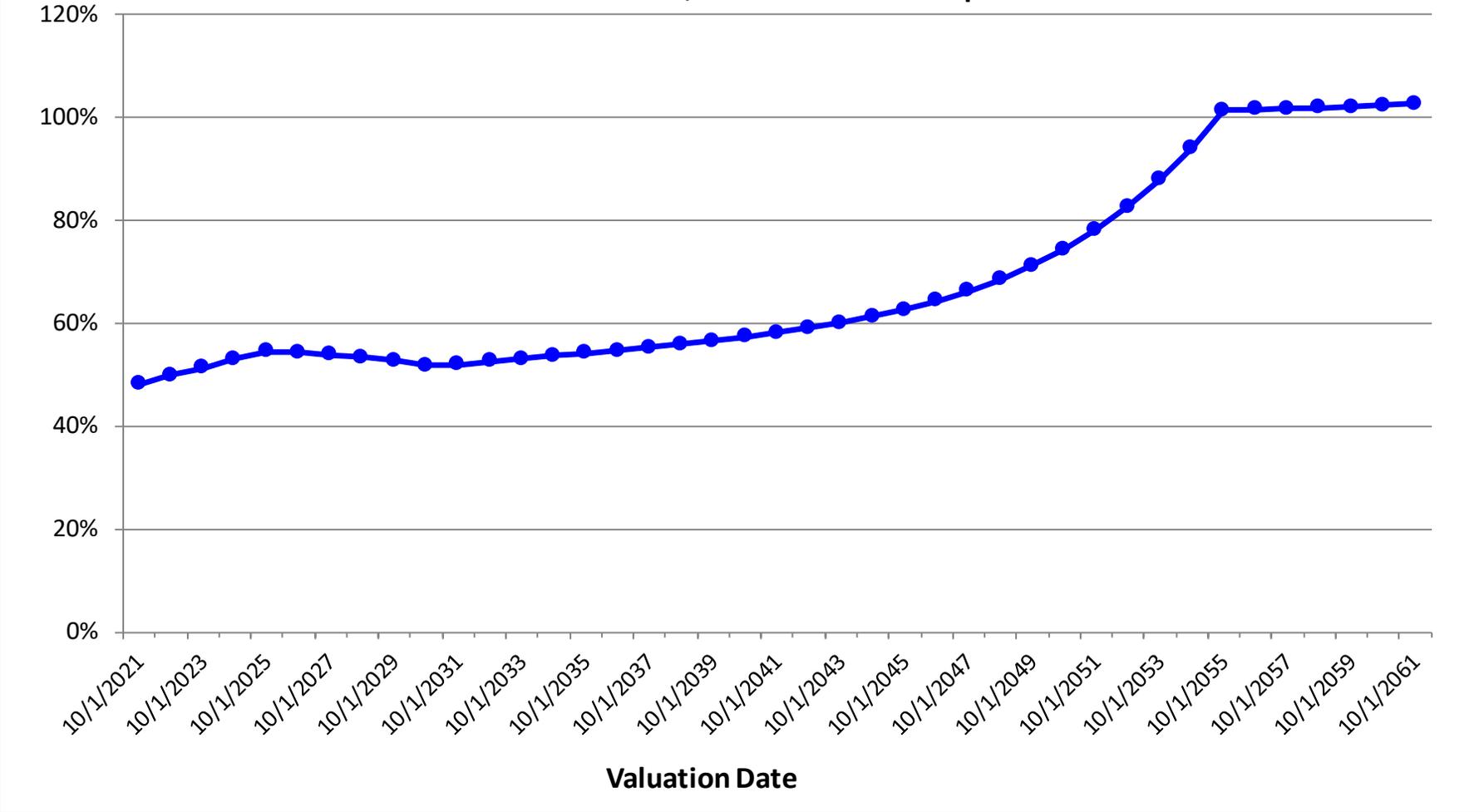
Jacksonville Police and Fire Pension Fund 40-Year Projection of Pension Liability Surtax Proceeds and Required City Contributions



**Jacksonville Police and Fire Pension Fund
40-Year Projection of Unfunded Actuarial Accrued Liability
Current Plan, Methods and Assumptions**



**Jacksonville Police and Fire Pension Fund
40-Year Projection of Funded Ratio
Current Plan, Methods and Assumptions**



SECTION F

MISCELLANEOUS INFORMATION

RECONCILIATION OF TOTAL MEMBERSHIP DATA		
	From 10/1/20 To 10/1/21	From 10/1/19 To 10/1/20
A. Active Members		
1. Number Included in Last Valuation	2,236	2,301
2. New Members Included in Current Valuation	0	0
3. Non-Vested Employment Terminations	(10)	(2)
4. Vested Employment Terminations	(22)	(9)
5. DROP Retirement	(139)	(51)
6. Service Retirements	(6)	(5)
7. Disability Retirements	0	0
8. Deaths	(2)	(1)
9. Other - Rehires	0	3
10. Number Included in This Valuation	<u>2,057</u>	<u>2,236</u>
B. Terminated Vested Members		
1. Number Included in Last Valuation	83	82
2. Additions from Active Members	22	9
3. Lump Sum Payments/Refund of Contributions	(5)	(4)
4. Payments Commenced	(9)	(1)
5. Deaths	0	0
6. Rehire	0	(3)
7. Other - Data Corrections	0	0
8. Number Included in This Valuation	<u>91</u>	<u>83</u>
C. DROP Retirees, Service Retirees, Disability Retirees and Beneficiaries		
1. Number Included in Last Valuation	3,067	3,045
2. Additions from Active Members	145	56
3. Additions from Terminated Vested Members	9	1
4. Deaths	(70)	(64)
5. Additions from New Survivor Benefits	37	32
6. End of Certain Period - No Further Payments	(4)	(3)
7. Other - Data Corrections	1	0
8. Number Included in This Valuation	<u>3,185</u>	<u>3,067</u>

Note: Participant Data is collected as of July 1.



ACTIVE MEMBERS AS OF OCTOBER 1, 2021

Age Group	Years of Service to Valuation Date									Earnings	
	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30+	Total	Total	Average
< 25	-	4	-	-	-	-	-	-	4	\$ 264,515	\$ 66,129
25-29	-	72	83	-	-	-	-	-	155	9,802,036	63,239
30-34	-	66	211	49	-	-	-	-	326	22,281,929	68,349
35-39	-	50	131	168	84	-	-	-	433	33,641,841	77,695
40-44	-	22	75	108	204	35	-	-	444	36,671,162	82,593
45-49	-	10	24	55	173	95	13	-	370	31,713,324	85,712
50-54	-	4	11	30	89	56	22	1	213	18,828,889	88,399
55-59	-	-	-	20	51	19	3	1	94	7,751,650	82,464
60-64	-	-	1	4	6	4	-	-	15	1,293,316	86,221
65-69	-	-	-	-	2	1	-	-	3	237,578	79,193
70+	-	-	-	-	-	-	-	-	-	-	-
Total	-	228	536	434	609	210	38	2	2,057	162,486,240	78,992

Average Age: 41.5 Average Service: 12.9

INACTIVE MEMBERS AS OF OCTOBER 1, 2021

Age	<u>Terminated Vested</u>		<u>Disabled</u>		<u>Retired</u>		<u>DROP</u>		<u>Beneficiaries</u>		<u>Grand Total</u>	
	<u>Number</u>	<u>Benefits</u>	<u>Number</u>	<u>Benefits</u>	<u>Number</u>	<u>Benefits</u>	<u>Number</u>	<u>Benefits</u>	<u>Number</u>	<u>Benefits</u>	<u>Number</u>	<u>Benefits</u>
Under 25	0	0	0	0	0	0	0	0	20	243,317	20	243,317
25 - 29	2	19,917	0	0	0	0	0	0	0	0	2	19,917
30 - 34	5	58,584	0	0	0	0	0	0	1	16,641	6	75,225
35 - 39	20	352,068	0	0	0	0	0	0	2	71,287	22	423,355
40 - 44	27	474,315	1	37,269	1	46,467	17	964,076	6	163,661	52	1,685,788
45 - 49	19	401,782	0	0	65	2,990,573	93	5,146,787	7	269,091	184	8,808,233
50 - 54	12	192,999	5	239,300	356	19,568,711	153	9,315,322	13	567,422	539	29,883,754
55 - 59	3	68,525	11	515,875	404	24,296,434	72	4,019,561	20	931,149	510	29,831,544
60 - 64	3	64,219	8	395,754	340	22,531,585	25	1,363,819	38	1,648,845	414	26,004,222
65 - 69	0	0	11	520,048	314	22,533,656	3	133,982	61	3,288,527	389	26,476,213
70 - 74	0	0	6	223,785	390	28,347,579	0	0	66	3,044,057	462	31,615,421
75 - 79	0	0	2	54,709	219	15,893,824	0	0	95	4,328,906	316	20,277,439
80 - 84	0	0	0	0	128	9,550,383	0	0	58	2,667,201	186	12,217,584
85 - 89	0	0	1	4,547	55	3,504,521	0	0	50	2,034,661	106	5,543,729
90 - 94	0	0	0	0	21	1,178,389	0	0	33	969,504	54	2,147,893
95 - 99	0	0	0	0	3	83,466	0	0	11	339,003	14	422,469
100 & Over	0	0	0	0	0	0	0	0	0	0	0	0
Total	91	1,632,409	45	1,991,287	2,296	150,525,588	363	20,943,547	481	20,583,272	3,276	195,676,103
Average Age:		44.0		63.9		65.5		52.6		72.3		64.5
Avg. Annual Benefit:		17,939		44,251		65,560		57,696		42,793		59,730



SECTION G

SUMMARY OF PLAN PROVISIONS

SUMMARY OF PLAN PROVISIONS

POLICE AND FIREFIGHTERS PENSION FUND

A. Ordinances

The Plan was established under the Code of Ordinances for the City of Jacksonville, Florida, Title V, Chapter 121. The Plan is also governed by certain provisions of Chapter 175, Florida Statutes, Chapter 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

B. Effective Date

Not Available.

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

Any police officer or firefighter employed by the City on a regular full-time basis in an approved budgeted position. The plan is closed to new entrants effective October 1, 2017.

F. Credited Service

Credited Service is measured as the total number of months and fractional parts thereof of full-time employment with the City during which time prescribed employee contributions are made. Members may purchase up to 5 years of service as a Florida State Certified Police Officer or Firefighter with another public employer and up to 2 years of wartime military service. No service is credited for any periods of employment for which the member received a refund of their contributions.

G. Compensation

Amounts actually paid to participants, including base salary, longevity, City college incentive, enhanced certification pay, emergency operation and hazardous duty pay; shift differential, and "upgrade" pay; and excluding all overtime, state incentive pay, reimbursed expenses and allowances such as cleaning/clothes allowances, and payments for unused accrued time.



H. Average Final Compensation (AFC)

The average of Compensation shall be the final two years of Credited Service immediately preceding the time of retirement.

I. Time Service Retirement

Eligibility: A member may retire on the first day of the month coincident with attainment of 20 years of Credited Service.

Benefit: Average final compensation multiplied by:
(1) 3.0% for each year of Credited Service for the first 20 years of service, plus
(2) 2.0% for each year of Credited Service for years in excess of 20 years of service.

The maximum benefit is 80% of AFC.

Normal Form
of Benefit: 75% Joint and Survivor option.

Health Care
Supplement: Monthly benefit of \$5.00 multiplied by years of Credited Service (not in excess of 30).

COLA: Each retiree will receive a 3.0% increase in benefits beginning with the first bi-weekly pay period in the first January after commencement of benefit and in each subsequent first bi-weekly pay period in January.

J. Delayed Retirement

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

K. Disability Retirement

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 greater of:
(1) the member's accrued benefit to date of disability, or
(2) 60% of AFC in effect on the date of disability.

Normal Form
of Benefit: 75% Joint and Survivor option.



Health Care

Supplement: Monthly benefit of \$5.00 multiplied by years of actual years of Credited Service (not in excess of 30).

COLA: Each disabled retiree will receive a 3.0% increase in benefits beginning with the first bi-weekly pay period in the first January after commencement of benefit and in each subsequent first bi-weekly pay period in January.

L. Pre-Retirement Death

Eligibility: Any member who is killed or dies from effects of an injury or of any illness or disease is eligible for survivor benefits regardless of Credited Service.

Benefit: If the member has a legal spouse, the pension benefit is the greater of:
(1) 75% of the member's accrued benefit to date of death, or
(2) 45% of AFC (i.e. 75% of the member's minimum projected time service retirement benefit) in effect on the date of death.

If the member had children, an additional \$200/month per child (total 75% of normal benefit if orphan) until (i) child reaches age 18 years, whether or not the child is a qualified student, or (ii) child reaches age 22, provided the child is a qualified student, or (iii) each child becomes married, provided that the total of the surviving spouse and children's benefits do not exceed the total of the deceased member's projected benefit.

If the member does not have a surviving spouse or children, a refund of the member's contributions to the Plan without interest shall be payable to the estate of the Member.

Normal Form

of Benefit: Payable for the life of the beneficiary.

Health Care

Supplement: Monthly benefit of \$5.00 multiplied by years of actual years of Credited Service (not in excess of 30).

COLA: Each beneficiary will receive a 3.0% increase in benefits beginning with the first bi-weekly pay period in the first January after commencement of benefit and in each subsequent first bi-weekly pay period in January.

M. Vested Termination

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion of 5 years of Credited Service. Optionally, vested members may elect a refund in lieu of the vested benefits otherwise due.



Benefit: The benefit is the member’s accrued Time Service Retirement Benefit. The benefit begins on the date that would have been the member’s Time Service Retirement date based on years of Credited Service at the termination date.

Normal Form of Benefit: 75% Joint and Survivor option.

Health Care Supplement: Same as Time Service Retirement.

COLA: Same as Time Service Retirement.

N. Refunds

Members terminating employment with less than 5 years of Credited Service will receive a refund of the member’s contributions without interest.

O. Member Contributions

10% of Compensation; 2% of Compensation for members in the DROP.

P. Employer Contributions

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

Q. Cost of Living Increases

Each retiree and beneficiary will receive a 3.0% increase in benefits on each first bi-weekly pay period in January.

R. Deferred Retirement Option Plan

Eligibility: Same as Time Service Retirement.

Benefit: The member’s Credited Service and AFC 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 AFC.

Maximum

DROP Period: The following time limits will apply for eligibility to elect to participate in the DROP:

Years of Credited Service at Time of Election:	Maximum Pay Periods of Participation:	Maximum Months of Participation:
20 but less than 30 years	130 biweekly	60
30 but less than 31 years	78 biweekly	36
31 but less than 32 years	52 biweekly	24



Interest

Credited: An annual rate of return of 8.40%.

Normal Form

of Benefit: Lump Sum, Direct Rollover, Partial Lump Sum with a Direct Rollover, or Monthly Distribution of the remaining balance.

COLA: Same as Normal Retirement.

S. Other Ancillary Benefits

There are no ancillary retirement type benefits not required by statutes but which might be deemed a City of Jacksonville Police and Fire Pension Fund liability if continued beyond the availability of funding by the current funding source.

T. Changes from Previous Valuation

None.