

GASB 67/68 Report
For Use in Financial Statement Reporting



SPRINGFIELD
FIREFIGHTERS'
PENSION FUND

Actuarial Valuation
as of March 1, 2021

LAUTERBACH & AMEN, LLP

GASB Statements 67 and 68 Actuarial Disclosures



Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

GASB 67: SPRINGFIELD FIREFIGHTERS' PENSION FUND

Fiscal Year Ending: February 28, 2022
Actuarial Valuation Date: March 1, 2021
Utilizing Data as of February 28, 2021
Measurement Date: February 28, 2022

GASB 68: CITY OF SPRINGFIELD, ILLINOIS

Fiscal Year Ending: February 28, 2022
Actuarial Valuation Date: March 1, 2021
Utilizing Data as of February 28, 2021
Measurement Date: February 28, 2022

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August 11, 2022

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ACTUARIAL CERTIFICATION

This certification provides supplemental information as required by the Governmental Accounting Standards Board. The enclosed schedules were prepared by the undersigned to assist in the preparation of the Annual Comprehensive Financial Report. The assumptions and methods used in the preparation of this report meet the parameters set for the disclosures presented in the financial section as required by the Governmental Accounting Standards Board. Additional information is provided solely to assist the Auditors in the preparation of the required footnote disclosures.

The results in this report are based on the census data and financial information submitted by the City of Springfield, Illinois, and may include results from the prior Actuary. We did not prepare the Actuarial Valuations for the years prior to March 1, 2016. If applicable, those valuations were prepared by the prior Actuary whose reports have been furnished to us, and our disclosures are based on those reports. An audit of the prior Actuary's results was not performed, but high-level reviews were completed for general reasonableness, as appropriate, based on the purpose of this valuation. The accuracy of the results is dependent on the precision and completeness of the underlying information.

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The City of Springfield, Illinois selected certain assumptions, while others were the result of guidance and/or judgment from the Plan's Actuary or Advisors. We believe that the assumptions used in this valuation are reasonable and appropriate for the purposes for which they have been used.

In preparing the results, our Actuaries used commercially available software (ProVal) developed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing Actuarial Valuations. Our Actuaries coded the plan provisions, assumptions, methods, and participant data summarized in this report, and reviewed the liability and cost outputs for reasonableness. We are not aware of any material weaknesses or limitations in the software, and have determined it is appropriate for performing this valuation.



To the best of our knowledge, all calculations are in accordance with the applicable accounting requirements, and the procedures followed and presentation of results conform to generally accepted actuarial principles and practices. The undersigned consultants of Lauterbach & Amen, LLP, with actuarial credentials, meet the Qualification Standards of the American Academy of Actuaries to render this Actuarial Certification. There is no relationship between the Springfield Firefighters' Pension Fund or the City of Springfield, Illinois and Lauterbach & Amen, LLP that impairs our objectivity.

Respectfully Submitted,
LAUTERBACH & AMEN, LLP

Todd A. Schroeder, ASA, FCA, EA, MAAA

Robert L. Rietz, Jr., FCA, EA, MAAA



PLAN FIDUCIARY NET POSITION

Statement of Plan Fiduciary Net Position
Statement of Changes in Plan Fiduciary Net Position



STATEMENT OF PLAN FIDUCIARY NET POSITION

	<u>2/28/2021</u>	<u>2/28/2022</u>
Assets		
Cash and Cash Equivalents	\$ 5,314,410	\$ 8,457,721
Total Cash	<u>5,314,410</u>	<u>8,457,721</u>
Receivables:		
Investment Income - Accrued Interest	302,383	1,075
Other	<u>16,045</u>	<u>14,945</u>
Total Receivables	<u>318,428</u>	<u>16,020</u>
Investments:		
U.S. Government and Agency Obligations	21,658,326	-
State and Local Obligations	1,814,244	-
Corporate Bonds	27,926,499	-
Insurance Contracts	13,303,652	-
Pooled Investment Accounts	-	158,425,681
Mutual Funds	82,463,603	-
Common Stock	<u>6,524,688</u>	<u>-</u>
Total Investments	<u>153,691,012</u>	<u>158,425,681</u>
Total Assets	<u>159,323,850</u>	<u>166,899,422</u>
Liabilities		
Payables:		
Expenses Due/Unpaid	<u>26,189</u>	<u>33,166</u>
Total Liabilities	<u>26,189</u>	<u>33,166</u>
Plan Fiduciary Net Position	<u>\$ 159,297,661</u>	<u>\$ 166,866,256</u>

The Plan Fiduciary Net Position shown above is intended to be in accordance with GAAP and the Governmental Accounting Standards Board. The Fair Value of Investments have been provided by the reporting entity, and the results are being audited by an independent Auditor. The level of the assets has been reviewed for reasonableness, but we make no representation as to the accuracy of the measurement of the Fair Value of Investments. The Statement of Plan Fiduciary Net Position for 2022 is based on audited financials.



STATEMENT OF CHANGES IN PLAN FIDUCIARY NET POSITION

	<u>2/28/2022</u>
Additions	
Contributions	
Employer	\$ 14,818,690
Members	<u>1,760,624</u>
Total Contributions	<u>16,579,314</u>
Investment Income	
Net Appreciation in Fair Value of Investments	4,974,767
Interest and Dividends	3,209,932
Less Investment Expense	<u>(242,065)</u>
Net Investment Income	<u>7,942,634</u>
Total Additions	<u>24,521,948</u>
Deductions	
Benefit Payments and Refunds of Member Contributions	16,801,355
Administrative Expense	<u>151,998</u>
Total Deductions	<u>16,953,353</u>
Net Increase in Net Position	<u>7,568,595</u>
Plan Fiduciary Net Position	
Beginning of Year	<u>159,297,661</u>
End of Year	<u>\$ 166,866,256</u>

The changes in Plan Fiduciary Net Position shown above is intended to be in accordance with GAAP and the Governmental Accounting Standards Board. The Plan activity has been provided by the reporting entity, and the results are being audited by an independent Auditor. The cash flows have been reviewed for reasonableness, but we make no representation as to the accuracy of the measurement of the Fair Value of Investments. The Statement of Changes in Plan Fiduciary Net Position for 2022 is based on audited financials.



ACTUARIAL PENSION LIABILITY INFORMATION

Statement of Total Pension Liability
Statement of Changes in Total Pension Liability
Statement of Changes in Net Pension Liability
Deferred Outflows and Inflows of Resources
Deferred Outflows and Inflows of Resources – Detail
Pension Expense Development



STATEMENT OF TOTAL PENSION LIABILITY

	<u>2/28/2021</u>	<u>2/28/2022</u>
Active Members	\$ 105,306,368	\$ 108,721,016
Inactive Members		
Terminated Members	1,014,024	1,125,021
Retired Members	218,604,785	216,350,876
Disabled Members	15,716,895	15,270,390
Other Beneficiaries	<u>17,654,746</u>	<u>17,056,581</u>
Total Inactive Members	<u>252,990,450</u>	<u>249,802,868</u>
Total Pension Liability	<u>\$ 358,296,818</u>	<u>\$ 358,523,884</u>

The Total Pension Liability (“TPL”) shown above is dependent on several factors such as Plan Provisions and actuarial assumptions used in this report. In addition, the calculation of the TPL may be dependent on the Plan Fiduciary Net Position shown in the prior section of this report. Changes in the Plan Fiduciary Net Position due to any factor, including adjustments on final audit, could change the TPL. The dependence of the TPL on the Plan Fiduciary Net Position is due to the role of the Plan Fiduciary Net Position (and the Plan’s Projected Fiduciary Net Position) on the determination of the Discount Rate used for the TPL.

The TPL has been determined for GASB 67/68 reporting purposes only. The resulting TPL is intended to be used in the financial statement reporting of the Plan and/or Employer. The resulting liability is not intended to be a representation of the Plan liability for other purposes, including but not limited to, determination of cash funding requirements and recommendations. The TPL is based on data as of the Actuarial Valuation - Data Date shown in this report. The TPL has been determined as of the Actuarial Valuation Date and based on the assumptions used in this report, and adjusted to the Measurement Date as needed.



STATEMENT OF CHANGES IN TOTAL PENSION LIABILITY

	<u>2/28/2022</u>
Changes in Total Pension Liability	
Service Cost	\$ 5,643,851
Interest	21,259,437
Changes of Benefit Terms	-
Differences Between Expected and Actual Experience	(22,251,631)
Change in Assumptions	12,376,764
Benefit Payments and Refunds	<u>(16,801,355)</u>
Net Change in Total Pension Liability	227,066
Total Pension Liability - Beginning	<u>358,296,818</u>
Total Pension Liability - Ending (a)	<u>\$ 358,523,884</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 166,866,256</u>
Employer's Net Pension Liability - Ending (a) - (b)	<u>\$ 191,657,628</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	46.54%
Covered-Employee Payroll	\$ 18,539,527
Employer's Net Pension Liability as a Percentage of Covered-Employee Payroll	1,033.78%

The Plan Fiduciary Net Position was detailed in the prior section of this report. The Employer's Net Pension Liability is the excess of the Total Pension Liability over the Plan Fiduciary Net Position.

Total Pension Liability may be dependent on the Plan Fiduciary Net Position. Changes in the Plan Fiduciary Net Position could change the determination of the Total Pension Liability. Any changes in the Plan Fiduciary Net Position, including adjustments on final audit, can have an impact on the Employer's Net Pension Liability that extends beyond the dollar-for-dollar change in the Plan Fiduciary Net Position.

Covered-Employee Payroll is based on the Covered-Employee Payroll for the Plan Members during the Fiscal Year.



STATEMENT OF CHANGES IN NET PENSION LIABILITY

The table below illustrates the changes in Net Pension Liability (“NPL”) from the prior Measurement Date to the current Measurement Date. Under Statement 68, the difference between the NPL from the prior Measurement Date to the current Measurement Date should be recognized as a component of Pension Expense, unless permitted to be recognized as a Deferred Outflow or Inflow of Resources.

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances Beginning at 3/1/2021	<u>\$ 358,296,818</u>	<u>\$ 159,297,661</u>	<u>\$ 198,999,157</u>
Changes for the Year:			
Service Cost	5,643,851	-	5,643,851
Interest	21,259,437	-	21,259,437
Actuarial Experience	(22,251,631)	-	(22,251,631)
Change in Assumptions	12,376,764	-	12,376,764
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	14,818,690	(14,818,690)
Contributions - Members	-	1,760,624	(1,760,624)
Contributions - Other	-	-	-
Net Investment Income	-	7,942,634	(7,942,634)
Benefit Payments and Refunds	(16,801,355)	(16,801,355)	-
Administrative Expense	-	(151,998)	151,998
Prior Period Audit Adjustment	-	-	-
Other Deductions	-	-	-
Net Changes	<u>\$ 227,066</u>	<u>\$ 7,568,595</u>	<u>\$ (7,341,529)</u>
Balances Ending at 2/28/2022	<u><u>\$ 358,523,884</u></u>	<u><u>\$ 166,866,256</u></u>	<u><u>\$ 191,657,628</u></u>

The changes in Total Pension Liability shown above are described on the prior page. The Plan Fiduciary Net Position was detailed in the prior section of this report. The Employer’s Net Pension Liability is the excess of the Total Pension Liability over the Plan Fiduciary Net Position.



DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The table below shows the cumulative amounts to be shown as Deferred Outflows and Inflows of Resources. Changes in Total Pension Liability related to the differences between expected and actual experience, or changes in assumptions regarding future events, are recognized in Pension Expense over the average future working career of all Members (active and inactive) in the Pension Plan. The net difference in projected and actual earnings on Pension Plan investments over the measurement period are recognized over a 5-year period. Amounts not yet recognized are summarized below:

	Deferred Outflows of Resources	Deferred Inflows of Resources	Total Deferred Amounts
Differences Between Expected and Actual Experience	\$ 2,236,953	\$ (22,332,499)	\$ (20,095,546)
Change in Assumptions	26,898,860	(5,355,082)	21,543,778
Net Difference Between Projected and Actual Earnings on Pension Plan Investments	5,246,136	(7,524,675)	(2,278,539)
Contributions Subsequent to the Measurement Date*	-	-	-
Total	<u>\$ 34,381,949</u>	<u>\$ (35,212,256)</u>	<u>\$ (830,307)</u>

*Contributions Subsequent to the Measurement Date may be recognized as a reduction to the Net Pension Liability. The amount is not known as of the date of this report. Subsequent to the Measurement Date, the following amounts will be recognized in Pension Expense in the upcoming years:

Year Ended	
February 28:	
2023	\$ (119,658)
2024	(920,132)
2025	(523,866)
2026	1,762,382
2027	(1,029,033)
Thereafter	\$ -



DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES – DETAIL

The table below shows the annual detail amounts that have been summarized on the prior page. Under Statement 68, the level of detail shown on the prior page is sufficient for financial statement reporting. The detail shown below is primarily for tracking purposes.

Pension Expense Source	Date Established	Initial Period	Initial Balance	Remaining Period	2/28/2022 Expense Recognized	2/28/2022 Deferred Balance
Asset Loss	2/28/2022	5.00	\$ 3,195,111	5.00	\$ 639,023	\$ 2,556,088
Change in Assumptions Loss	2/28/2022	5.99	12,376,764	5.99	2,066,238	10,310,526
Actuarial Gain	2/28/2022	5.99	(22,251,631)	5.99	(3,714,797)	(18,536,834)
Asset Gain	2/28/2021	5.00	(12,541,125)	4.00	(2,508,225)	(7,524,675)
Change in Assumptions Loss	2/28/2021	6.21	22,785,262	5.21	3,669,125	15,447,012
Actuarial Gain	2/28/2021	6.21	(4,952,431)	5.21	(797,493)	(3,357,445)
Asset Loss	2/29/2020	5.00	3,213,394	3.00	642,679	1,285,357
Change in Assumptions Gain	2/29/2020	6.71	(4,494,064)	4.71	(669,757)	(2,484,793)
Actuarial Loss	2/29/2020	6.71	2,679,231	4.71	399,290	1,481,361
Asset Loss	2/28/2019	5.00	7,023,467	2.00	1,404,694	1,404,691
Change in Assumptions Loss	2/28/2019	7.17	2,400,265	4.17	334,765	1,061,205
Actuarial Loss	2/28/2019	7.17	1,493,791	4.17	208,340	660,431
Asset Gain	2/28/2018	5.00	(2,927,973)	1.00	(585,593)	-
Change in Assumptions Gain	2/28/2018	7.14	(7,907,441)	3.14	(1,107,485)	(2,370,016)
Actuarial Loss	2/28/2018	7.14	238,569	3.14	33,414	71,499
Change in Assumptions Gain	2/28/2017	7.14	(3,133,319)	2.14	(438,841)	(500,273)
Actuarial Gain	2/28/2017	7.14	(2,744,644)	2.14	(384,404)	(438,220)
Change in Assumptions Loss	2/29/2016	7.04	14,101,572	1.04	2,003,065	80,117
Actuarial Loss	2/29/2016	7.04	4,164,750	1.04	591,584	23,662
Total			\$ 12,719,548		\$ 1,785,622	\$ (830,307)

Each detail amount shown above was established as of the Fiscal Year End shown and the full amount deferred has been determined as of that time. Any events that occur in subsequent Fiscal Years do not have an impact on the prior Fiscal Year. The bases are established independently each year.



PENSION EXPENSE DEVELOPMENT

The table below displays the Pension Expense development for the current year. The Pension Expense includes items that change the Net Pension Liability from one year to the next, netted out for amounts that are deferred under GASB pronouncement, plus any amounts that are being recognized that were deferred previously.

See below for the Pension Expense development:

	<u>2/28/2022</u>
Pension Expense/(Income) Under GASB 68	
Service Cost	\$ 5,643,851
Interest	21,259,437
Changes of Benefit Terms	-
Contributions - Members	(1,760,624)
Contributions - Other	-
Expected Investment Income	(11,137,745)
Administrative Expense	151,998
Other Changes	-
Initial Pension Expense/(Income)	<u>\$ 14,156,917</u>
Recognition of Outflow/(Inflow) of Resources Due to Liabilities	2,193,044
Recognition of Outflow/(Inflow) of Resources Due to Assets	<u>(407,422)</u>
Total Pension Expense/(Income)	<u>\$ 15,942,539</u>



ACTUARIAL ASSUMPTIONS INFORMATION

Statement of Significant Actuarial Assumptions
Assumption Changes
Actuarial Assumptions (Demographic)
Postemployment Benefit Changes
Expected Return on Pension Plan Investments
Municipal Bond Rate
Discount Rate
Sensitivity of the Discount Rate
Assessment and Use of Actuarial Models



STATEMENT OF SIGNIFICANT ACTUARIAL ASSUMPTIONS

Actuarial Assumptions (Economic)

Discount Rate Used for the Total Pension Liability	6.21%
Expected Rate of Return on Investments	7.00%
High-Quality 20 Year Tax-Exempt G.O. Bond Rate	2.51%
Projected Individual Pay Increases	3.75% - 16.54%
Projected Total Payroll Increases	3.25%
Consumer Price Index (Urban)	2.25%
Inflation Rate	2.25%

See the *Actuarial Assumptions (Demographic)* section of this report for further details on Demographic Assumptions.

The Actuarial Assumptions (Economic) rates shown above are assumed to be annual rates, compounded on an annual basis. For more information on the selection of the actuarial assumptions, please see the Actuarial Assumption Summary document prepared for the Plan, available upon request.

ASSUMPTION CHANGES

The assumptions were changed from the prior year.

The High-Quality 20 Year Tax-Exempt General Obligation (“G.O.”) Bond Rate assumption was changed from 2.44% to 2.51% for the current year. The underlying index used is The Bond Buyer 20-Bond G.O. Index as discussed in more detail later in this section. The choice of Index is unchanged from the prior year. The rate has been updated to the current Fiscal Year End based on changes in market conditions as reflected in the Index. The change was made to reflect our understanding of the requirements of GASB under Statement 67 and Statement 68.

The Discount Rate used in the determination of the Total Pension Liability was changed from 6.49% to 6.21%. The Discount Rate is impacted by a couple of metrics. Any change in the underlying High-Quality 20 Year Tax Exempt G.O. Bond Rate will impact the blended Discount Rate.

In the current valuation, we have reviewed the projected individual pay increases assumption to reflect the wage schedule between the City of Springfield, Illinois and the Springfield Fire Fighters Local 37 of



the International Association of Fire Fighters for the period March 1, 2021 through February 28, 2025. The year over year step increases dictated by the wage schedule did not change significantly from the prior wage schedule; therefore, we have not updated the individual pay increases assumption.

The above stated assumption changes were made to better reflect the future anticipated experience of the Plan.

In addition, there are changes that can be made that impact the projection of the Plan Fiduciary Net Position. For example, changes in the Formal or Informal Funding Policy can impact the Discount Rate. Actual changes in the Plan Fiduciary Net Position from one year to the next can impact the projections as well.



ACTUARIAL ASSUMPTIONS (DEMOGRAPHIC)

Projected Individual Pay Increases*

Projected individual pay increases include a long-term average increase for inflation, average annual increases for promotions, and any additional increases for a step program. Sample rates are as follows:

Service	Rate	Service	Rate
0	16.54%	8	3.75%
1	14.75%	9	5.70%
2	13.36%	10	3.75%
3	3.75%	15	3.75%
4	6.50%	20	3.75%
5	3.75%	25	3.75%
6	3.75%	30	3.75%
7	3.75%	35	3.75%

* Projected individual pay increases for active Members hired at age 40 or older are assumed annual increases at the ultimate rate reduced by 50 basis points, without adjustments in early service years.

Retirement Rates

100% of the L&A Assumption Study for Firefighters 2020 Cap Age 65. Sample rates are as follows:

Age	Rate	Age	Rate
50	7.00%	58	17.15%
51	7.00%	59	17.15%
52	7.00%	60	20.00%
53	7.00%	61	20.00%
54	7.00%	62	20.00%
55	17.15%	63	25.00%
56	17.15%	64	25.00%
57	17.15%	65	100.00%



Termination Rates

100% of the L&A Assumption Study for Firefighters 2020. Sample rates are as follows:

Age	Rate	Age	Rate
25	7.02%	40	1.25%
30	4.07%	45	0.41%
35	2.41%	50	0.00%

Disability Rates

100% of the L&A Assumption Study for Firefighters 2020. Sample rates are as follows:

Age	Rate	Age	Rate
25	0.07%	40	0.54%
30	0.09%	45	0.75%
35	0.27%	50	0.97%

75% of active Members who become disabled are assumed to be in the Line of Duty.

Mortality Rates

Active Mortality follows the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study. Mortality improvement uses MP-2019 Improvement Rates applied on a fully generational basis.

50% of active Member deaths are assumed to be in the Line of Duty.

Retiree Mortality follows the L&A Assumption Study for Firefighters 2020. These rates are experience weighted with the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study improved to 2017 using MP-2019 Improvement Rates. These rates are then improved fully generationally using MP-2019 Improvement Rates.

Disabled Mortality follows the L&A Assumption Study for Firefighters 2020. These rates are experience weighted with the Sex Distinct Raw Rates as developed in the PubS-2010 Study for disabled participants improved to 2017 using MP-2019 Improvement Rates. These rates are then improved fully generationally using MP-2019 Improvement Rates.



Mortality Rates (Continued)

Spouse Mortality follows the Sex Distinct Raw Rates as developed in the PubS-2010(A) Study for contingent survivors. For all rates not provided there (ages 45 and younger) the PubG-2010 Study for general employees was used. Mortality improvement uses MP-2019 Improvement Rates applied on a fully generational basis.

Marital Assumptions

Active Members: 80% of active Members are assumed to be married. Female spouses are assumed to be 3 years younger than male spouses.

Retiree and Disabled Members: Actual spousal data was utilized for retiree and disabled Members.

POSTEMPLOYMENT BENEFIT CHANGES

Eligibility for postemployment benefit increases is determined based on the Illinois Pension Code. Tier 1 Firefighter retirees are provided with an annual increase of 3.00% of the current retirement benefits by statute when eligible. Tier 2 Firefighter retirees are provided postemployment benefit increases based on the lesser of 3.00% of the original retirement benefits or one-half of the Consumer Price Index (Urban) for the prior September.

The CPI-U for September 1991 was 137.2. The CPI-U for September 2021 was 274.31. The average increase in the CPI-U for September 1991 through September 2021 was 2.34% (on a compounded basis).



EXPECTED RETURN ON PENSION PLAN INVESTMENTS

The Long-Term Expected Rate of Return is intended to represent the best estimate of future real rates of return and is shown for each of the major asset classes in the investment policy.

The table below illustrates the best estimates of target allocations and Long-Term Expected Rates of Return developed for each of the major asset classes, adjusted for expected inflation. These rates and target allocations were disclosed by Marquette Associates for the Illinois Firefighters' Pension Investment Fund, dated April 29, 2022.

There are multiple approaches seen to providing these rates. Typically, the information is either based on capital market projections, or historical rates seen for the asset classes. We do not provide an opinion on the reasonableness of the returns provided nor the reasonableness of the approach used in the determination of the rates provided. The information provided is shown below for convenience.

The rates provided in the table below are based on a geometric average. The Investment Policy Statement will provide more detail regarding the Fund's policies on asset allocation targets and acceptable ranges.

<u>Asset Class</u>	<u>Long-Term Expected Rate of Return</u>	<u>Long-Term Inflation Expectation</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Target Allocation</u>
U.S. Equity	7.70%	2.50%	5.20%	31.00%
Developed Market Equity (non-US)	7.60%	2.50%	5.10%	16.00%
Emerging Market Equity	8.00%	2.50%	5.50%	8.00%
Private Equity	11.10%	2.50%	8.60%	5.00%
Public Credit	4.30%	2.50%	1.80%	3.00%
Private Credit	9.50%	2.50%	7.00%	5.00%
Cash Equivalents	1.90%	2.50%	-0.60%	0.00%
Core Investment Grade Bonds	4.10%	2.50%	1.60%	15.00%
Long-Term Treasuries	3.80%	2.50%	1.30%	3.00%
TIPS	3.30%	2.50%	0.80%	4.00%
Real Estate	7.40%	2.50%	4.90%	5.00%
Infrastructure	7.60%	2.50%	5.10%	5.00%

Long-Term Expected Real Rates of Return under GASB are expected to reflect the period of time that begins when a Plan Member begins to provide service to the employer and ends at the point when all benefits to the Plan Member have been paid. The rates provided above are intended to estimate those figures.



The Long-Term Inflation Expectation is 2.50% and is included in the Long-Term Expected Rates of Return. The Long-Term Inflation Expectation is from the same source as the Long-Term Expected Real Rates of Return, and is not necessarily reflective of the inflation measures used for other purposes in the report.

Geometric rates of return are equal to arithmetic rates of return when the annual returns exhibit no volatility over time. When arithmetic returns are volatile on a year-to-year basis, the actual realized geometric returns over time will be lower. Higher volatility results in a greater difference.



MUNICIPAL BOND RATE

The Municipal Bond Rate assumption is based on the Bond Buyer 20-Bond G.O. Index. The rate shown earlier in this section of the report is the February 24, 2022 rate. The 20-Bond G.O. Index is based on an average of certain general obligation municipal bonds maturing in 20 years and having an average rating equivalent of Moody's Aa2 and Standard & Poor's AA.

The 20-Bond G.O. Index consists of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.

The indices represent theoretical yields rather than actual price or yield quotations. Municipal bond traders are asked to estimate what a current-coupon bond for each issuer in the indices would yield if the bond was sold at par value. The indices are simple averages of the average estimated yields of the bonds.

DISCOUNT RATE

The Discount Rate used in the determination of the Total Pension Liability is based on a combination of the Expected Rate of Return on Plan Investments and the Municipal Bond Rate.

Cash flow projections were used to determine the extent to which the Plan's Projected Fiduciary Net Position will be able to cover Projected Benefit Payments. To the extent that Projected Benefit Payments are covered by the Plan's Projected Fiduciary Net Position, the Expected Rate of Return on Plan Investments is used to determine the portion of the Net Pension Liability associated with those payments. To the extent that Projected Benefit Payments are not covered by the Plan's Projected Fiduciary Net Position, the Municipal Bond Rate is used to determine the portion of the Net Pension Liability associated with those payments.

Projected Benefit Payments are determined during the actuarial process based on the assumptions. More details on the assumptions are earlier in this section of the report. The expected contributions are based on the funding policy of the Plan. The funding policy is discussed in more detail in the *Funding Policy* section of this report.



SENSITIVITY OF THE DISCOUNT RATE

The Employer's Net Pension Liability has been determined using the Discount Rate listed in this section of the report. Below is a table illustrating the sensitivity of the Employer's Net Pension Liability to the Discount Rate assumption.

	1% Decrease (5.21%)	Current Discount Rate (6.21%)	1% Increase (7.21%)
Employer's Net Pension Liability	<u>\$242,020,754</u>	<u>\$191,657,628</u>	<u>\$150,391,067</u>

The sensitivity of the Employer's Net Pension Liability to the Discount Rate is based primarily on two factors:

1. The duration of the Plan's Projected Benefit Payments. Younger Plans with benefit payments further in the future will be more sensitive to changes in the Discount Rate.
2. The Percent Funded of the Plan (ratio of the Plan Fiduciary Net Position to the Total Pension Liability). The higher the Percent Funded, the higher the sensitivity to the Discount Rate.



ASSESSMENT AND USE OF ACTUARIAL MODELS

Actuarial Valuations rely upon the use of actuarial modeling software to predict the occurrence of future events, which include specific demographic and financial potential outcomes. Actuarial assumptions are established to provide a guideline to use for such modeling.

- The model used in this Actuarial Valuation is intended to determine the Recommended Contribution, under the selected Funding Policy, to assist in the preparation of the Annual Comprehensive Financial Report. The actuarial assumptions used were developed with this goal in mind.
- There are no known material limitations or inconsistencies among the actuarial assumptions or methods.
- The output from the model is reasonable based on the individual actuarial assumptions and based on the actuarial assumptions in the aggregate.
- The actuarial software used to calculate plan liabilities has been purchased from an outside vendor. We have performed thorough testing of the software, including review of sample participants, to ensure the intended purpose of the model, the operation of the model, sensitivities and dependencies, and strengths and limitations of the model are sufficient for this purpose.
- Census data and financial information have been provided by client professionals, financial advisors, and/or auditors, who are known to be experts in their respective fields. We rely on the fact that the information provided by these experts has been given for the intended purpose of this Actuarial Valuation.
- Where applicable, certain actuarial assumptions and Funding Policy may be required as prescribed by law. In such instances, we have followed legal guidance to ensure conformity.
- The Expected Rate of Return on Investments assumption has been chosen using input from several sources; including, but not limited to: client professionals, financial advisors, auditors, and other capital market outlooks. We have relied on the information provided, in the aggregate, to settle on the selected Expected Rate of Return on Investments assumption.



PARTICIPANT DATA

Participant Demographic Data & Average Future Working Career



PARTICIPANT DEMOGRAPHIC DATA & AVERAGE FUTURE WORKING CAREER

The chart below summarizes the Member count, payroll, and average future working career as of:

Actuarial Valuation - Data Date	2/29/2020	2/28/2021
Fiscal Year End for Reporting	(FYE 2/28/2021)	(FYE 2/28/2022)
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	251	245
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	2	2
Active Plan Members	217	213
Total	<u>470</u>	<u>460</u>
Payroll of Active Plan Members	<u>\$ 18,563,064</u>	<u>\$ 18,785,866</u>
Average Future Working Career (In Years)		
Active Plan Members	13.44	12.93
Inactive Plan Members	0.00	0.00
Total	6.21	5.99

Member counts shown above are as of the Actuarial Valuation Date for the two most recent Fiscal Years. Payroll of Active Plan Members is the pensionable salary for active Plan Members as of the Actuarial Valuation – Data Date. For the Fiscal Year Ending February 28, 2022, a beginning of year Actuarial Valuation Date was used along with a rollforward of liabilities to the end of the Fiscal Year based on assumptions and standard rollforward techniques.

The average future working career is measured as of the Actuarial Valuation Date and is based on the demographic assumptions used in the preparation of this report.



FUNDING POLICY

Components of the Actuarially Determined Contributions

Formal Funding Policy

Informal Funding Policy

Funding Policy – Other Considerations



COMPONENTS OF THE ACTUARIALLY DETERMINED CONTRIBUTION

The Actuarially Determined Contribution (“ADC”) includes the determination of the Normal Cost Contribution for active Plan Members, as well as a provision for the payment towards Unfunded Liability.

The actuarial funding method used in the determination of the Normal Cost and the Actuarial Accrued Liability is the Projected Unit Credit Cost Method. The method allocates Normal Cost Contributions by Members over the working career of the Member.

Unfunded Liability is the excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The Actuarially Determined Contribution includes a payment towards Unfunded Liability existing at the Actuarial Valuation Date. The payment towards Unfunded Liability is set up as a level percent of payroll payment that is expected to increase during the payment period and target 90% funding. The current Employer Contributions are being compared to the Actuarially Determined Contribution as developed in the March 1, 2020 Actuarial Valuation. The equivalent single amortization period as of that valuation is 20 years.

The Actuarial Value of Assets smooths gains and losses on the Fair Value of Assets over a 5-year period.

Under no circumstances will the Actuarially Determined Contribution be less than the amount determined as the Statutory Minimum Contribution under Illinois State Statutes.

FORMAL FUNDING POLICY

There is no Formal Funding Policy that exists between the Pension Board and the City at this time.

INFORMAL FUNDING POLICY

In determining the most appropriate Informal Funding Policy, GASB provides the following guidance in the Statement:

Application of professional judgment should consider the most recent five-year contribution history of the employers and nonemployer contributing entities as a key indicator of future contributions from those sources and should reflect all other known events and conditions. ... the amount of projected cash flows for contributions from employers and nonemployer contributing entities should be limited to an average of contributions from those sources over the most recent five-year period and may be modified based on consideration of subsequent events. For this purpose, the basis for the average (for example, percentage of covered payroll contributed or percentage of Actuarially Determined Contributions made) should be a matter of professional judgment.



In our review of Informal Funding Policy, the following factors are considered and described herein:

1. Five-Year Contribution History of the Employer (with a focus on the average contributions from those sources)
2. Other Known Events and Conditions
3. Consideration of Subsequent Events

Five-Year Contribution History of the Employer

Employer Contributions (under the Informal Funding Policy) should be limited to the average over the most recent five years. In determining the basis for the average, we reviewed three possibilities: (a) the average dollar contribution; (b) the average percent of pensionable pay; and (c) the average percent of the Actuarially Determined Contribution. Please see the table below for a summary of these values:

Fiscal Year End	Employer Contributions	Most Applicable ADC	% of ADC	Covered- Employee Payroll	% of Payroll
2/28/2022	\$14,818,690	\$14,159,124	104.66%	\$18,539,527	79.93%
2/28/2021	\$13,550,355	\$13,232,121	102.41%	\$19,050,536	71.13%
2/29/2020	\$12,508,920	\$12,508,920	100.00%	\$19,027,608	65.74%
2/28/2019	\$11,916,494	\$11,916,494	100.00%	\$19,807,840	60.16%
2/28/2018	\$11,184,141	\$11,184,141	100.00%	\$19,991,231	55.95%

When compared to the other policies reviewed, history suggests that a contribution as a percent of the Actuarially Determined Contribution is the least volatile, and as a result, the most stable contribution method under an Informal Funding Policy.

Other Known Events and Conditions

GASB has a provision for consideration of any other known events or conditions in the most recent five-year history in applying judgement for the Informal Funding Policy. There are no events or conditions that have been considered in the development of the Informal Funding Policy.

Consideration of Subsequent Events

GASB has a provision for modification based on consideration of subsequent events in development of the Informal Funding Policy. There are no subsequent events that have been considered in the development of the Informal Funding Policy.



Informal Funding Policy – Selected

The Informal Funding Policy that has been determined for future contributions is 101.41% of the Actuarially Determined Contribution. This represents the full future contributions expected to be made.

FUNDING POLICY – OTHER CONSIDERATIONS

Under GASB, the future contribution amount is not intended to include dollars contributed on behalf of future employees. Contributions are only intended to cover contributions towards the Normal Cost of current employees as of the Actuarial Valuation Date as well as payment of Unfunded Liability on behalf of the current employees. Contributions under the funding policy have been adjusted as necessary to exclude dollars that would be anticipated to be contributed on behalf of future employees hired after the Actuarial Valuation Date.

The contribution level may not pay off the Unfunded Liability during the active working career of current employees. In that case, contributions will persist beyond the working career of current employees. To the extent that a portion of the above total contribution is anticipated to pay contributions for the Normal Cost of future employees, the amount has been netted out. The remaining amount is anticipated to be paid towards the Unfunded Liability existing for current employees.

The Actuarially Determined Contribution is determined annually based on the parameters previously discussed. The funding methods and procedures are assumed to continue into the future. If applicable, the tax levy in the next December is assumed to be the Actuarially Determined Contribution. Funding is assumed to go into the Plan during the next full Fiscal Year.



SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the Net Pension Liability
Schedule of Total Pension Liability and Related Ratios
Schedule of Contributions
Notes to Schedule of Contributions



SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY

	2/28/2022	2/28/2021	2/29/2020	2/28/2019	2/28/2018	2/28/2017	2/29/2016	2/28/2015	2/28/2014	2/28/2013
Total Pension Liability										
Service Cost	\$ 5,643,851	\$ 5,322,103	\$ 5,197,220	\$ 5,205,445	\$ 5,283,043	\$ 4,951,770	\$ 5,111,168	\$ 5,438,758		
Interest	21,259,437	22,140,316	21,253,481	20,465,858	19,736,353	19,481,955	17,506,592	17,749,350		
Changes of Benefit Terms	-	-	1,976,795	-	-	-	-	-		
Differences Between Expected and Actual Experience	(22,251,631)	(4,952,431)	2,679,231	1,493,791	238,569	(2,744,644)	4,164,750	-		
Change in Assumptions	12,376,764	22,785,262	(4,494,064)	2,400,265	(7,907,441)	(3,133,319)	14,101,572	-		
Benefit Payments and Refunds	(16,801,355)	(16,317,321)	(16,034,348)	(15,723,823)	(14,928,475)	(14,577,712)	(13,670,346)	(12,922,751)		
Net Change in Total Pension Liability	\$ 227,066	\$ 28,977,929	\$ 10,578,315	\$ 13,841,536	\$ 2,422,049	\$ 3,978,050	\$ 27,213,736	\$ 10,265,357		
Total Pension Liability - Beginning	<u>358,296,818</u>	<u>329,318,889</u>	<u>318,740,574</u>	<u>304,899,038</u>	<u>302,476,989</u>	<u>298,498,939</u>	<u>271,285,203</u>	<u>261,019,846</u>		
Total Pension Liability - Ending (a)	<u>\$ 358,523,884</u>	<u>\$ 358,296,818</u>	<u>\$ 329,318,889</u>	<u>\$ 318,740,574</u>	<u>\$ 304,899,038</u>	<u>\$ 302,476,989</u>	<u>\$ 298,498,939</u>	<u>\$ 271,285,203</u>		
Plan Fiduciary Net Position										
Contributions - Employer	\$ 14,818,690	\$ 13,550,355	\$ 12,508,920	\$ 11,916,494	\$ 11,184,141	\$ 10,395,154	\$ 9,786,645	\$ 9,973,179		
Contributions - Members	1,760,624	1,807,386	1,818,701	1,700,670	1,696,447	1,718,845	1,696,300	1,704,162		
Contributions - Other	-	-	-	-	-	-	-	7,144,916		
Net Investment Income	7,942,634	22,177,023	6,097,536	2,271,252	11,568,713	14,904,623	(5,946,400)	(12,922,751)		
Benefit Payments and Refunds	(16,801,355)	(16,317,321)	(16,034,348)	(15,723,823)	(14,928,475)	(14,577,712)	(13,670,346)	(133,317)		
Administrative Expense	(151,998)	(110,520)	(133,450)	(132,495)	(165,250)	(137,137)	(109,969)	-		
Net Change in Plan Fiduciary Net Position	\$ 7,568,595	\$ 21,106,923	\$ 4,257,359	\$ 32,098	\$ 9,355,576	\$ 12,303,773	\$ (8,243,770)	\$ 5,766,189		
Plan Fiduciary Net Position - Beginning	<u>159,297,661</u>	<u>138,190,738</u>	<u>133,933,379</u>	<u>133,901,281</u>	<u>124,545,705</u>	<u>112,241,932</u>	<u>120,485,702</u>	<u>114,719,513</u>		
Plan Fiduciary Net Position - Ending (b)	<u>\$ 166,866,256</u>	<u>\$ 159,297,661</u>	<u>\$ 138,190,738</u>	<u>\$ 133,933,379</u>	<u>\$ 133,901,281</u>	<u>\$ 124,545,705</u>	<u>\$ 112,241,932</u>	<u>\$ 120,485,702</u>		
Employer's Net Pension Liability - Ending (a) - (b)	<u>\$ 191,657,628</u>	<u>\$ 198,999,157</u>	<u>\$ 191,128,151</u>	<u>\$ 184,807,195</u>	<u>\$ 170,997,757</u>	<u>\$ 177,931,284</u>	<u>\$ 186,257,007</u>	<u>\$ 150,799,501</u>		

The current year information was developed in the completion of this report.



SCHEDULE OF TOTAL PENSION LIABILITY AND RELATED RATIOS

	<u>2/28/2022</u>	<u>2/28/2021</u>	<u>2/29/2020</u>	<u>2/28/2019</u>	<u>2/28/2018</u>	<u>2/28/2017</u>	<u>2/29/2016</u>	<u>2/28/2015</u>	<u>2/28/2014</u>	<u>2/28/2013</u>
Total Pension Liability - Ending (a)	<u>\$ 358,523,884</u>	<u>\$ 358,296,818</u>	<u>\$ 329,318,889</u>	<u>\$ 318,740,574</u>	<u>\$ 304,899,038</u>	<u>\$ 302,476,989</u>	<u>\$ 298,498,939</u>	<u>\$ 271,285,203</u>		
Plan Fiduciary Net Position - Ending (b)	<u>\$ 166,866,256</u>	<u>\$ 159,297,661</u>	<u>\$ 138,190,738</u>	<u>\$ 133,933,379</u>	<u>\$ 133,901,281</u>	<u>\$ 124,545,705</u>	<u>\$ 112,241,932</u>	<u>\$ 120,485,702</u>		
Employer's Net Pension Liability - Ending (a) - (b)	<u>\$ 191,657,628</u>	<u>\$ 198,999,157</u>	<u>\$ 191,128,151</u>	<u>\$ 184,807,195</u>	<u>\$ 170,997,757</u>	<u>\$ 177,931,284</u>	<u>\$ 186,257,007</u>	<u>\$ 150,799,501</u>		
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	46.54%	44.46%	41.96%	42.02%	43.92%	41.18%	37.60%	44.41%		
Covered-Employee Payroll	\$ 18,539,527	\$ 19,050,536	\$ 19,027,608	\$ 19,807,840	\$ 19,991,231	\$ 19,361,967	\$ 16,982,730	\$ 16,985,797		
Employer's Net Pension Liability as a Percentage of Covered-Employee Payroll	1,033.78%	1,044.59%	1,004.48%	933.00%	855.36%	918.97%	1,096.74%	887.80%		

Covered-Employee Payroll shown above for the current year is based on the Covered-Employee Payroll for the Plan Members during the Fiscal Year.



SCHEDULE OF CONTRIBUTIONS

	<u>2/28/2022</u>	<u>2/28/2021</u>	<u>2/29/2020</u>	<u>2/28/2019</u>	<u>2/28/2018</u>	<u>2/28/2017</u>	<u>2/29/2016</u>	<u>2/28/2015</u>	<u>2/28/2014</u>	<u>2/28/2013</u>
Actuarially Determined Contribution	\$ 14,159,124	\$ 13,232,121	\$ 12,508,920	\$ 11,916,494	\$ 11,184,141	\$ 10,395,154	\$ 9,786,645	\$ 9,473,179		
Contributions in Relation to the Actuarially Determined Contribution	14,818,690	13,550,355	12,508,920	11,916,494	11,184,141	10,395,154	9,786,645	9,473,179		
Contribution Deficiency/(Excess)	<u>\$ (659,566)</u>	<u>\$ (318,234)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>		
Covered-Employee Payroll	\$ 18,539,527	\$ 19,050,536	\$ 19,027,608	\$ 19,807,840	\$ 19,991,231	\$ 19,361,967	\$ 16,982,730	\$ 16,985,797		
Contributions as a Percentage of Covered-Employee Payroll	79.93%	71.13%	65.74%	60.16%	55.95%	53.69%	57.63%	55.77%		

NOTES TO SCHEDULE OF CONTRIBUTIONS

The Actuarially Determined Contribution shown above for the current year is the Statutory Minimum Contribution from the March 1, 2020 Actuarial Valuation completed by Lauterbach & Amen, LLP for the December 2020 tax levy, if applicable. The methods and assumptions shown below are based on the same Actuarial Valuation. For more detail on the age-based and service-based rates disclosed below, please see the Actuarial Valuation.

Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level % Pay (Closed)
Equivalent Single Amortization Period	90% Funded Over 20 Years
Asset Valuation Method	5-Year Smoothed Fair Value
Inflation (CPI-U)	2.25%
Total Payroll Increases	3.25%
Individual Pay Increases	3.75% - 16.54%
Expected Rate of Return on Investments	7.00%
Mortality Rates	Pub-2010 Adjusted for Plan Status, Demographics, and Illinois Public Pension Data, as Described
Retirement Rates	100% of L&A 2020 Illinois Firefighters Retirement Rates Capped at Age 65
Termination Rates	100% of L&A 2020 Illinois Firefighters Termination Rates
Disability Rates	100% of L&A 2020 Illinois Firefighters Disability Rates



GASB METHODS AND PROCEDURES

GASB Methods and Procedures



GASB METHODS AND PROCEDURES

	Statement 67	Statement 68
	<u>Pension Plan Financials</u>	<u>Employer Financials</u>
Fiscal Year End for Reporting	February 28, 2022	February 28, 2022
Measurement Date	February 28, 2022	February 28, 2022
Actuarial Valuation Date	March 1, 2021	March 1, 2021
Actuarial Valuation - Data Date	February 28, 2021	February 28, 2021
Asset Valuation Method	Fair Value	Fair Value
Actuarial Cost Method	Entry Age Normal (Level %)	Entry Age Normal (Level %)

Methodology Used in the Determination of Deferred Outflows and Inflows of Resources

Amortization Method	Straight Line	Straight Line
Amortization Period		
Actuarial Experience	5.99 Years	5.99 Years
Change in Assumptions	5.99 Years	5.99 Years
Asset Experience	5.00 Years	5.00 Years



SUPPLEMENTARY TABLES

GASB Projections – Summary and Procedure

GASB Projections – Limitations

Projection of Contributions

Notes to Projection of Contributions

Projection of the Pension Plan's Fiduciary Net Position

Notes to Projection of the Pension Plan's Fiduciary Net Position

Actuarial Present Value of Projected Benefit Payments

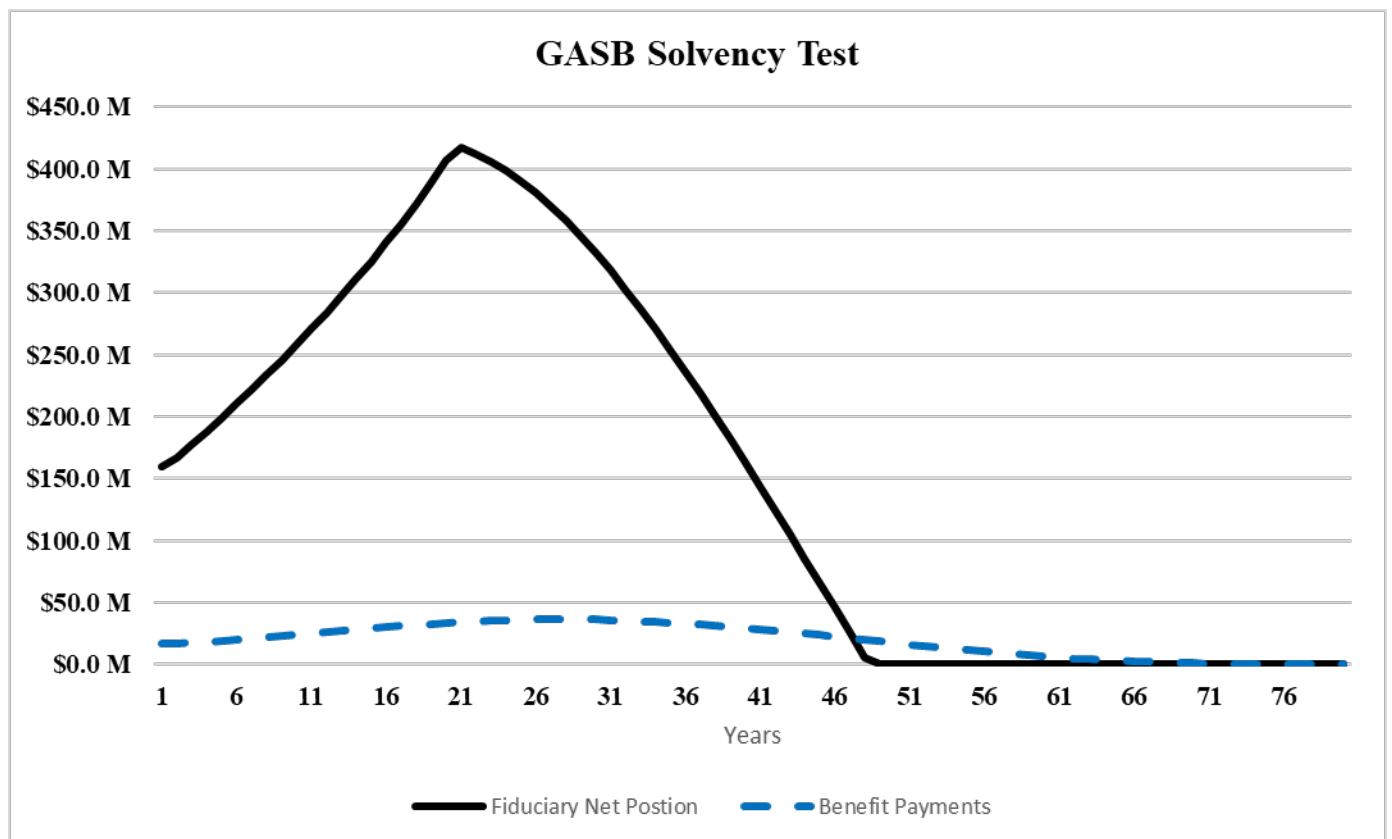
Notes to Actuarial Present Value of Projected Benefit Payments



GASB PROJECTIONS – SUMMARY AND PROCEDURE

GASB requires a solvency test to use in the determination of the Discount Rate each year. The Plan Fiduciary Net Position is projected forward. To the extent that the Plan Fiduciary Net Position is anticipated to be greater than \$0, Projected Benefit Payments are discounted based on the Expected Rate of Return on Plan Investments.

If the Plan Fiduciary Net Position is anticipated to reach \$0 prior to the payment of Projected Benefit Payments for employees who are in the Plan as of the Actuarial Valuation Date, then the remaining Projected Benefit Payments are discounted using the High-Quality Municipal Bond Rate, as described in the *Actuarial Assumptions Information* section of this report. The chart below is a high-level summary of the projections:



The Plan's Projected Fiduciary Net Position is anticipated to cover Projected Benefit Payments in full for the current employees through 2068.



GASB PROJECTIONS – LIMITATIONS

Projections of any type require assumptions about future events. The projections required for GASB reporting are deterministic in nature. That means that values are projected forward under one set of assumptions which can be thought of as the average result. Actual results could vary, and projections of one deterministic assumption set do not necessarily provide a framework for making risk management or funding policy decisions. Projections that deal with risk management are outside the scope of this report.

In addition, GASB requirements create results that are specific only to financial statement reporting, and should not be used or interpreted for other purposes. For example, GASB cash flow projections do not entail the total expected cash flows of the Plan, but rather a subset of cash flows specific to employees who are in the Plan as of the Actuarial Valuation Date. While the likely expectation may be that future employees are hired to replace the current employees, cash flows attributable to their benefits are not considered. Under GASB, when the Plan Fiduciary Net Position reaches \$0, that represents the Plan Fiduciary Net Position for the assets attributable to the current employees.

Also, GASB mandates certain assumptions that are made in the projection process. Most notably, Projected Contributions under an Informal Funding Policy. In proposing an Informal Funding Policy, GASB suggests a focus be placed on the average contributions over the past 5 years. Projected Contributions in this section may be based on the five-year average, unless a Formal Funding Policy is in place.

Contributions reflecting an Informal Funding Policy are applied under GASB, whether or not the projected results dictate a need for more or less contributions. This would not be the case with other uses for projections. Any events that are taken into account (past or future) in the Informal Funding Policy are discussed in the *Funding Policy* section of this report.

Projections further into the future are more sensitive to assumption changes. For projections that run out close to 80 years, a small change in an assumption may have a dramatic impact on the projections. If the solvency of the Plan as determined by GASB remains constant, then dramatic changes in the projection results may not necessarily lead to big changes in the determination of the Total Pension Liability.

We recommend the projections are not used for any other purposes, other than providing information for purposes of the financial statement report.

The following pages provide the detail behind the chart shown on the prior page.



PROJECTION OF CONTRIBUTIONS – YEARS 1 TO 30

Year	Projected Pensionable Payroll			Projected Contributions			
	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Contributions from Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Payroll of Future Employees (f) - Notes	Total Contributions (g) = (d) + (e) + (f)
1	\$ 18,785,866	\$ -	\$ 18,785,866	\$ 1,760,624	\$14,818,690	\$ -	\$ 16,579,314
2	19,075,042	321,365	19,396,407	1,803,545	14,670,590	-	16,474,135
3	19,236,062	790,728	20,026,790	1,818,770	14,091,913	-	15,910,683
4	19,250,587	1,427,074	20,677,661	1,820,143	14,540,906	-	16,361,049
5	19,115,351	2,234,334	21,349,685	1,807,356	14,993,296	-	16,800,652
6	18,903,314	3,140,236	22,043,550	1,787,308	15,436,607	-	17,223,915
7	18,580,482	4,179,483	22,759,965	1,756,785	15,891,416	-	17,648,201
8	18,154,621	5,345,043	23,499,664	1,716,519	16,350,117	-	18,066,636
9	17,617,913	6,645,490	24,263,403	1,665,774	16,816,032	-	18,481,806
10	17,110,019	7,941,944	25,051,964	1,617,752	17,292,730	-	18,910,482
11	16,540,137	9,326,015	25,866,152	1,563,870	17,804,515	-	19,368,385
12	15,884,005	10,822,797	26,706,802	1,501,833	18,342,132	-	19,843,965
13	15,036,005	12,538,768	27,574,773	1,421,654	18,914,382	-	20,336,036
14	14,218,054	14,252,900	28,470,954	1,344,317	19,488,026	-	20,832,343
15	13,368,795	16,027,465	29,396,260	1,264,020	20,113,717	-	21,377,737
16	12,500,102	17,851,536	30,351,638	1,181,885	20,790,196	-	21,972,081
17	11,606,765	19,731,301	31,338,066	1,097,420	21,516,293	-	22,613,713
18	10,712,439	21,644,114	32,356,553	1,012,861	22,298,813	-	23,311,674
19	9,802,176	23,605,965	33,408,141	926,796	23,151,470	-	24,078,266
20	8,907,013	25,586,893	34,493,906	842,158	15,928,177	-	16,770,335
21	8,044,749	27,570,209	35,614,958	760,631	622,211	-	1,382,842
22	7,116,621	29,655,823	36,772,444	672,877	535,629	-	1,208,506
23	6,173,978	31,793,571	37,967,548	583,750	442,007	-	1,025,757
24	5,384,412	33,817,082	39,201,494	509,096	341,974	-	851,070
25	4,559,038	35,916,504	40,475,542	431,057	290,638	-	721,695
26	3,827,390	37,963,608	41,790,997	361,880	228,522	-	590,402
27	3,132,832	40,016,373	43,149,205	296,209	189,385	-	485,594
28	2,553,058	41,998,496	44,551,554	241,392	140,040	-	381,432
29	2,000,182	43,999,298	45,999,480	189,117	114,797	-	303,914
30	1,608,651	45,885,811	47,494,463	152,098	73,215	-	225,313

Column d – Contributions from current employees to the Plan (employees in the Plan as of the Actuarial Valuation Date).

Column e – Employer Contributions to the Plan excluding contributions for employees hired after the Actuarial Valuation Date.

Column f – Contributions from future employees to the extent that contributions are assumed to be greater than their Normal Cost.



PROJECTION OF CONTRIBUTIONS – YEARS 31 TO 60

Year	Projected Pensionable Payroll			Projected Contributions			
	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Contributions from Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Payroll of Future Employees (f) - Notes	Total Contributions (g) = (d) + (e) + (f)
31	\$ 1,257,691	\$ 47,780,341	\$ 49,038,033	\$ 118,915	\$ 59,491	\$ -	\$ 178,406
32	931,327	49,700,442	50,631,769	88,057	48,747	-	136,804
33	642,143	51,635,158	52,277,301	60,715	40,139	-	100,854
34	441,154	53,535,160	53,976,313	41,711	27,181	-	68,892
35	275,132	55,455,412	55,730,544	26,014	22,185	-	48,199
36	162,706	57,379,080	57,541,786	15,384	15,032	-	30,416
37	91,150	59,320,745	59,411,894	8,618	9,383	-	18,001
38	62,542	61,280,239	61,342,781	5,913	3,828	-	9,741
39	31,100	63,305,322	63,336,421	2,940	4,111	-	7,051
40	23,414	65,371,441	65,394,855	2,214	907	-	3,121
41	9,858	67,510,329	67,520,188	932	1,730	-	2,662
42	-	69,714,594	69,714,594	-	1,285	-	1,285
43	-	71,980,318	71,980,318	-	-	-	-
44	-	74,319,679	74,319,679	-	-	-	-
45	-	76,735,068	76,735,068	-	-	-	-
46	-	79,228,958	79,228,958	-	-	-	-
47	-	81,803,899	81,803,899	-	-	-	-
48	-	84,462,526	84,462,526	-	-	-	-
49	-	87,207,558	87,207,558	-	-	-	-
50	-	90,041,803	90,041,803	-	-	-	-
51	-	92,968,162	92,968,162	-	-	-	-
52	-	95,989,627	95,989,627	-	-	-	-
53	-	99,109,290	99,109,290	-	-	-	-
54	-	102,330,342	102,330,342	-	-	-	-
55	-	105,656,078	105,656,078	-	-	-	-
56	-	109,089,901	109,089,901	-	-	-	-
57	-	112,635,323	112,635,323	-	-	-	-
58	-	116,295,970	116,295,970	-	-	-	-
59	-	120,075,590	120,075,590	-	-	-	-
60	-	123,978,046	123,978,046	-	-	-	-

Column d – Contributions from current employees to the Plan (employees in the Plan as of the Actuarial Valuation Date).
 Column e – Employer Contributions to the Plan excluding contributions for employees hired after the Actuarial Valuation Date.
 Column f – Contributions from future employees to the extent that contributions are assumed to be greater than their Normal Cost.



PROJECTION OF CONTRIBUTIONS – YEARS 61 TO 80

Year	Projected Pensionable Payroll			Projected Contributions				
	Payroll for Current Employees (a)	Payroll for Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Contributions from Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Payroll of Future Employees (f) - Notes	Total Contributions (g) = (d) + (e) + (f)	
61	\$ -	\$ 128,007,333	\$ 128,007,333	\$ -	\$ -	\$ -	\$ -	
62	-	132,167,571	132,167,571	-	-	-	-	
63	-	136,463,017	136,463,017	-	-	-	-	
64	-	140,898,065	140,898,065	-	-	-	-	
65	-	145,477,252	145,477,252	-	-	-	-	
66	-	150,205,263	150,205,263	-	-	-	-	
67	-	155,086,934	155,086,934	-	-	-	-	
68	-	160,127,259	160,127,259	-	-	-	-	
69	-	165,331,395	165,331,395	-	-	-	-	
70	-	170,704,666	170,704,666	-	-	-	-	
71	-	176,252,567	176,252,567	-	-	-	-	
72	-	181,980,776	181,980,776	-	-	-	-	
73	-	187,895,151	187,895,151	-	-	-	-	
74	-	194,001,743	194,001,743	-	-	-	-	
75	-	200,306,800	200,306,800	-	-	-	-	
76	-	206,816,771	206,816,771	-	-	-	-	
77	-	213,538,316	213,538,316	-	-	-	-	
78	-	220,478,311	220,478,311	-	-	-	-	
79	-	227,643,856	227,643,856	-	-	-	-	
80	-	235,042,282	235,042,282	-	-	-	-	

NOTES TO PROJECTION OF CONTRIBUTIONS

Total Employee Payroll is projected to increase annually at the Projected Total Payroll Increases rate shown in the *Actuarial Assumptions Information* section of this report. Payroll for current employees (employees in the Plan as of the Actuarial Valuation Date) are projected on an employee-by-employee basis, using the Projected Individual Pay Increases and probability of remaining an employee in the future.

Employer Contributions are related to current employees in the Plan as of the Actuarial Valuation Date. To the extent that Projected Contributions under the Funding Policy are made to cover the Normal Cost of benefit payments for future employees, those contributions are excluded for purposes of these projections and this report.

Contributions are based on the Funding Policy as described in the *Funding Policy* section of this report. The contributions do not factor in changes in the Funding Policy based on an assumed Employer decision; if, the projections were to play out in this fashion. The only future events that are considered were outlined in the *Funding Policy* section of this report. Contributions from future employees have not been included. It is assumed that contributions made by future employees will not exceed the Normal Cost of their participation in the Plan. In addition, Employer Contributions on behalf of future employees have not been included per the GASB parameters.



PROJECTION OF THE PENSION PLAN’S FIDUCIARY NET POSITION – YEARS 1 TO 30

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expense (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a)+(b)-(c)-(d)+(e)
1	\$ 159,297,661	\$ 16,579,314	\$ 16,801,355	\$ 151,998	\$ 7,942,634	\$ 166,866,256
2	166,866,256	16,474,136	17,165,581	108,394	11,652,644	177,719,060
3	177,719,060	15,910,683	17,771,422	110,833	12,371,329	188,118,817
4	188,118,817	16,361,049	18,484,950	113,327	13,090,014	198,971,603
5	198,971,603	16,800,652	19,233,168	115,876	13,838,818	210,262,029
6	210,262,029	17,223,915	20,083,418	118,484	14,614,113	221,898,155
7	221,898,155	17,648,201	21,038,196	121,150	15,409,981	233,796,990
8	233,796,990	18,066,637	21,983,947	123,875	16,224,348	245,980,153
9	245,980,153	18,481,806	22,932,794	126,663	17,058,393	258,460,895
10	258,460,895	18,910,482	23,885,964	129,513	17,913,588	271,269,489
11	271,269,489	19,368,385	24,880,579	132,427	18,791,302	284,416,170
12	284,416,170	19,843,965	25,987,792	135,406	19,689,359	297,826,296
13	297,826,296	20,336,036	27,035,343	138,453	20,608,519	311,597,056
14	311,597,056	20,832,343	28,071,284	141,568	21,553,476	325,770,022
15	325,770,022	21,377,737	29,128,759	144,753	22,527,549	340,401,797
16	340,401,797	21,972,081	30,119,194	148,010	23,537,796	355,644,470
17	355,644,470	22,613,712	31,061,533	151,340	24,594,142	371,639,451
18	371,639,451	23,311,674	31,949,242	154,746	25,707,031	388,554,168
19	388,554,168	24,078,266	32,766,558	158,227	26,889,164	406,596,812
20	406,596,812	16,770,335	33,499,257	161,787	27,870,602	417,576,705
21	417,576,705	1,382,842	34,236,578	165,428	28,074,699	412,632,240
22	412,632,240	1,208,505	34,920,024	169,150	27,698,433	406,450,004
23	406,450,004	1,025,756	35,459,573	172,956	27,240,263	399,083,494
24	399,083,494	851,070	35,922,077	176,847	26,702,170	390,537,811
25	390,537,811	721,695	36,260,670	180,826	26,087,454	380,905,463
26	380,905,463	590,401	36,522,621	184,895	25,399,283	370,187,632
27	370,187,632	485,594	36,659,366	189,055	24,640,435	358,465,241
28	358,465,241	381,432	36,690,257	193,309	23,814,992	345,778,099
29	345,778,099	303,915	36,557,183	197,658	22,928,685	332,255,857
30	332,255,857	225,313	36,331,545	202,105	21,987,118	317,934,639

Column b – Contributions on behalf of current employees in the Plan as of the Actuarial Valuation Date.
 Column d – Based on the average Administrative Expense in recent years, and projected to increase in the future.
 Column e – Based on the Expected Rate of Return on Plan Investments, and does not factor in allocation changes.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION – YEARS 31 TO 60

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expense (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a)+(b)-(c)-(d)+(e)
31	\$ 317,934,639	\$ 178,406	\$ 36,014,706	\$ 206,653	\$ 20,993,921	\$ 302,885,607
32	302,885,607	136,804	35,595,948	211,303	19,953,527	287,168,687
33	287,168,687	100,854	35,068,785	216,057	18,870,368	270,855,067
34	270,855,067	68,892	34,455,668	220,918	17,748,585	253,995,958
35	253,995,958	48,199	33,763,838	225,889	16,591,764	236,646,195
36	236,646,195	30,416	32,997,473	226,430	15,403,462	218,856,169
37	218,856,169	18,001	32,150,632	210,213	14,187,932	200,701,257
38	200,701,257	9,742	31,261,724	193,624	12,948,492	182,204,143
39	182,204,143	7,052	30,313,180	176,709	11,687,391	163,408,696
40	163,408,696	3,121	29,326,205	159,499	10,406,718	144,332,831
41	144,332,831	2,662	28,295,086	142,022	9,108,093	125,006,478
42	125,006,478	1,285	27,216,925	124,299	7,793,556	105,460,095
43	105,460,095	-	26,100,480	106,359	6,464,967	85,718,222
44	85,718,222	-	24,948,362	88,228	5,123,995	65,805,627
45	65,805,627	-	23,764,144	69,928	3,772,201	45,743,756
46	45,743,756	-	22,552,076	51,480	2,410,938	25,551,139
47	25,551,139	-	21,317,291	32,902	1,041,323	5,242,269
48	5,242,269	-	20,065,892	14,211	-	-
49	-	-	18,805,143	-	-	-
50	-	-	17,542,936	-	-	-
51	-	-	16,287,841	-	-	-
52	-	-	15,048,065	-	-	-
53	-	-	13,830,731	-	-	-
54	-	-	12,643,367	-	-	-
55	-	-	11,493,234	-	-	-
56	-	-	10,387,061	-	-	-
57	-	-	9,330,757	-	-	-
58	-	-	8,329,113	-	-	-
59	-	-	7,385,936	-	-	-
60	-	-	6,504,490	-	-	-

Column b – Contributions on behalf of current employees in the Plan as of the Actuarial Valuation Date.
 Column d – Based on the average Administrative Expense in recent years, and projected to increase in the future.
 Column e – Based on the Expected Rate of Return on Plan Investments, and does not factor in allocation changes.



PROJECTION OF THE PENSION PLAN’S FIDUCIARY NET POSITION – YEARS 61 TO 80

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expense (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a)+(b)-(c)-(d)+(e)
61	\$ -	\$ -	\$ 5,687,533	\$ -	\$ -	\$ -
62	-	-	4,936,384	-	-	-
63	-	-	4,251,329	-	-	-
64	-	-	3,631,710	-	-	-
65	-	-	3,075,976	-	-	-
66	-	-	2,581,773	-	-	-
67	-	-	2,146,275	-	-	-
68	-	-	1,766,170	-	-	-
69	-	-	1,437,755	-	-	-
70	-	-	1,157,156	-	-	-
71	-	-	920,253	-	-	-
72	-	-	722,618	-	-	-
73	-	-	559,900	-	-	-
74	-	-	427,792	-	-	-
75	-	-	322,073	-	-	-
76	-	-	238,764	-	-	-
77	-	-	174,178	-	-	-
78	-	-	124,946	-	-	-
79	-	-	88,083	-	-	-
80	-	-	60,991	-	-	-

NOTES TO PROJECTION OF THE PENSION PLAN’S FIDUCIARY NET POSITION

Projected Total Contributions are Employee and Employer Contributions projected to be made under the Funding Policy on behalf of current employees in the Plan as of the Actuarial Valuation Date. The amounts shown are detailed earlier in this section.

Projected Benefit Payments shown represents current employees as of the Actuarial Valuation Date. The Plan will pay benefits in the future on behalf of employees hired after the Actuarial Valuation Date, but those benefit payments are not projected for this purpose.

Projected Investment Earnings are based on the Expected Rate of Return on Plan Investments. Administrative Expense are typically not charged on a per employee basis. Administrative Expenses shown are not projected to distinguish between current and future employees.

The Projected Fiduciary Net Position represents assets held or projected to be held on behalf of current employees in the Plan as of the Actuarial Valuation Date. The Plan will hold assets in the future on behalf of employees hired after the Actuarial Valuation Date, but those assets are not projected for this purpose.



ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS – YEARS 1 TO 30

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (7.00%)	Present Value of "Unfunded" Benefit Payments (2.51%)	Present Value of Benefit Payments Using the Single Discount Rate (6.21%)
1	\$ 159,297,661	\$ 16,801,355	\$ 16,801,355	\$ -	\$ 16,242,483	\$ -	\$ 16,302,778
2	166,866,256	17,165,581	17,165,581	-	15,508,966	-	15,682,323
3	177,719,060	17,771,422	17,771,422	-	15,005,924	-	15,286,521
4	188,118,817	18,484,950	18,484,950	-	14,587,305	-	14,970,605
5	198,971,603	19,233,168	19,233,168	-	14,184,820	-	14,665,825
6	210,262,029	20,083,418	20,083,418	-	13,842,893	-	14,418,759
7	221,898,155	21,038,196	21,038,196	-	13,552,329	-	14,221,105
8	233,796,990	21,983,947	21,983,947	-	13,235,103	-	13,991,526
9	245,980,153	22,932,794	22,932,794	-	12,903,124	-	13,742,033
10	258,460,895	23,885,964	23,885,964	-	12,560,210	-	13,476,322
11	271,269,489	24,880,579	24,880,579	-	12,227,307	-	13,216,720
12	284,416,170	25,987,792	25,987,792	-	11,935,921	-	12,997,720
13	297,826,296	27,035,343	27,035,343	-	11,604,720	-	12,731,052
14	311,597,056	28,071,284	28,071,284	-	11,261,112	-	12,445,985
15	325,770,022	29,128,759	29,128,759	-	10,920,869	-	12,159,719
16	340,401,797	30,119,194	30,119,194	-	10,553,458	-	11,838,032
17	355,644,470	31,061,533	31,061,533	-	10,171,630	-	11,494,594
18	371,639,451	31,949,242	31,949,242	-	9,777,874	-	11,131,813
19	388,554,168	32,766,558	32,766,558	-	9,371,971	-	10,749,067
20	406,596,812	33,499,257	33,499,257	-	8,954,710	-	10,346,887
21	417,576,705	34,236,578	34,236,578	-	8,553,087	-	9,956,334
22	412,632,240	34,920,024	34,920,024	-	8,153,110	-	9,561,329
23	406,450,004	35,459,573	35,459,573	-	7,737,462	-	9,141,381
24	399,083,494	35,922,077	35,922,077	-	7,325,591	-	8,719,154
25	390,537,811	36,260,670	36,260,670	-	6,910,879	-	8,286,732
26	380,905,463	36,522,621	36,522,621	-	6,505,424	-	7,858,579
27	370,187,632	36,659,366	36,659,366	-	6,102,599	-	7,426,798
28	358,465,241	36,690,257	36,690,257	-	5,708,170	-	6,998,452
29	345,778,099	36,557,183	36,557,183	-	5,315,389	-	6,565,360
30	332,255,857	36,331,545	36,331,545	-	4,936,992	-	6,143,336

The Projected Fiduciary Net Position and Benefit Payments are based on current employees in the Plan as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position is shown in more detail earlier in this section.



ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS – YEARS 31 TO 60

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (7.00%)	Present Value of "Unfunded" Benefit Payments (2.51%)	Present Value of Benefit Payments Using the Single Discount Rate (6.21%)
31	\$ 317,934,639	\$ 36,014,706	\$ 36,014,706	\$ -	\$ 4,573,774	\$ -	\$ 5,733,699
32	302,885,607	35,595,948	35,595,948	-	4,224,853	-	5,335,685
33	287,168,687	35,068,785	35,068,785	-	3,889,985	-	4,949,313
34	270,855,067	34,455,668	34,455,668	-	3,571,940	-	4,578,461
35	253,995,958	33,763,838	33,763,838	-	3,271,233	-	4,224,207
36	236,646,195	32,997,473	32,997,473	-	2,987,835	-	3,886,947
37	218,856,169	32,150,632	32,150,632	-	2,720,706	-	3,565,760
38	200,701,257	31,261,724	31,261,724	-	2,472,414	-	3,264,450
39	182,204,143	30,313,180	30,313,180	-	2,240,557	-	2,980,322
40	163,408,696	29,326,205	29,326,205	-	2,025,800	-	2,714,702
41	144,332,831	28,295,086	28,295,086	-	1,826,703	-	2,466,107
42	125,006,478	27,216,925	27,216,925	-	1,642,148	-	2,233,442
43	105,460,095	26,100,480	26,100,480	-	1,471,763	-	2,016,595
44	85,718,222	24,948,362	24,948,362	-	1,314,764	-	1,814,875
45	65,805,627	23,764,144	23,764,144	-	1,170,426	-	1,627,652
46	45,743,756	22,552,076	22,552,076	-	1,038,065	-	1,454,322
47	25,551,139	21,317,291	21,317,291	-	917,036	-	1,294,317
48	5,242,269	20,065,892	5,242,269	14,823,623	210,761	4,566,235	1,147,101
49	-	18,805,143	-	18,805,143	-	5,650,857	1,012,172
50	-	17,542,936	-	17,542,936	-	5,142,493	889,026
51	-	16,287,841	-	16,287,841	-	4,657,670	777,160
52	-	15,048,065	-	15,048,065	-	4,197,780	676,024
53	-	13,830,731	-	13,830,731	-	3,763,725	585,007
54	-	12,643,367	-	12,643,367	-	3,356,366	503,516
55	-	11,493,234	-	11,493,234	-	2,976,340	430,951
56	-	10,387,061	-	10,387,061	-	2,624,018	366,701
57	-	9,330,757	-	9,330,757	-	2,299,454	310,150
58	-	8,329,113	-	8,329,113	-	2,002,352	260,668
59	-	7,385,936	-	7,385,936	-	1,732,131	217,635
60	-	6,504,490	-	6,504,490	-	1,488,067	180,456

The Projected Fiduciary Net Position and Benefit Payments are based on current employees in the Plan as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position is shown in more detail earlier in this section.



ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS – YEARS 61 TO 80

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Values of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments (7.00%)	Present Value of "Unfunded" Benefit Payments (2.51%)	Present Value of Benefit Payments Using the Single Discount Rate (6.21%)
61	\$ -	\$ 5,687,533	\$ -	\$ 5,687,533	\$ -	\$ 1,269,307	\$ 148,565
62	-	4,936,384	-	4,936,384	-	1,074,696	121,405
63	-	4,251,329	-	4,251,329	-	902,891	98,443
64	-	3,631,710	-	3,631,710	-	752,411	79,179
65	-	3,075,976	-	3,075,976	-	621,671	63,141
66	-	2,581,773	-	2,581,773	-	509,014	49,898
67	-	2,146,275	-	2,146,275	-	412,792	39,056
68	-	1,766,170	-	1,766,170	-	331,369	30,260
69	-	1,437,755	-	1,437,755	-	263,147	23,193
70	-	1,157,156	-	1,157,156	-	206,604	17,575
71	-	920,253	-	920,253	-	160,283	13,160
72	-	722,618	-	722,618	-	122,779	9,729
73	-	559,900	-	559,900	-	92,802	7,098
74	-	427,792	-	427,792	-	69,170	5,106
75	-	322,073	-	322,073	-	50,801	3,619
76	-	238,764	-	238,764	-	36,738	2,526
77	-	174,178	-	174,178	-	26,144	1,735
78	-	124,946	-	124,946	-	18,295	1,172
79	-	88,083	-	88,083	-	12,582	778
80	-	60,991	-	60,991	-	8,499	507

NOTES TO THE ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS

The Projected Fiduciary Net Position and Benefit Payments are based on current employees in the Plan as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position is shown in more detail earlier in this section.

The Funded and Unfunded Portion of Benefit Payments are split based on the time that the Projected Fiduciary Net Position is to reach \$0 (based on assets for current employees).

The Present Value ("PV") of the Funded and Unfunded Portion of Benefit Payments are determined separately. The PV of the Funded Portion of Benefit Payments uses the Expected Rate of Return on Plan Investments. The PV of the Unfunded Portion of Benefit Payments are determined using the High-Quality Municipal Bond Rate as of the Measurement Date, as described in the *Actuarial Assumptions Information* section of this report.

The Discount Rate used for GASB purposes is the rate such that when applied to the Total Projected Benefit Payments results in a Present Value that equals the sum of the Present Value of the Funded and Unfunded Portion of Benefit Payments. The Discount Rate is rounded to four decimal places; therefore, the resulting Present Value comparisons may show a slight difference due to rounding.



SUMMARY OF PRINCIPAL PLAN PROVISIONS

Establishment of the Fund
Administration
Member Contributions
Regular Retirement Pension Benefit
Early Retirement Pension Benefit
Surviving Spouse Benefit
Termination Benefit – Vested
Disability Benefit



ESTABLISHMENT OF THE FUND

The Firefighters' Pension Fund is established and administered as prescribed by "Article 4 – Firefighters' Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code.

ADMINISTRATION

The Firefighters' Pension Fund is administered by a Board of Trustees whose duties are to manage the Pension Fund, determine applications for pensions, authorize payment of pensions, establish rules, pay expenses, invest assets, and keep records.

MEMBER CONTRIBUTIONS

Members contribute 9.455% of pensionable salary.

REGULAR RETIREMENT PENSION BENEFIT

Tier I

Eligibility: Age 50 with at least 20 years of creditable service.

Benefit: 50% of final salary for the first 20 years of service, plus an additional 2.5% of final salary for each year of service beyond 20 years of service, pro-rated monthly, and not to exceed 75% of final salary. "Final salary" is based on the firefighter's pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: A firefighter is entitled to receive an initial increase equal to 1/12 of 3% of the original monthly benefit for each full month that has passed since the pension began. The initial increase date will be the latter of the first day of the month after the pensioner turns age 55 or the first day of the month after the benefit date anniversary. Subsequent increases of 3% of the current monthly benefit will be granted every January 1st thereafter.



REGULAR RETIREMENT PENSION BENEFIT - CONTINUED

Tier II

Eligibility: Age 55 with at least 10 years of creditable service.

Benefit: 2.5% of final average salary for each year of service, and not to exceed 75% of final average salary. "Final average salary" is determined by dividing the total pensionable salary during 48 consecutive months of service within the last 60 months of service in which total pensionable salary was the highest, by the number of months of service in that period (or by dividing the total pensionable salary during 96 consecutive months of service within the last 120 months of service in which total pensionable salary was the highest, by the number of months of service in that period, if greater). Annual salary for this purpose will not exceed the salary cap, indexed by the lesser of 3% or the CPI-U for the 12 months ending with the September preceding each November 1st. The salary cap will not decrease.

Annual Increase in Benefit: The initial increase date will be the latter of the January 1st after the pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.

EARLY RETIREMENT PENSION BENEFIT

Tier I

None.

Tier II

Eligibility: Age 50 with at least 10 years of creditable service.

Benefit: The regular retirement pension benefit reduced by ½ of 1% for each month that the firefighters' age is between 50 and 55.

Annual Increase in Benefit: The initial increase date will be the latter of the January 1st after the pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.



SURVIVING SPOUSE BENEFIT

Tier I

Eligibility: Married to an active firefighter, a disabled pensioner at the time of death, or a retired pensioner (at least 12 months prior to the time of death if married post-retirement).

Active Line of Duty Death Benefit: An eligible surviving spouse is entitled to receive 100% of the firefighter's final pensionable salary attached to rank held on the last day of service.

Non-Duty Death Benefit:

Disabled or Retired Pensioner: An eligible surviving spouse is entitled to receive the greater of the pensioner's benefit at the time of death or 54% of the pensioner's final pensionable salary attached to rank held on the last day of service.

Active Member: An eligible surviving spouse is entitled to receive the greater of the firefighter's eligible benefit at the time of death or 54% of the firefighter's final pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: None.

Tier II

Eligibility: Married to an active firefighter, a disabled pensioner at the time of death, or a retired pensioner (at least 12 months prior to the time of death if married post-retirement).

Active Line of Duty Death Benefit: An eligible surviving spouse is entitled to receive 100% of the firefighter's final pensionable salary attached to rank held on the last day of service.

Non-Duty Death Benefit:

Disabled or Retired Pensioner and Active Member: An eligible surviving spouse is entitled to receive the greater of 66 $\frac{2}{3}$ % of the firefighter's earned pension benefit at the time of death or 54% of the firefighter's monthly salary at the time of death.

Annual Increase in Benefit: The initial increase date will be the January 1st after the surviving spouse turns age 60. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or $\frac{1}{2}$ of the CPI-U for the 12 months ending with the September preceding each November 1st.



TERMINATION BENEFIT – VESTED

Tier I

Eligibility: Age 60 with at least 10 but less than 20 years of creditable service.

Benefit: An accrual factor times final salary for each year of service. “Accrual factor” is a factor of 1.5% at 10 years of service, increasing ratably up to 2.4% at 19 years of service. “Final salary” is based on the firefighter’s pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: A firefighter is entitled to receive an initial increase equal to 1/12 of 3% of the original monthly benefit for each full month that has passed since the pension began. The initial increase date will be the first day of the month after the benefit date anniversary. Subsequent increases of 3% of the current monthly benefit will be granted every January 1st thereafter.

Tier II

None.



DISABILITY BENEFIT

Tier I

Eligibility: Duty Disability, Non-Duty Disability with at least 7 years of creditable service, or Occupational Disease Disability with at least 5 years of creditable service.

Benefit: For a duty disability or an occupational disease disability with at least 5 years of creditable service, a firefighter is entitled to receive the greater of 65% of final salary or the regular retirement pension benefit at the time of disability. For a non-duty disability with at least 7 years of creditable service, a firefighter is entitled to receive 50% of final salary. “Final salary” is based on the firefighter’s pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: A firefighter is entitled to receive an initial increase equal to 3% of the original monthly benefit for each full year that has passed since the pension began. The initial increase date will be the latter of the January 1st after following pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases of 3% of the original monthly benefit will be granted every January 1st thereafter.

Tier II

Eligibility: Duty Disability, Non-Duty Disability with at least 7 years of creditable service, or Occupational Disease Disability with at least 5 years of creditable service.

Benefit: For a duty disability or an occupational disease disability with at least 5 years of creditable service, a firefighter is entitled to receive the greater of 65% of final salary or the regular retirement pension benefit at the time of disability. For a non-duty disability, a firefighter is entitled to receive 50% of final salary. “Final salary” is based on the firefighter’s pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: A firefighter is entitled to receive an initial increase equal to 3% of the original monthly benefit for each full year that has passed since the pension began. The initial increase date will be the latter of the January 1st after following pensioner turns age 60 or the first day of the month after the benefit date anniversary. Subsequent increases of 3% of the original monthly benefit will be granted every January 1st thereafter.



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