



Firefighters' Retirement Plan of the City of St. Louis

**GASB 67/68 Report
as of September 30, 2022
Measurement Date**

Produced by Cheiron

February 2023

TABLE OF CONTENTS

<i>Section</i>		<i>Page</i>
Section I	Board Summary	1
Section II	Certification	3
Section III	Determination of Discount Rate	4
Section IV	Total Pension Liability Sensitivity.....	5
Section V	Note Disclosures	6
Section VI	Required Supplementary Information	8
Section VII	Employer Reporting Amounts	11
 <i>Appendices</i>		
Appendix A	Membership Information	14
Appendix B	Actuarial Assumptions and Methods	15
Appendix C	Summary of Plan Provisions.....	16
Appendix D	Glossary of Terms.....	17

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION I – BOARD SUMMARY

The purpose of this report is to provide accounting and financial disclosure information under Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67 and 68) for the Firefighters’ Retirement Plan of the City of St. Louis (the Plan) and the City of St. Louis (the City).

This information includes:

- Calculation of the Net Pension Liability at the discount rate as well as discount rates 1% higher and lower than the discount rate,
- Changes in the Net Pension Liability,
- Schedule of Employer Contributions,
- Disclosure of Deferred Inflows and Outflows, and
- Calculation of the Annual Pension Expense for the City.

Highlights

The measurement date used in this report for the Plan is September 30, 2022. This measurement date is used for the Plan’s GASB 67 reporting as of September 30, 2022 and the City’s GASB 68 reporting as of June 30, 2023. Measurements as of this measurement date are based on the fair value of assets as of September 30, 2022 and the Total Pension Liability as of the valuation date, also September 30, 2022.

The table below provides a summary of the key results as of the current September 30, 2022 measurement date as well as the immediately preceding measurement date.

Table I-1 Summary of Results			
Measurement Date	September 30, 2022		September 30, 2021
Net Pension Liability	\$	60,239,881	\$ 14,011,542
Deferred Outflows		(32,840,198)	(8,618,103)
Deferred Inflows		15,686,133	33,344,032
Net Impact on Statement of Net Position	\$	43,085,816	\$ 38,737,471
Pension Expense (\$ Amount)	\$	12,234,025	\$ 4,086,662
Pension Expense (% of Payroll)		28.54%	9.88%

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION I – BOARD SUMMARY

Under GASB 68, the City recognized a Net Pension Liability of \$14,011,542 as of the September 30, 2021 measurement date for its reporting for the fiscal year ending June 30, 2022. As of the measurement date September 30, 2022, the City will report a Net Pension Liability of \$60,239,881, Deferred Outflows of Resources of \$32,840,198, and Deferred Inflows of Resources of \$15,686,133 related to the Plan for the fiscal year ending June 30, 2023. Consequently, the net impact on the City's Statement of Net Position would be \$43,085,816 at the end of the reporting year. In addition, any contributions between the measurement date and the reporting date would be reported as deferred outflows to offset the cash outflow reported.

For the measurement year ending September 30, 2022, the annual pension expense is \$12,234,025 or 28.54% of covered payroll. This amount is not equal to the employer's contributions to the Plan, but instead represents the change in the net impact on the City's Statement of Net Position plus employer and non-employer contributions. A breakdown of the components of the Pension Expense is shown in section VII of this report.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION II – CERTIFICATION

The purpose of this report is to provide accounting and financial reporting information under GASB 67 for the Firefighters' Retirement Plan of the City of St. Louis (the Plan) and under GASB 68 for the City of St. Louis (the City). This report is for the use of the Plan, the City, and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for the Plan.

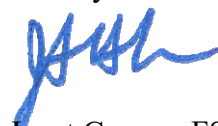
In preparing our report, we relied on information, some oral and some written, supplied by the Plan. This information includes, but is not limited to, the plan provisions, membership data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

The membership data, actuarial assumptions, and plan provisions are the same as were described in the October 1, 2022 actuarial valuation report.

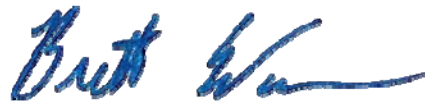
Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for the purposes described herein and for the use by the Plan and City auditors in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.



Janet Cranna, FSA, FCA, MAAA, EA
Principal Consulting Actuary



Brett Warren, FSA, CERA, MAAA, EA
Consulting Actuary

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION III – DETERMINATION OF DISCOUNT RATE

The discount rate used to measure the Total Pension Liability (TPL) was 7.00%.

In developing the projection of cash flows used to determine the discount rate, we have assumed that employer contributions to the Plan will continue to follow the written contribution policy. The total employer contribution rate is the sum of the normal cost rate plus an amortization of the Plan's unfunded actuarial liability (UAL) plus a provision for expenses. The normal cost rate is determined under the entry age actuarial cost method while the UAL rate is that necessary to pay down the UAL over a closed 30-year period that began February 1, 2013, using a level percentage of payroll, assuming 2.75% annual payroll growth. We also assume that member contributions will continue to be made at the rates specified in the Plan.

Based on these assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current members following the procedures described in paragraphs 39-45 of GASB 67. Consequently, the single equivalent rate used to determine the Total Pension Liability as of September 30, 2022 is 7.00%, the long-term expected rate of return as defined by GASB 67 and 68 as of that date.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION IV – TOTAL PENSION LIABILITY SENSITIVITY

The table below shows the Total Pension Liability (TPL) amounts at discount rates equal to the rate used for measuring the TPL at the September 30, 2022 measurement date as well as plus and minus one percent from that rate.

Table IV-1 Total Pension Liability			
Discount Rate	6.00%	7.00%	8.00%
Total Pension Liability, 9/30/2022			
Actives	\$ 170,421,347	\$ 149,764,152	\$ 132,275,038
Deferred Vested	415,630	386,534	363,742
Retirees	36,603,945	32,716,489	29,506,330
Total	\$ 207,440,922	\$ 182,867,175	\$ 162,145,110

Net Pension Liability (NPL) sensitivity disclosures required under GASB 67 and 68 are developed based on the information contained in Table V-2 in section V of this report.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION V – NOTE DISCLOSURES

The table below shows the changes in the Total Pension Liability (TPL), the Plan Fiduciary Net Position (i.e., fair value of Plan assets) (FNP), and the Net Pension Liability (NPL) during the measurement period ending on September 30, 2022.

Table V-1 Change in Net Pension Liability			
	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 9/30/2021	\$ 155,842,454	\$ 141,830,912	\$ 14,011,542
Changes for the year:			
Service cost	8,192,982		8,192,982
Interest	11,785,329		11,785,329
Changes of benefits	0		0
Differences between expected and actual experience	2,363,585		2,363,585
Changes of assumptions	7,693,857		7,693,857
Contributions - employer		7,885,680	(7,885,680)
Contributions - non-employer		0	0
Contributions - member		3,158,229	(3,158,229)
Net investment income		(26,774,864)	26,774,864
Benefit payments	(3,011,032)	(3,011,032)	0
Administrative expenses		(461,631)	461,631
Net changes	<u>27,024,721</u>	<u>(19,203,618)</u>	<u>46,228,339</u>
Balances at 9/30/2022	<u>\$ 182,867,175</u>	<u>\$ 122,627,294</u>	<u>\$ 60,239,881</u>

There were no changes in benefits during the year.

During the measurement year, the NPL increased by approximately \$46.2 million in total. The service cost and interest cost increased the NPL by approximately \$20.0 million, and investment losses and administrative expenses offset by member and employer contributions increased the NPL by approximately \$16.2 million. Additionally, there were actuarial experience losses during the year of approximately \$2.4 million.

In addition, the Board adopted recommended assumption changes, including:

- Demographic assumption changes, including changes to the termination rates, retirement rates, disability rates, mortality rates, salary merit rates, and type of disability, and
- Decrease in the rate of investment return assumption from 7.25% to 7.00%

The combined effect of these assumption changes increased the NPL by approximately \$7.7 million.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION V – NOTE DISCLOSURES

Changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate. The table below shows the sensitivity of the NPL to the discount rate.

Table V-2 Sensitivity of Net Pension Liability to Changes in Discount Rate			
	1% Decrease 6.00%	Discount Rate 7.00%	1% Increase 8.00%
Total Pension Liability	\$ 207,440,922	\$ 182,867,175	\$ 162,145,110
Plan Fiduciary Net Position	<u>122,627,294</u>	<u>122,627,294</u>	<u>122,627,294</u>
Net Pension Liability	<u>\$ 84,813,628</u>	<u>\$ 60,239,881</u>	<u>\$ 39,517,816</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	59.1%	67.1%	75.6%

A one percent decrease in the discount rate increases the TPL by approximately 13% and increases the NPL by approximately 41%. A one percent increase in the discount rate decreases the TPL by approximately 11% and decreases the NPL by approximately 34%.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION VI – REQUIRED SUPPLEMENTARY INFORMATION

The schedules of Required Supplementary Information generally start with information as of the implementation of GASB 67, and eventually will build up to ten years of information.

The schedule below and continued on the next page shows the changes in NPL and related ratios required by GASB.

Table VI-1 Schedule of Changes in Net Pension Liability and Related Ratios					
	FYE 2022	FYE 2021	FYE 2020	FYE 2019	FYE 2018
<u>Total Pension Liability</u>					
Service cost	\$ 8,192,982	\$ 8,223,932	\$ 7,952,461	\$ 8,400,874	\$ 7,620,110
Interest (includes interest on service cost)	11,785,329	11,096,096	10,137,611	9,337,346	7,776,889
Changes of benefit terms	0	0	0	0	0
Differences between expected and actual experience	2,363,585	(7,354,732)	(3,353,929)	(4,682,377)	6,428,256
Changes of assumptions	7,693,857	0	0	0	0
Benefit payments, including refunds of member contributions	(3,011,032)	(1,864,389)	(1,712,548)	(1,430,968)	(745,964)
Net change in Total Pension Liability	\$ 27,024,721	\$ 10,100,907	\$ 13,023,595	\$ 11,624,875	\$ 21,079,291
Total Pension Liability - beginning	155,842,454	145,741,547	132,717,952	121,093,077	100,013,786
Total Pension Liability - ending	\$ 182,867,175	\$ 155,842,454	\$ 145,741,547	\$ 132,717,952	\$ 121,093,077
<u>Plan Fiduciary Net Position</u>					
Contributions - employer	\$ 7,885,680	\$ 8,606,861	\$ 8,583,020	\$ 8,995,725	\$ 8,022,799
Contributions - non-employer	0	0	0	0	0
Contributions - member	3,158,229	3,337,924	3,303,888	3,294,992	3,172,039
Net investment income	(26,774,864)	24,691,740	9,162,898	1,120,101	5,683,305
Benefit payments, including refunds of member contributions	(3,011,032)	(1,864,389)	(1,712,548)	(1,430,968)	(745,964)
Administrative expense	(461,631)	(400,116)	(437,427)	(406,047)	(413,882)
Net change in Plan Fiduciary Net Position	\$ (19,203,618)	\$ 34,372,020	\$ 18,899,831	\$ 11,573,803	\$ 15,718,297
Plan Fiduciary Net Position - beginning	141,830,912	107,458,892	88,559,061	76,985,258	61,266,961
Plan Fiduciary Net Position - ending	\$ 122,627,294	\$ 141,830,912	\$ 107,458,892	\$ 88,559,061	\$ 76,985,258
Net Pension Liability - ending	\$ 60,239,881	\$ 14,011,542	\$ 38,282,655	\$ 44,158,891	\$ 44,107,819
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	67.06%	91.01%	73.73%	66.73%	63.58%
Covered payroll	\$ 42,859,173	\$ 41,349,542	\$ 42,075,366	\$ 40,926,565	\$ 39,933,287
Net Pension Liability as a percentage of covered payroll	140.55%	33.89%	90.99%	107.90%	110.45%

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION VI – REQUIRED SUPPLEMENTARY INFORMATION

Table VI-1 (Cont.) Schedule of Changes in Net Pension Liability and Related Ratios				
	FYE 2017	FYE 2016	FYE 2015	FYE 2014
<u>Total Pension Liability</u>				
Service cost	\$ 6,008,806	\$ 6,032,617	\$ 6,226,863	\$ 6,411,308
Interest (includes interest on service cost)	8,213,809	7,215,207	6,146,506	4,087,628
Changes of benefit terms	0	0	979,056	0
Differences between expected and actual experience	4,040,484	337,479	1,178,760	(5,359,993)
Changes of assumptions	(19,681,632)	0	22,244,023	0
Benefit payments, including refunds of member contributions	(551,797)	(381,467)	(263,081)	(132,992)
Net change in Total Pension Liability	\$ (1,970,330)	\$ 13,203,836	\$ 36,512,127	\$ 5,005,951
Total Pension Liability - beginning	101,984,116	88,780,280	52,268,153	47,262,202
Total Pension Liability - ending	\$ 100,013,786	\$ 101,984,116	\$ 88,780,280	\$ 52,268,153
<u>Plan Fiduciary Net Position</u>				
Contributions - employer	\$ 9,262,698	\$ 9,148,007	\$ 7,435,635	\$ 15,825,184
Contributions - non-employer	0	0	1,070,749	-
Contributions - member	3,120,654	2,918,622	2,829,213	2,813,290
Net investment income	5,899,921	2,892,491	(843,058)	(92,382)
Benefit payments, including refunds of member contributions	(551,797)	(381,467)	(263,081)	(132,992)
Administrative expense	(412,619)	(405,147)	(313,193)	(206,598)
Net change in Plan Fiduciary Net Position	\$ 17,318,857	\$ 14,172,506	\$ 9,916,265	\$ 18,206,502
Plan Fiduciary Net Position - beginning	43,948,104	29,775,598	19,859,333	1,652,831
Plan Fiduciary Net Position - ending	\$ 61,266,961	\$ 43,948,104	\$ 29,775,598	\$ 19,859,333
Net Pension Liability - ending	\$ 38,746,825	\$ 58,036,012	\$ 59,004,682	\$ 32,408,820
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	61.26%	43.09%	33.54%	38.00%
Covered payroll	\$ 38,483,242	\$ 36,637,437	\$ 35,531,194	\$ 34,938,772
Net Pension Liability as a percentage of covered payroll	100.68%	158.41%	166.06%	92.76%

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION VI – REQUIRED SUPPLEMENTARY INFORMATION

If an Actuarially Determined Contribution (ADC) is calculated, the following schedule is required. An ADC is a contribution amount determined in accordance with Actuarial Standards of Practice.

Table VI-2 Schedule of Employer Contributions									
	FYE 2022	FYE 2021	FYE 2020	FYE 2019	FYE 2018	FYE 2017	FYE 2016	FYE 2015	FYE 2014
Actuarially Determined Contribution (ADC)	\$ 7,885,680	\$ 8,606,861	\$ 8,583,020	\$ 8,995,724	\$ 8,022,799	\$ 9,262,698	\$ 9,148,007	\$ 7,435,635	\$ 8,942,435
Contributions in Relation to the ADC	7,885,680	8,606,861	8,583,020	8,995,725	8,022,799	9,262,698	9,148,007	7,435,635	15,825,184
Non-Employer Contribution	0	0	0	0	0	0	0	1,070,749	0
Contribution Deficiency/(Excess)	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ (1)</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ (1,070,749)</u>	<u>\$ (6,882,749)</u>
Covered Payroll	\$ 42,859,173	\$ 41,349,542	\$ 42,075,366	\$ 40,926,565	\$ 39,933,287	\$ 38,483,242	\$ 36,637,437	\$ 35,531,194	\$ 34,938,772
Contributions as a Percentage of Covered Payroll	18.40%	20.81%	20.40%	21.98%	20.09%	24.07%	24.97%	23.94%	45.29%

The notes below summarize the key methods and assumptions used to determine the actuarially determined contribution for FYE 2022.

Notes to Schedule

Valuation Date: October 1, 2021
 Timing: Actuarially determined contributions are calculated based on the actuarial valuation at the beginning of the plan year.

Key Methods and Assumptions Used to Determine Contribution Rates

Actuarial Cost Method: Entry Age Normal Cost Method
 Asset Valuation Method: 5-year smoothed market
 Amortization Method: Closed 30-year level percent amortization of unfunded liability as of February 1, 2013
 Discount Rate: 7.25%
 Amortization Growth Rate: 2.75%
 Inflation: 2.75%
 Salary Increases: Varies based on employee's years of service
 Mortality: RP-2014 Blue Collar Tables adjusted to 2006, with generational mortality improvement using MP 2017

A complete description of the methods and assumptions used to determine contribution rates for the year ending September 30, 2022 can be found in the October 1, 2021 actuarial valuation report.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION VII – EMPLOYER REPORTING AMOUNTS

The schedules in this section will be used by the City for its reporting date of June 30, 2023.

The impact of experience gains or losses and assumption changes on the TPL are recognized in expense over the average expected remaining service life of all active and inactive members of the Plan. As of the beginning of the measurement period, this recognition period was nine years. In addition, the impact of investment gains or losses is recognized over a period of five years.

The table below summarizes the balances of deferred outflows and deferred inflows of resources related to the Plan as of the September 30, 2022 measurement date along with the net recognition over the next five years and the total recognition thereafter, if any, of these amounts.

Table VII-1		
Schedule of Deferred Inflows and Outflows of Resources		
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 6,659,587	\$ 10,765,725
Changes in assumptions	6,838,984	4,920,408
Net difference between projected and actual earnings on pension plan investments	19,341,627	0
Total	<u>\$ 32,840,198</u>	<u>\$ 15,686,133</u>
Amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:		
Measurement year ended September 30:		
2023	\$ 2,529,965	
2024	1,585,125	
2025	4,080,525	
2026	7,453,074	
2027	43,792	
Thereafter	1,461,584	

The annual pension expense recognized by the City can be calculated two different ways. First, it is the change in the amounts reported on the City’s Statement of Net Position that relate to the Plan and are not attributable to employer contributions. That is, it is the change in NPL minus the change in deferred outflows plus the change in deferred inflows plus the City’s contributions during the year.

Alternatively, annual pension expense can be calculated by its individual components. While GASB does not require or suggest the organization of the individual components shown in the table below, we believe it helps to understand the level and volatility of pension expense.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION VII – EMPLOYER REPORTING AMOUNTS

The table below shows the development of pension expense for the City through both of these methodologies.

Table VII-2 Calculation of Pension Expense		
Measurement Year Ending	2022	2021
Change in Net Pension Liability	\$ 46,228,339	\$ (24,271,113)
Change in Deferred Outflows	(24,222,095)	4,059,481
Change in Deferred Inflows	(17,657,899)	15,691,433
Employer Contributions	7,885,680	8,606,861
Non-Employer Contributions	<u>0</u>	<u>0</u>
Pension Expense	\$ 12,234,025	\$ 4,086,662
Pension Expense as % of Payroll	28.54%	9.88%
Operating Expenses		
Service cost	\$ 8,192,982	\$ 8,223,932
Employee contributions	(3,158,229)	(3,337,924)
Administrative expenses	<u>461,631</u>	<u>400,116</u>
Total	\$ 5,496,384	\$ 5,286,124
Financing Expenses		
Interest cost	\$ 11,785,329	\$ 11,096,096
Expected return on assets	<u>(10,271,542)</u>	<u>(7,829,000)</u>
Total	\$ 1,513,787	\$ 3,267,096
Changes		
Benefit changes	\$ 0	\$ 0
Recognition of assumption changes	1,175,171	320,299
Recognition of liability gains and losses	(116,490)	(1,049,111)
Recognition of investment gains and losses	<u>4,165,173</u>	<u>(3,737,746)</u>
Total	\$ 5,223,854	\$ (4,466,558)
Pension Expense	\$ 12,234,025	\$ 4,086,662

First, there are components referred to as operating expenses. These are items directly attributable to the operation of the Plan during the measurement year. Service Cost less employee contributions represents the increase in employer-provided benefits attributable to the year, and administrative expenses are the cost of operating the Plan for the year.

Second, there are the financing expenses: the interest on the Total Pension Liability less the expected return on assets.

The final category is changes. This category will drive most of the volatility in pension expense from year to year. It includes any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

SECTION VII – EMPLOYER REPORTING AMOUNTS

The table below shows the amortization schedule for the deferred outflows and deferred inflows of resources for the City.

Table VII-3 Calculation of Deferred Items Schedule					
Experience Year	Recognition Period	Total Amount	Remaining Years	Recognized in Pension Expense	Deferred Resources
Recognition of Experience (Gains) and Losses					
2022	9	\$ 2,363,585	8	\$ 262,621	\$ 2,100,964
2021	9	(7,354,732)	7	(817,192)	(5,720,348)
2020	9	(3,353,929)	6	(372,659)	(2,235,952)
2019	10	(4,682,377)	6	(468,238)	(2,809,425)
2018	11	6,428,256	6	584,387	3,506,321
2017	8	4,040,484	2	505,061	1,010,118
2016	8	337,479	1	42,185	42,184
2015	8	1,178,760	0	147,345	0
Total		\$ (1,042,474)		\$ (116,490)	\$ (4,106,138)
Recognition of Assumption Changes					
2022	9	\$ 7,693,857	8	\$ 854,873	\$ 6,838,984
2017	8	(19,681,632)	2	(2,460,204)	(4,920,408)
2015	8	22,244,023	0	2,780,502	0
Total		\$ 10,256,248		\$ 1,175,171	\$ 1,918,576
Recognition of Investment (Gains) and Losses					
2022	5	\$ 37,046,406	4	\$ 7,409,281	\$ 29,637,125
2021	5	(16,862,740)	3	(3,372,548)	(10,117,644)
2020	5	(2,701,269)	2	(540,254)	(1,080,507)
2019	5	4,513,257	1	902,651	902,653
2018	5	(1,169,785)	0	(233,957)	0
Total		\$ 20,825,869		\$ 4,165,173	\$ 19,341,627

**FIREFIIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

APPENDIX A – MEMBERSHIP INFORMATION

Table A-1 Table of Plan Coverage			
	October 1, 2021	October 1, 2022	% change
Active Participants in Valuation			
Number			
FRP Only	175	187	6.9%
FRP with Frozen FRS Benefit	456	437	(4.2%)
Total	631	624	(1.1%)
Average Age	47.6	48.1	1.0%
Average Service	17.9	18.2	1.7%
Total Pensionable Payroll (as of 9/30)	\$ 41,349,542	\$ 42,859,173	3.7%
Average Total Pensionable Payroll	\$ 65,530	\$ 68,685	4.8%
DROP Participants in Valuation (included in Active Participants)			
Number	96	102	6.3%
Average Age	58.0	57.9	(0.1%)
Average Service	29.8	29.2	(2.0%)
Total FRP DROP Account Balances	\$ 4,355,216	\$ 4,642,976	6.6%
Average FRP DROP Account Balances	\$ 45,367	\$ 45,519	0.3%
Terminated Statistics			
Non-Vested Count (Refund Only)	22	22	0.0%
Total Account Balances	\$ 98,329	\$ 171,064	74.0%
Vested Terminated Count (Vested benefit)	4	2	(50.0%)
Average Monthly Benefit	\$ 634	\$ 604	(4.7%)
Total Account Balances	\$ 122,947	\$ 64,172	(47.8%)
Pensioners			
Number in Pay Status			
Retirees	103	119	15.5%
Disableds	11	12	9.1%
Total	114	131	14.9%
Average Age - Retirees	60.9	61.9	1.6%
Average Monthly Benefit - Retirees	\$ 616	\$ 801	30.0%
Average Age - Disableds	54.1	51.9	(4.1%)
Average Monthly Benefit - Disabled	\$ 3,360	\$ 3,378	0.6%
Beneficiaries in Pay Status			
Number	11	12	9.1%
Average Age	44.1	45.8	4.0%
Average Monthly Benefit	\$ 2,089	\$ 2,126	1.8%
Retired FRS - Death Benefit Only			
Number	9	9	0.0%
Average Age	61.1	62.1	1.6%
Average Monthly Benefit (Spouse Only)	\$ 2,637	\$ 2,637	0.0%

Please refer to the October 1, 2022 actuarial valuation report for a more complete summary of the data.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

The actuarial assumptions and methodology used in developing the TPL are the same as those summarized in the October 1, 2022 actuarial valuation report. GASB specific methodologies and assumptions are described in Appendix D.

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies for the intended purpose of calculating liabilities and projected benefit payments. We have examined the reasonableness of the input data and assumptions, reviewed sample calculations for accuracy, reconciled the actuarial gain loss, and find the aggregate results reasonable and appropriate. We are not aware of any material inconsistencies, unreasonable output resulting from the aggregation of assumptions, material limitations or known weaknesses that would affect this actuarial valuation.

The projections used for the depletion test are based on our propriety model P-Scan developed by our firm that utilize the results shown in our actuarial valuation report as of October 1, 2022. The projections assume continuation of the plan provisions and actuarial assumptions in effect as of the valuation date and do not reflect the impact of any changes in benefits or actuarial assumptions that may be adopted after the valuation date. While the assumptions individually are reasonable for the underlying valuation that supports the projections, specifically for projection purposes, they are also considered reasonable in the aggregate.

**FIREFIGHTERS' RETIREMENT PLAN OF THE CITY OF ST. LOUIS
GASB 67 AND 68 REPORTING FOR SEPTEMBER 30, 2022 MEASUREMENT DATE**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

The plan provisions are the same as those summarized in the October 1, 2022 actuarial valuation report.

APPENDIX D – GLOSSARY OF TERMS

1. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

2. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

3. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

4. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

5. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 and 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Service Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

6. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the Actuarial Valuation Date to the Measurement Date. The Measurement Date must be the same as the Reporting Date for the Plan.

APPENDIX D – GLOSSARY OF TERMS

7. Net Pension Liability

The liability of employers and nonemployer contributing entities for employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position.

8. Plan Fiduciary Net Position

The fair or market value of assets.

9. Reporting Date

The last day of the Plan or employer's fiscal year.

10. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The Service Cost is the normal cost calculated under the Entry Age Actuarial Cost Method.

11. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the actuarial liability calculated under the Entry Age Actuarial Cost Method. This measurement generally is not appropriate for estimating the cost to settle the Plan's liabilities.