

CITY OF GENEVA
POLICE PENSION FUND
ACTUARIAL VALUATION
AS OF MAY 1, 2022
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING APRIL 30, 2024
GASB 67/68 DISCLOSURE INFORMATION
AS OF APRIL 30, 2022



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS



August 5, 2022

Ms. Rita Kruse
City of Geneva Police Pension Fund

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68) – City of Geneva Police Pension Fund

Dear Ms. Kruse:

We are pleased to present to the City this report of the annual actuarial valuation of the City of Geneva Police Pension Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and could produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuations, we did not perform an analysis of the potential range of such future measurements.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the City, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in the GASB results are based on an actuarial valuation performed as of the valuation date.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

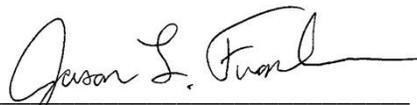
The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Geneva, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Geneva Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By: 
Jason L. Franken, FSA, EA, MAAA

By: 
Heidi E. Andorfer, FSA, EA, MAAA

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Enclosures

TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	6
	c. Comparative Summary of Principal Valuation Results	7
II	Valuation Information	
	a. Development of Amortization Payment	12
	b. Detailed Actuarial (Gain)/Loss Analysis	13
	c. Reconciliation of Changes in Contribution Requirement	14
	d. Statutory Minimum Required Contribution	15
	e. Projection of Benefit Payments	16
	f. Actuarial Assumptions and Methods	17
	g. Glossary	20
	h. Discussion of Risk	21
III	Trust Fund	24
IV	Member Statistics	
	a. Statistical Data	28
	b. Age and Service Distribution	29
	c. Valuation Participant Reconciliation	30
V	Summary of Current Plan	31
VI	Governmental Accounting Standards Board Statements No. 67 and No. 68 Disclosure Information	34

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Geneva Police Pension Fund, performed as of May 1, 2022, has been completed and the results are presented in this report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended April 30, 2024.

The contribution requirements, compared with those set forth in the May 1, 2021 actuarial report, are as follows:

Valuation Date Applicable to Fiscal Year Ending	5/1/2022 <u>4/30/2024</u>	5/1/2021 <u>4/30/2023</u>
Total Recommended Contribution	\$2,289,982	\$2,114,001
% of Projected Annual Payroll	61.5%	60.9%
Member Contributions (Est.)	(368,856)	(344,026)
% of Projected Annual Payroll	(9.9%)	(9.9%)
City Recommended Contribution	1,921,126	1,769,975
% of Projected Annual Payroll	51.6%	51.0%

As you can see, the Total Recommended Contribution shows an increase when compared to the results determined in the May 1, 2021 actuarial valuation report. The increase is attributable to changes in plan assumptions and the natural increase in the amortization payment due to the payroll growth assumption.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of unfavorable experience included more retirements than expected, lower than expected inactive mortality, and an investment return of 6.87% (Actuarial Asset Basis) which fell short of the 7.00% assumption. These losses were offset in part by gains associated with an average salary increase of 4.16% which fell short of the 5.36% assumption and more turnover than expected.

CHANGES SINCE PRIOR VALUATION

Plan Changes Since Prior Valuation

There were no plan changes since the prior valuation.

Actuarial Assumption/Method Changes Since Prior Valuation

Based on the results of the 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund, the following assumption changes were made:

- Updated mortality, retirement, disability, and termination rate tables.
- Updated assumed salary increase rates.
- Reduced assumed payroll growth rate from 4.00% to 3.50%.

There were no method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>5/1/2022</u>	Old Assump <u>5/1/2022</u>	<u>5/1/2021</u>
A. Participant Data			
Number Included			
Actives	38	38	35
Service Retirees	22	22	20
Beneficiaries	3	3	3
Disability Retirees	2	2	2
Terminated Vested	<u>4</u>	<u>4</u>	<u>2</u>
Total	69	69	62
Total Annual Payroll	\$3,722,056	\$3,722,056	\$3,471,507
Payroll Under Assumed Ret. Age	3,722,056	3,722,056	3,471,507
Annual Rate of Payments to:			
Service Retirees	1,798,442	1,798,442	1,624,517
Beneficiaries	100,241	100,241	100,241
Disability Retirees	131,487	131,487	130,294
Terminated Vested	51,864	51,864	24,243
B. Assets			
Actuarial Value	30,458,201	30,458,201	28,321,956
Market Value	29,100,169	29,100,169	31,291,534
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	22,084,756	21,130,783	21,295,738
Disability Benefits	1,720,036	1,763,691	1,625,266
Death Benefits	234,014	242,351	226,951
Vested Benefits	1,129,935	1,320,535	1,344,288
Service Retirees	28,356,504	28,567,216	25,891,257
Beneficiaries	836,700	862,123	880,565
Disability Retirees	1,969,936	1,980,771	1,961,276
Terminated Vested	<u>308,219</u>	<u>298,604</u>	<u>181,712</u>
Total	56,640,100	56,166,074	53,407,053

C. Liabilities - (Continued)	New Assump <u>5/1/2022</u>	Old Assump <u>5/1/2022</u>	<u>5/1/2021</u>
Present Value of Future Salaries	38,070,326	37,424,929	33,009,383
Present Value of Future Member Contributions	3,772,769	3,708,810	3,271,230
Normal Cost (Retirement)	601,210	547,404	536,653
Normal Cost (Disability)	104,853	105,944	100,246
Normal Cost (Death)	12,474	13,263	12,098
Normal Cost (Vesting)	<u>71,762</u>	<u>81,991</u>	<u>75,644</u>
Total Normal Cost	790,299	748,602	724,641
Present Value of Future Normal Costs	7,314,516	6,801,146	6,225,157
Accrued Liability (Retirement)	16,471,691	16,094,159	16,616,145
Accrued Liability (Disability)	689,931	738,823	724,276
Accrued Liability (Death)	93,712	96,452	107,978
Accrued Liability (Vesting)	598,891	726,780	818,687
Accrued Liability (Inactives)	<u>31,471,359</u>	<u>31,708,714</u>	<u>28,914,810</u>
Total Actuarial Accrued Liability	49,325,584	49,364,928	47,181,896
Unfunded Actuarial Accrued Liability (UAAL)	18,867,383	18,906,727	18,859,940
Funded Ratio (AVA / AL)	61.7%	61.7%	60.0%

	New Assump <u>5/1/2022</u>	Old Assump <u>5/1/2022</u>	<u>5/1/2021</u>
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	31,471,359	31,708,714	28,914,810
Actives	6,518,545	6,322,462	6,436,197
Member Contributions	<u>3,519,734</u>	<u>3,519,734</u>	<u>3,533,980</u>
Total	41,509,638	41,550,910	38,884,987
Non-vested Accrued Benefits	<u>537,242</u>	<u>502,394</u>	<u>1,027,214</u>
Total Present Value Accrued Benefits	42,046,880	42,053,304	39,912,201
Funded Ratio (MVA / PVAB)	69.2%	69.2%	78.4%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	(6,424)	0	
Plan Experience	0	1,425,354	
Benefits Paid	0	(2,007,831)	
Interest	0	2,723,580	
Other	<u>0</u>	<u>0</u>	
Total	(6,424)	2,141,103	

	New Assump	Old Assump	
Valuation Date	5/1/2022	5/1/2022	5/1/2021
Applicable to Fiscal Year Ending	<u>4/30/2024</u>	<u>4/30/2024</u>	<u>4/30/2023</u>

E. Pension Cost

Normal Cost ¹	\$845,620	\$801,004	\$775,366
% of Total Annual Payroll ¹	22.7	21.6	22.3
Administrative Expenses ¹	34,582	34,582	34,268
% of Total Annual Payroll ¹	0.9	0.9	1.0
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 19 years (as of 5/1/2022) ¹	1,409,780	1,358,767	1,304,367
% of Total Annual Payroll ¹	37.9	36.5	37.6
Total Recommended Contribution	2,289,982	2,194,353	2,114,001
% of Total Annual Payroll ¹	61.5	59.0	60.9
Expected Member Contributions ¹	(368,856)	(368,856)	(344,026)
% of Total Annual Payroll ¹	(9.9)	(9.9)	(9.9)
Expected City Contribution	1,921,126	1,825,497	1,769,975
% of Total Annual Payroll ¹	51.6	49.1	51.0

F. Past Contributions

Plan Years Ending:	<u>4/30/2022</u>
Total Recommended Contribution	2,061,191
City	1,709,455
Actual Contributions Made:	
Members (excluding buyback)	351,736
City	<u>1,756,100</u>
Total	2,107,836

G. Net Actuarial (Gain)/Loss 103,750

¹ Contributions developed as of 5/1/2022 displayed above have been adjusted to account for assumed interest.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Accrued Liability</u>
2022	18,867,383
2023	18,778,320
2024	18,633,681
2028	17,380,000
2033	13,737,576
2037	8,405,611
2041	0

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

		<u>Actual</u>	<u>Assumed</u>
Year Ended	4/30/2022	4.16%	5.36%
Year Ended	4/30/2021	4.11%	5.28%
Year Ended	4/30/2020	4.56%	5.00%
Year Ended	4/30/2019	1.87%	5.00%
Year Ended	4/30/2018	7.29%	5.00%

(ii) 5 Year Comparison of Investment Return on Actuarial Value

		<u>Actual MVA</u>	<u>Actual AVA</u>	<u>Assumed</u>
Year Ended	4/30/2022	-7.57%	6.87%	7.00%
Year Ended	4/30/2021	28.30%	9.81%	7.25%
Year Ended	4/30/2020	-0.31%	4.65%	7.25%
Year Ended	4/30/2019	6.33%	5.88%	7.25%
Year Ended	4/30/2018	8.55%	5.85%	7.25%

DEVELOPMENT OF MAY 1, 2022 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of May 1, 2021	\$18,859,940
(2)	Sponsor Normal Cost developed as of May 1, 2021	380,615
(3)	Expected administrative expenses for the year ended April 30, 2022	32,026
(4)	Expected interest on (1), (2) and (3)	1,347,960
(5)	Sponsor contributions to the System during the year ended April 30, 2022	1,756,100
(6)	Expected interest on (5)	61,464
(7)	Expected Unfunded Actuarial Accrued Liability as of April 30, 2022, (1)+(2)+(3)+(4)-(5)-(6)	18,802,977
(8)	Change to UAAL due to Assumption Change	(39,344)
(9)	Change to UAAL due to Actuarial (Gain)/Loss	103,750
(10)	Unfunded Accrued Liability as of May 1, 2022	18,867,383
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	18,867,383

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>5/1/2022</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
5/1/2022	19	18,867,383	1,317,551

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of May 1, 2021	\$18,859,940
(2) Expected UAAL as of May 1, 2022	18,802,977
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	36,151
Salary Increases	(247,423)
Active Decrements	15,541
Inactive Mortality	152,679
Other	<u>146,802</u>
Change in UAAL due to (Gain)/Loss	103,750
Change to UAAL due to Assumption Change	<u>(39,344)</u>
(4) Actual UAAL as of May 1, 2022	\$18,867,383

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of May 1, 2021	\$ 1,769,975
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	25,638
Change in Assumed Administrative Expense	314
Investment Return (Actuarial Asset Basis)	2,598
Salary Increases	(17,782)
New Entrants	2,911
Active Decrements	1,117
Inactive Mortality	10,973
Contributions (More) or Less than Recommended	(3,470)
Increase in Amortization Payment Due to Payroll Growth Assumption	52,175
Change in Expected Member Contributions	(24,830)
Assumption Change	95,629
Other	<u>5,878</u>
Total Change in Contribution	151,151
(3) Contribution Determined as of May 1, 2022	\$1,921,126

STATUTORY MINIMUM REQUIRED CONTRIBUTION

Contribution requirements shown on this page are calculated according to statutory minimum funding requirements of the Illinois Pension Code. We do not believe this method is sufficient to fund future benefits; as such, we recommend funding according to the contributions developed in Section E of this report.

	New Assump	Old Assump	
Valuation Date	5/1/2022	5/1/2022	5/1/2021
Applicable to Fiscal Year Ending	<u>4/30/2024</u>	<u>4/30/2024</u>	<u>4/30/2023</u>
Actuarial Accrued Liability (PUC)	47,395,618	47,292,119	45,273,661
Actuarial Value of Assets	<u>30,458,201</u>	<u>30,458,201</u>	<u>28,321,956</u>
Unfunded Actuarial Accrued Liability (UAAL)	16,937,417	16,833,918	16,951,705
UAAL Subject to Amortization	12,197,855	12,104,706	12,424,339
Normal Cost ¹	\$1,006,393	\$986,184	\$945,425
% of Total Annual Payroll ¹	27.0	26.5	27.2
Administrative Expenses ¹	34,582	34,582	34,268
% of Total Annual Payroll ¹	0.9	0.9	1.0
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 18 years (as of 5/1/2022) ¹	947,804	906,416	892,898
% of Total Annual Payroll ¹	25.5	24.4	25.7
Total Required Contribution	1,988,779	1,927,182	1,872,591
% of Total Annual Payroll ¹	53.4	51.8	53.9
Expected Member Contributions ¹	(368,856)	(368,856)	(344,026)
% of Total Annual Payroll ¹	(9.9)	(9.9)	(9.9)
Expected City Contribution	1,619,923	1,558,326	1,528,565
% of Total Annual Payroll ¹	43.5	41.9	44.0

Assumptions and Methods:

Actuarial Cost Method	Projected Unit Credit
Amortization Method	90% Funding by 2040

All other assumptions and methods are as described in the Actuarial Assumptions and Methods section.

¹ Contributions developed as of 5/1/2022 displayed above have been adjusted to account for assumed interest.

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2022	76,627	2,044,959	2,121,586
2023	175,763	2,060,752	2,236,515
2024	264,994	2,101,851	2,366,845
2025	378,731	2,173,245	2,551,976
2026	507,561	2,215,881	2,723,442
2027	633,408	2,257,055	2,890,463
2028	746,624	2,296,540	3,043,164
2029	883,077	2,334,116	3,217,193
2030	1,041,860	2,369,551	3,411,411
2031	1,180,656	2,402,566	3,583,222
2032	1,323,689	2,432,848	3,756,537
2033	1,466,642	2,460,034	3,926,676
2034	1,631,794	2,507,270	4,139,064
2035	1,787,609	2,527,525	4,315,134
2036	1,920,229	2,543,290	4,463,519
2037	2,048,206	2,554,115	4,602,321
2038	2,171,890	2,559,608	4,731,498
2039	2,315,998	2,559,461	4,875,459
2040	2,447,930	2,553,413	5,001,343
2041	2,587,687	2,541,186	5,128,873
2042	2,747,278	2,522,469	5,269,747
2043	2,889,084	2,496,913	5,385,997
2044	3,015,838	2,464,120	5,479,958
2045	3,155,590	2,423,745	5,579,335
2046	3,321,156	2,375,499	5,696,655
2047	3,512,111	2,345,527	5,857,638
2048	3,706,604	2,281,707	5,988,311
2049	3,868,853	2,209,617	6,078,470
2050	4,079,114	2,129,167	6,208,281
2051	4,338,559	2,040,384	6,378,943
2052	4,577,606	1,943,453	6,521,059
2053	4,766,625	1,838,673	6,605,298
2054	4,904,153	1,726,507	6,630,660
2055	5,005,324	1,607,763	6,613,087
2056	5,084,099	1,483,643	6,567,742
2057	5,142,261	1,355,685	6,497,946
2058	5,180,391	1,225,804	6,406,195
2059	5,199,201	1,096,105	6,295,306
2060	5,198,469	968,722	6,167,191
2061	5,177,240	845,794	6,023,034

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	7.00% per year compounded annually, net of investment related expenses.
Mortality Rate	<p>Active Lives: PubS-2010 Employee mortality, unadjusted, with generational improvements with most recent projection scale (currently Scale MP-2021). 10% of active deaths are assumed to be in the line of duty.</p> <p>Inactive Lives: PubS-2010 Healthy Retiree mortality, adjusted by a factor of 1.15 for male retirees and unadjusted for female retirees, with generational improvements with most recent projection scale (currently Scale MP-2021).</p> <p>Beneficiaries: PubS-2010 Survivor mortality, unadjusted for male beneficiaries and adjusted by a factor of 1.15 for female beneficiaries, with generational improvements with most recent projection scale (currently Scale MP-2021).</p> <p>Disabled Lives: PubS-2010 Disabled mortality, adjusted by a factor of 1.08 for male disabled members and unadjusted for female disabled members, with generational improvements with most recent projection scale (currently Scale MP-2021).</p> <p>The mortality assumptions sufficiently accommodate anticipated future mortality improvements.</p>
Retirement Age	See table at end of this section. This is based on a 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund.
Disability Rate	See table at end of this section. 60% of the disabilities are assumed to be in the line of duty. This is based on a 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund.
Termination Rate	See table at end of this section. This is based on a 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund.

Salary Increases

See table below. This is based on a 2022 experience study performed for the Illinois Police Officers' Pension Investment Fund.

Salary Scale	
Service	Rate
0	11.00%
1	9.50%
2	8.00%
3	7.50%
4	7.00%
5	6.00%
6	5.00%
7 - 11	4.00%
12 - 29	3.75%
30+	3.50%

Inflation

2.50%.

Cost-of-Living Adjustment

Tier 1: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.

Marital Status

80% of Members are assumed to be married.

Spouse's Age

Males are assumed to be three years older than females.

Funding Method

Entry Age Normal Cost Method.

Actuarial Asset Method

Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.

Funding Policy Amortization Method

The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2041. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.

Payroll Growth

3.50% per year (previously 4.00%).

Administrative Expenses

Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.

Decrement Tables

<u>% Terminating During the Year</u>		<u>% Becoming Disabled During the Year</u>		<u>% Retiring During the Year (Tier 1)</u>		<u>% Retiring During the Year (Tier 2)</u>	
<u>Service</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
0	13.00%	20	0.000%	50 - 54	20%	50 - 54	5%
1	8.00%	25	0.029%	55 - 62	25%	55	40%
2	7.00%	30	0.133%	63	33%	56 - 62	25%
3	6.00%	35	0.247%	64	40%	63	33%
4	5.00%	40	0.399%	65 - 69	55%	64	40%
5	4.50%	45	0.561%	70+	100%	65 - 69	55%
6	4.00%	50	0.675%			70+	100%
7	3.50%	55	0.855%				
8	3.00%	60	1.093%				
9	2.50%						
10	2.25%						
11	2.00%						
12	1.75%						
13	1.50%						
14+	1.25%						

GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Accrued Liability is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service.

Total Recommended Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period ending in 2041. The recommended amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

- (a) The normal cost accrual rate equals:
 - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
 - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.
- (d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.
- Contribution Risk: This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with the

Board's funding policy. The funding policy is intended to result in contribution requirements that if paid when due, will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due. Contribution deficits, particularly large deficits and those that occur repeatedly, increase future contribution requirements and put the plan at risk for not being able to pay plan benefits when due.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature plans with a substantial inactive liability. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled "Plan Maturity Measures and Other Risk Metrics". Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 145.8% on May 1, 2019 to 122.6% on May 1, 2022, indicating that the plan has been rapidly maturing.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 63.8%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors will need to be made up for over a shorter time horizon than would be needed for a less mature plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 56.5% on May 1, 2019 to 61.7% on May 1, 2022, due mainly to plan experience.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, stayed approximately the same from May 1, 2019 to May 1, 2022. The current Net Cash Flow Ratio of 0.6% indicates that contributions are generally covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>5/1/2022</u>	<u>5/1/2021</u>	<u>5/1/2020</u>	<u>5/1/2019</u>
<u>Support Ratio</u>				
Total Actives	38	35	36	35
Total Inactives	31	27	26	24
Actives / Inactives	122.6%	129.6%	138.5%	145.8%

Asset Volatility Ratio

Market Value of Assets (MVA)	29,100,169	31,291,534	24,213,080	24,017,118
Total Annual Payroll	3,722,056	3,471,507	3,442,389	3,333,936
MVA / Total Annual Payroll	781.8%	901.4%	703.4%	720.4%

Accrued Liability (AL) Ratio

Inactive Accrued Liability	31,471,359	28,914,810	27,979,003	23,603,782
Total Accrued Liability	49,325,584	47,181,896	44,711,111	42,865,404
Inactive AL / Total AL	63.8%	61.3%	62.6%	55.1%

Funded Ratio

Actuarial Value of Assets (AVA)	30,458,201	28,321,956	25,603,939	24,200,228
Total Accrued Liability	49,325,584	47,181,896	44,711,111	42,865,404
AVA / Total Accrued Liability	61.7%	60.0%	57.3%	56.5%

Net Cash Flow Ratio

Net Cash Flow ¹	183,439	197,369	271,342	194,372
Market Value of Assets (MVA)	29,100,169	31,291,534	24,213,080	24,017,118
Ratio	0.6%	0.6%	1.1%	0.8%

¹ Determined as total contributions minus benefit payments and administrative expenses.

STATEMENT OF FIDUCIARY NET POSITION
April 30, 2022

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	43,339
Money Market	2,409,345
Total Cash and Equivalents	2,452,684
Receivables:	
Prepays	11,355
Accrued Past Due Interest	56,993
Total Receivable	68,348
Investments:	
Corporate Bonds	4,490,465
U.S. Gov't and Agency Obligations	3,196,392
Stocks	9,541,827
Mutual Funds	9,351,921
Total Investments	26,580,605
Total Assets	29,101,637
 <u>LIABILITIES</u>	
Liabilities:	
Payable:	
Expenses	1,468
Total Liabilities	1,468
Net Assets:	
Active and Retired Members' Equity	29,100,169
NET POSITION RESTRICTED FOR PENSIONS	29,100,169
TOTAL LIABILITIES AND NET ASSETS	29,101,637

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED April 30, 2022
Market Value Basis

ADDITIONS

Contributions:

Member	351,736
Miscellaneous Member Revenue	115,754
City	1,756,100

Total Contributions 2,223,590

Investment Income:

Miscellaneous Income	340	
Net Realized Gain (Loss)	(906,298)	
Unrealized Gain (Loss)	(2,290,908)	
Net Increase in Fair Value of Investments		(3,196,866)
Interest & Dividends		936,981
Less Investment Expense ¹		(114,919)

Net Investment Income (2,374,804)

Total Additions (151,214)

DEDUCTIONS

Distributions to Members:

Benefit Payments	1,963,278
Refund of Contributions/Transfers	44,553

Total Distributions 2,007,831

Administrative Expenses 32,320

Total Deductions 2,040,151

Net Increase in Net Position (2,191,365)

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 31,291,534

End of the Year 29,100,169

¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

April 30, 2022

Development of Actuarial Value of Assets

Market Value of Assets, 4/30/2022	29,100,169
(Gains)/Losses Not Yet Recognized	<u>1,358,032</u>
Actuarial Value of Assets, 4/30/2022	30,458,201
4/30/2022 Limited Actuarial Assets:	30,458,201

Development of Investment Gain/Loss

Market Value of Assets, 4/30/2021	31,291,534
Contributions Less Benefit Payments & Administrative Expenses	183,439
Expected Investment Earnings ¹	2,196,828
Actual Net Investment Earnings	<u>(2,374,804)</u>
2022 Actuarial Investment Gain/(Loss)	(4,571,632)

¹ Expected Investment Earnings = 7.00% x (31,291,534 + 0.5 x 183,439)

Gains/(Losses) Not Yet Recognized

Plan Year Ending	Gain/(Loss)	Amounts Not Yet Recognized by Valuation Year				
		2022	2023	2024	2025	2026
4/30/2019	(206,162)	(41,232)	0	0	0	0
4/30/2020	(1,826,457)	(730,583)	(365,291)	0	0	0
4/30/2021	5,118,482	3,071,089	2,047,393	1,023,696	0	0
4/30/2022	(4,571,632)	(3,657,306)	(2,742,979)	(1,828,653)	(914,326)	0
Total		(1,358,032)	(1,060,877)	(804,957)	(914,326)	0

Development of Asset Returns

(A) 4/30/2021 Actuarial Assets:	28,321,956
(I) Net Investment Income:	
1. Interest and Dividends	937,321
2. Realized Gains (Losses)	(906,298)
3. Change in Actuarial Value	2,036,702
4. Investment Expenses	<u>(114,919)</u>
Total	1,952,806
(B) 4/30/2022 Actuarial Assets:	30,458,201
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	6.87%
Market Value of Assets Rate of Return:	-7.57%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(36,151)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 April 30, 2022
 Actuarial Asset Basis

INCOME		
Contributions:		
Member	351,736	
Miscellaneous Member Revenue	115,754	
City	1,756,100	
Total Contributions		2,223,590
Earnings from Investments		
Interest & Dividends	936,981	
Miscellaneous Income	340	
Net Realized Gain (Loss)	(906,298)	
Change in Actuarial Value	2,036,702	
Total Earnings and Investment Gains		2,067,725
EXPENSES		
Administrative Expenses:		
Investment Related ¹	114,919	
Other	32,320	
Total Administrative Expenses		147,239
Distributions to Members:		
Benefit Payments	1,963,278	
Refund of Contributions/Transfers	44,553	
Total Distributions		2,007,831
Change in Net Assets for the Year		2,136,245
Net Assets Beginning of the Year		28,321,956
Net Assets End of the Year ²		30,458,201

¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

² Net Assets may be limited for actuarial consideration.

STATISTICAL DATA

	<u>5/1/2022</u>	<u>5/1/2021</u>	<u>5/1/2020</u>	<u>5/1/2019</u>
<u>Actives - Tier 1</u>				
Number	18	21	22	25
Average Current Age	46.6	45.9	45.2	45.2
Average Age at Employment	25.9	26.4	26.2	26.7
Average Past Service	20.7	19.5	19.0	18.5
Average Annual Salary	\$113,005	\$109,469	\$106,264	\$102,741
<u>Actives - Tier 2</u>				
Number	20	14	14	10
Average Current Age	29.1	29.0	28.8	30.0
Average Age at Employment	25.9	25.5	26.0	27.7
Average Past Service	3.2	3.5	2.8	2.3
Average Annual Salary	\$84,398	\$83,761	\$78,899	\$76,540
<u>Service Retirees</u>				
Number	22	20	20	17
Average Current Age	62.7	62.5	62.4	62.9
Average Annual Benefit	\$81,747	\$81,226	\$80,903	\$79,073
<u>Beneficiaries</u>				
Number	3	3	3	3
Average Current Age	77.7	76.7	75.7	74.7
Average Annual Benefit	\$33,414	\$33,414	\$33,414	\$33,414
<u>Disability Retirees</u>				
Number	2	2	2	2
Average Current Age	65.9	64.9	63.9	62.9
Average Annual Benefit	\$65,744	\$65,147	\$64,551	\$63,954
<u>Terminated Vested</u>				
Number	4	2	1	2
Average Current Age	33.6	36.3	45.6	40.9
Average Annual Benefit ¹	\$25,932	\$24,243	\$24,243	\$24,243

¹ Average Annual Benefit for Terminated Vested members reflects the benefit for members entitled to a future annual benefit from the plan.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	1	0	0	0	0	0	0	0	0	0	0	1
25 - 29	5	2	3	0	0	1	0	0	0	0	0	11
30 - 34	1	0	0	0	0	3	0	0	0	0	0	4
35 - 39	0	0	0	2	0	1	2	1	0	0	0	6
40 - 44	0	0	0	0	0	0	0	2	2	0	0	4
45 - 49	0	0	0	0	0	0	2	2	1	1	0	6
50 - 54	0	0	0	0	0	0	0	0	3	3	0	6
55 - 59	0	0	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	7	2	3	2	0	5	4	5	6	4	0	38

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 5/1/2021	35
b. Terminations	
i. Vested (partial or full) with deferred benefits	(2)
ii. Non-vested or full lump sum distribution received	0
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	<u>(2)</u>
f. Continuing participants	31
g. New entrants	<u>7</u>
h. Total active life participants in valuation	38

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	20	3	2	2	27
Retired	2	0	0	0	2
Vested Deferred	0	0	0	2	2
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	0	0	0	0
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	0	0
b. Number current valuation	22	3	2	4	31

SUMMARY OF CURRENT PLAN

Article 3 Pension Fund

The Plan is established and administered as prescribed by “Article 3. Police Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

Plan Administration

The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:

- a.) Two members appointed by the Municipality,
- b.) Two active Members of the Police Department elected by the Membership, and
- c.) One retired Member of the Police Department elected by the Membership.

Credited Service

Complete years of service as a sworn police officer employed by the Municipality.

Normal Retirement

Date

Tier 1: Age 50 and 20 years of Credited Service.

Tier 2: Age 55 with 10 years of Credited Service.

Benefit

Tier 1: 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,000 per month.

Tier 2: 2.50% per year of service times the average salary for the 48 consecutive months of service within the last 60 months of service in which the total salary was the highest prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,000 per month.

For Tier 2 participants, the salary is capped at a rate of \$106,800 as of 2011, indexed annually at a rate of CPI-U, but not to exceed 3.00%.

Form of Benefit

Tier 1: For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member’s benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.

Tier 2: Same as above, but with 66 2/3% of benefit continued to spouse.

Early Retirement

Date	Tier 1: Age 60 and 8 years of Credited Service. Tier 2: Age 50 with 10 years of Credited Service.
Benefit	Tier 1: Normal Retirement benefit with no minimum. Tier 2: Normal Retirement benefit, reduced 6.00% each year before age 55, with no minimum benefit.
Form of Benefit	Same as Normal Retirement

Disability Benefit

Eligibility	Total and permanent as determined by the Board of Trustees.
Benefit Amount	A maximum of: <ul style="list-style-type: none">a.) 65% of salary attached to the rank held by Member on last day of service, and;b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.

For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Cost-of-Living Adjustment

Tier 1:

Retirees: An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Disabled Retirees: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

Tier 2: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit

Service Incurred	100% of salary attached to rank held by Member on last day of service.
Non-Service Incurred	A maximum of: <ul style="list-style-type: none">a.) 54% of salary attached to the rank held by Member on last day of service, and;b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

Vesting (Termination)

Vesting Service Requirement	Tier 1: 8 years. Tier 2: 10 years.
Non-Vested Benefit	Refund of Member Contributions.
Vested Benefit	Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (4-year final average salary for Tier 2) times creditable service.

Contributions

Employee	9.91% of Salary.
Municipality	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

SUMMARY

Valuation Date	5/1/2022	5/1/2021
Measurement Date	4/30/2022	4/30/2021
Plan Membership:		
Inactives Currently Receiving Benefits	27	25
Inactives Not Yet Receiving Benefits	4	2
Active Plan Members	<u>38</u>	<u>35</u>
Total	69	62
Covered Payroll	\$ 3,549,304	\$ 3,471,507
Net Pension Liability		
Total Pension Liability	\$ 48,965,068	\$ 46,773,127
Plan Fiduciary Net Position	<u>29,100,169</u>	<u>31,291,532</u>
Net Pension Liability	\$ 19,864,899	\$ 15,481,595
Plan Fiduciary Net Position		
As a Percentage of Total Pension Liability	59.43%	66.90%
Net Pension Liability		
As a Percentage of Covered Payroll	559.68%	445.96%
Total Pension Expense	\$ 1,616,098	\$ 972,899
Development of Single Discount Rate		
Single Discount Rate	7.00%	7.00%
Long-Term Expected Rate of Return	7.00%	7.00%
High-quality Municipal Bond Rate	3.98%	1.83%
Number of Years Future Benefit Payments		
Are Expected to be Paid	99	99

SCHEDULE OF CHANGES IN NET PENSION LIABILITY
PLAN AND CITY REPORTING

GASB 68 Reporting Period Ending	04/30/2022	04/30/2021
Measurement Date	<u>04/30/2022</u>	<u>04/30/2021</u>
Total Pension Liability		
Service Cost	743,171	729,221
Interest	3,255,867	3,198,783
Changes of Benefit Terms	-	-
Differences Between Expected and Actual Experience	18,257	(1,136,795)
Changes of Assumptions	66,723	1,526,123
Contributions - Buy Back	115,754	-
Benefit Payments, Including Refunds of Employee Contributions	<u>(2,007,831)</u>	<u>(1,872,311)</u>
Net Change in Total Pension Liability	2,191,941	2,445,021
Total Pension Liability - Beginning	<u>46,773,127</u>	<u>44,328,106</u>
Total Pension Liability - Ending (a)	\$ 48,965,068	\$ 46,773,127
 Plan Fiduciary Net Position		
Contributions - Employer	1,756,100	1,756,100
Contributions - Employee	351,736	345,606
Contributions - Buy Back	115,754	-
Net Investment Income	(2,374,804)	6,881,271
Benefit Payments, Including Refunds of Employee Contributions	(2,007,831)	(1,872,311)
Administrative Expense	<u>(32,320)</u>	<u>(32,214)</u>
Net Change in Plan Fiduciary Net Position	(2,191,365)	7,078,452
Plan Fiduciary Net Position - Beginning	31,291,532	24,213,080
Adjustment to beginning of year	2	-
Plan Fiduciary Net Position - Ending (b)	\$ 29,100,169	\$ 31,291,532
 Net Pension Liability - Ending (a) - (b)	\$ 19,864,899	\$ 15,481,595
 Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	59.43%	66.90%
 Covered Payroll	\$ 3,549,304	\$ 3,471,507
Net Pension Liability as a Percentage of Covered Payroll	559.68%	445.96%

STATEMENT OF CHANGES IN NET PENSION LIABILITY
CITY REPORTING

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Balances at April 30, 2021	\$ 46,773,127	\$ 31,291,532	\$ 15,481,595
Adjustment to beginning of year	-	2	(2)
Changes for a Year:			
Service Cost	743,171	-	743,171
Interest	3,255,867	-	3,255,867
Differences Between Expected and Actual Experience	18,257	-	18,257
Changes of Assumptions	66,723	-	66,723
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	1,756,100	(1,756,100)
Contributions - Employee	-	351,736	(351,736)
Contributions - Buy Back	115,754	115,754	-
Net Investment Income	-	(2,374,804)	2,374,804
Benefit Payments, Including Refunds of Employee Contributions	(2,007,831)	(2,007,831)	-
Administrative Expense	-	(32,320)	32,320
Net Changes	2,191,941	(2,191,365)	4,383,306
Balances at April 30, 2022	\$ 48,965,068	\$ 29,100,169	\$ 19,864,899

Sensitivity of Net Pension Liability to changes in the Discount Rate:

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.00%	7.00%	8.00%
Sponsor's Net Pension Liability	\$ 27,147,982	\$ 19,864,899	\$ 13,950,086

Pension Plan Fiduciary Net Position

Detailed information about the Pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

GASB 68

PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF
RESOURCES RELATED TO PENSIONS
YEAR-END APRIL 30, 2022

For the year ended April 30, 2022, the Sponsor will recognize a pension expense of \$1,616,098.

On April 30, 2022, the Sponsor reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between actual and expected experience	512,394	1,210,027
Changes of assumptions	1,501,192	653,244
Net difference between projected and actual earnings on pension plan investments	1,358,030	0
Total	\$3,371,616	\$1,863,271

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year-ended April 30:

2023	\$184,532
2024	\$330,129
2025	(\$35,162)
2026	\$941,361
2027	\$66,241
Thereafter	\$21,244

COMPONENTS OF PENSION EXPENSE
YEAR-END APRIL 30, 2022

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 15,481,595	\$ 6,609,526	\$ 3,594,563	
Total Pension Liability Factors:				
Service Cost	743,171	-	-	743,171
Interest	3,255,867	-	-	3,255,867
Changes in Benefit Terms	-	-	-	-
Contributions - Buy Back	115,754			115,754
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions				
Current Year Amortization	-	(435,029)	(126,388)	(308,641)
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs				
Current Year Amortization	-	(163,311)	(361,232)	197,921
Benefit Payments, Including Refunds of Employee Contributions	(2,007,831)	-	-	-
Net Change	2,191,941	(598,340)	(402,640)	4,004,072
Plan Fiduciary Net Position:				
Contributions - Employer	1,756,100	-	-	-
Contributions - Employee	351,736	-	-	(351,736)
Contributions - Buy Back	115,754			(115,754)
Projected Net Investment Income	2,196,828	-	-	(2,196,828)
Difference Between Projected and Actual Earnings on Pension Plan Investments				
Current Year Amortization	-	(1,076,827)	(1,320,851)	244,024
Benefit Payments, Including Refunds of Employee Contributions	(2,007,831)	-	-	-
Administrative Expenses	(32,320)	-	-	32,320
Net Change	(2,191,365)	(1,076,827)	3,250,781	(2,387,974)
Adjustment to beginning of year	2	-	-	-
Ending Balance	\$ 19,864,899	\$ 4,934,359	\$ 6,442,704	\$ 1,616,098

AMORTIZATION SCHEDULE – EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Year Base Established	Differences Between Expected and Actual Experience	Recognition Period (Years)	2022	2023	2024	2025	2026	Thereafter
2022	\$ 18,257	8	\$ 2,283	\$ 2,282	\$ 2,282	\$ 2,282	\$ 2,282	\$ 6,846
2021	\$ (1,136,795)	7	\$ (162,399)	\$ (162,399)	\$ (162,399)	\$ (162,399)	\$ (162,399)	\$ (162,399)
2020	\$ 868,735	7	\$ 124,105	\$ 124,105	\$ 124,105	\$ 124,105	\$ 124,105	\$ -
2019	\$ (492,807)	7	\$ (70,401)	\$ (70,401)	\$ (70,401)	\$ (70,401)	\$ -	\$ -
2018	\$ (1,120,976)	6	\$ (186,829)	\$ (186,829)	\$ -	\$ -	\$ -	\$ -
2017	\$ (111,650)	5.8	\$ (15,400)	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			(308,641)	(293,242)	(106,413)	(106,413)	(36,012)	(155,553)

AMORTIZATION SCHEDULE – CHANGES OF ASSUMPTIONS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions

Year Base Established	Effects of Changes in Assumptions	Recognition Period (Years)	2022	2023	2024	2025	2026	Thereafter
2022	\$ 66,723	8	\$ 8,343	\$ 8,340	\$ 8,340	\$ 8,340	\$ 8,340	\$ 25,020
2021	\$ 1,526,123	7	\$ 218,018	\$ 218,018	\$ 218,018	\$ 218,018	\$ 218,018	\$ 218,018
2020	\$ (1,143,176)	7	\$ (163,311)	\$ (163,311)	\$ (163,311)	\$ (163,311)	\$ (163,311)	\$ -
2019	\$ 823,021	7	\$ 117,574	\$ 117,574	\$ 117,574	\$ 117,574	\$ -	\$ -
2017	\$ 125,412	5.8	\$ 17,297	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 197,921	\$ 180,621	\$ 180,621	\$ 180,621	\$ 63,047	\$ 243,038

AMORTIZATION SCHEDULE – INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Differences Between Projected and Actual Earnings on Pension Plan Investments

Year Base Established	Differences		Increase (Decrease) in Pension Expense Arising from the Recognition of the Differences Between Projected and Actual Earnings on Pension Plan Investments						
	Between Projected and Actual Earnings	Recognition Period (Years)	2022	2023	2024	2025	2026	Thereafter	
2022	\$ 4,571,632	5	\$ 914,328	\$ 914,326	\$ 914,326	\$ 914,326	\$ 914,326	\$ -	
2021	\$ (5,118,482)	5	\$ (1,023,696)	\$(1,023,696)	\$(1,023,696)	\$(1,023,696)	\$ -	\$ -	
2020	\$ 1,826,457	5	\$ 365,291	\$ 365,291	\$ 365,291	\$ -	\$ -	\$ -	
2019	\$ 206,162	5	\$ 41,232	\$ 41,232	\$ -	\$ -	\$ -	\$ -	
2018	\$ (265,654)	5	\$ (53,131)	\$ -	\$ -	\$ -	\$ -	\$ -	
Net Increase (Decrease) in Pension Expense			\$ 244,024	\$ 297,153	\$ 255,921	\$ (109,370)	\$ 914,326	\$ -	

SCHEDULE OF CONTRIBUTIONS

Plan Year-End	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
04/30/2022	1,709,455	1,756,100	(46,645)	3,549,304	49.48%
04/30/2021	1,631,288	1,756,100	(124,812)	3,471,507	50.59%

The following assumptions were used to determine the Actuarially Determined Contribution for the plan year ending April 30, 2022:

Calculation Timing	The Actuarially Determined Contribution is calculated using a May 1, 2020 valuation date.
Interest Rate	7.25%
Mortality Rate	<p>Active Lives: PubS-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2019. 10% of active deaths are assumed to be in the line of duty.</p> <p>Inactive Lives: PubS-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2019.</p> <p>Beneficiaries: PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2019.</p> <p>Disabled Lives: PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2019.</p>
Assumptions	All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the May 1, 2020 Actuarial Valuation Report for the City of Geneva Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

SCHEDULE OF INVESTMENT RETURNS

For the year ended April 30, 2022, the annual money-weighted return on Pension Plan investments, net of pension plan investment expense, was -8.03 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Plan Year-End	Annual Money-Weighted Rate of Return Net of Investment Expense
04/30/2022	-8.03%
04/30/2021	29.59%

ASSUMPTIONS – GASB PENSION LIABILITY AND PENSION EXPENSE

The GASB 67/GASB 68 Pension Liability as of April 30, 2022 and GASB 68 Pension Expense were determined as follows:

Valuation Date	May 1, 2022
Measurement Date	April 30, 2022
GASB 68 Expense Measurement Period	May 1, 2021 - April 30, 2022
Reporting Period	May 1, 2021 - April 30, 2022
Discount Rate	7.00%
Inflation	2.50%
Salary Increases	Service-based rates
Other Assumptions	A summary of complete assumptions can be found in the accompanying Actuarial Valuation as of May 1, 2022 for the City of Geneva Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

The GASB 67/GASB 68 Total Pension Liability and GASB 68 Pension Expense reflect the following assumption changes:

- Updated mortality, retirement, disability, and termination rate tables.
- Updated assumed salary increase rates.

NOTES TO THE FINANCIAL STATEMENTS

Support for Long-Term Expected Rate of Return

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the Pension Plan’s target asset allocation adopted as of April 30, 2022, as provided by Morgan Stanley, are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return ¹
Domestic Equity	49.00%	6.04%
International Equity	11.00%	4.94%
Fixed Income	35.00%	1.54%
Emerging Markets	5.00%	6.34%
Total	100.00%	

¹ Please note that the implied long-term expected return of the total portfolio provided by the investment advisor would suggest that the Discount Rate is not supported. We will continue to monitor this in light of longer time horizons and the impact of Consolidation.

Inflation rate of investment advisor 2.26%

Concentrations

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan’s fiduciary net position.

Discount Rate

The Discount Rate used to measure the Total Pension Liability was 7.00 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments (7.00 percent) was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00 percent. The municipal bond rate is 3.98 percent (based on the daily rate closest to, but not later than the measurement date of the S&P Municipal Bond 20 Year High Grade Rate Index). The resulting single discount rate is 7.00 percent.

SUMMARY OF CURRENT PLAN

Article 3 Pension Fund

The Plan is established and administered as prescribed by “Article 3. Police Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

Plan Administration

The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:

- a.) Two members appointed by the Municipality,
- b.) Two active members of the Police Department elected by the Membership.
- c.) One retired member of the Police Department elected by the Membership.

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

A summary of the benefit provisions can be found in the accompanying Actuarial Valuation as of May 1, 2022 for the City of Geneva Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.