



CITY OF WASHINGTON, ILLINOIS City Council Agenda Communication

Meeting Date: January 18, 2022

Prepared By: Joanie Baxter, Finance Director *JB*

Agenda Item: Police Pension Fund Actuarial Valuation Report

Explanation: The preliminary results of the actuarial study were reviewed with the Police Pension Board on November 1st by Jason Franken of Foster & Foster. With no changes to assumptions, the increase in the City contribution is \$33,370. The Fund had impressive investment performance with a yield of 17.89%; however, the actuarial valuation incorporates a 5-year smoothing resulting in a 6.74% yield. Other factors affecting the results include Normal Cost increases due to an increase in number of active officers as well as payroll growth assumption. The percent funded improved from 59.3% to 61.2%.

Although the interest rate assumption of 6.75% is more than likely too high for a fund of less than \$10 million that is subject to a 45% equity investment limitation – the Board agreed to keep the interest rate the same due to pending investment consolidation and the Fund has been notified that the Illinois Police Officers' Pension Investment Fund (IPOPIF) will assume fiduciary control of the cash and investments of the Fund on March 1, 2022. The total City contribution of \$713,027 is required at this time and the Board approved the recommendation. This can be reduced by approximately \$25,000 in anticipated personal property replacement tax for a recommended tax levy of \$688,100 for the Police Pension Fund.

The City Council approved to include the contribution of \$688,100 in the tax levy that was recently adopted.

The 48-page report is included in the online packets.

Fiscal Impact: Property taxes approximating \$688,100 will be received in FY 22-23 to fund the Police Pension Fund employer contribution.

Recommendation/Committee Discussion Summary: City Council approved as part of tax levy.

Action Requested: Acceptance of Actuarial Study filed with the Department of Insurance as required.

CITY OF WASHINGTON
POLICE PENSION FUND
ACTUARIAL VALUATION
AS OF MAY 1, 2021
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING APRIL 30, 2023
GASB 67/68 DISCLOSURE INFORMATION
AS OF APRIL 30, 2021



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS



November 1, 2021

Ms. Joan E. Baxter
City of Washington Police Pension Fund

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

Dear Ms. Baxter:

We are pleased to present to the City this report of the annual actuarial valuation of the City of Washington 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.

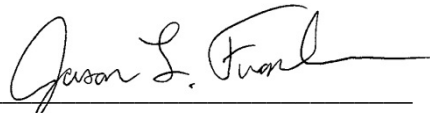
The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the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

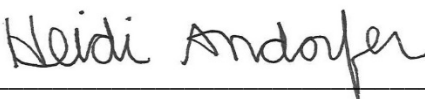
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Washington, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Washington Police Pension 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

JLF/lke
Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Washington Police Pension Fund, performed as of May 1, 2021, 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, 2023.

The contribution requirements, compared with those set forth in the May 1, 2020 actuarial report, are as follows:

Valuation Date	5/1/2021	5/1/2020
Applicable to Fiscal Year Ending	<u>4/30/2023</u>	<u>4/30/2022</u>
Total Recommended Contribution	\$876,145	\$830,238
% of Projected Annual Payroll	53.2%	54.6%
Member Contributions (Est.)	(163,118)	(150,760)
% of Projected Annual Payroll	(9.9%)	(9.9%)
City Recommended Contribution	713,027	679,478
% of Projected Annual Payroll	43.3%	44.7%

As you can see, the Total Recommended Contribution shows an increase when compared to the results determined in the May 1, 2020 actuarial valuation report. The increase is attributable to growth in active membership 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 lower than expected inactive mortality and the cost of the transfer of service to another fund. These losses were offset in part by a gain associated with an average salary increase of 4.20% which fell short of the 5.44% assumption.

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

There were no assumption or method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>5/1/2021</u>	<u>5/1/2020</u>
A. Participant Data		
Number Included		
Actives	22	21
Service Retirees	8	8
Beneficiaries	4	4
Disability Retirees	0	0
Terminated Vested	<u>4</u>	<u>4</u>
Total	38	37
Total Annual Payroll	\$1,645,994	\$1,521,288
Payroll Under Assumed Ret. Age	1,645,994	1,521,288
Annual Rate of Payments to:		
Service Retirees	489,764	475,499
Beneficiaries	162,201	162,201
Disability Retirees	0	0
Terminated Vested	0	0
B. Assets		
Actuarial Value	9,506,948	8,803,784
Market Value	9,838,568	8,247,378
C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	8,407,254	7,617,458
Disability Benefits	882,746	819,050
Death Benefits	131,027	116,253
Vested Benefits	564,530	543,539
Service Retirees	8,005,743	7,929,555
Beneficiaries	1,464,740	1,505,211
Disability Retirees	0	0
Terminated Vested	<u>58,478</u>	<u>58,478</u>
Total	19,514,518	18,589,544

C. Liabilities - (Continued)	<u>5/1/2021</u>	<u>5/1/2020</u>
Present Value of Future Salaries	18,068,309	16,730,680
Present Value of Future Member Contributions	1,790,569	1,658,010
Normal Cost (Retirement)	298,335	277,435
Normal Cost (Disability)	59,640	54,968
Normal Cost (Death)	7,800	6,890
Normal Cost (Vesting)	<u>35,177</u>	<u>32,947</u>
Total Normal Cost	400,952	372,240
Present Value of Future Normal Costs	3,988,378	3,733,198
Accrued Liability (Retirement)	5,390,224	4,786,933
Accrued Liability (Disability)	279,591	260,228
Accrued Liability (Death)	42,815	39,193
Accrued Liability (Vesting)	284,549	276,748
Accrued Liability (Inactives)	<u>9,528,961</u>	<u>9,493,244</u>
Total Actuarial Accrued Liability	15,526,140	14,856,346
Unfunded Actuarial Accrued Liability (UAAL)	6,019,192	6,052,562
Funded Ratio (AVA / AL)	61.2%	59.3%

	<u>5/1/2021</u>	<u>5/1/2020</u>
D. Actuarial Present Value of Accrued Benefits		
Vested Accrued Benefits		
Inactives	9,528,961	9,493,244
Actives	1,622,305	1,390,092
Member Contributions	<u>1,319,648</u>	<u>1,192,633</u>
Total	12,470,914	12,075,969
Non-vested Accrued Benefits	<u>304,614</u>	<u>223,000</u>
Total Present Value Accrued Benefits	12,775,528	12,298,969
Funded Ratio (MVA / PVAB)	77.0%	67.1%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	419,564	
Benefits Paid	(747,942)	
Interest	804,937	
Other	<u>0</u>	
Total	476,559	

Valuation Date	5/1/2021	5/1/2020
Applicable to Fiscal Year Ending	<u>4/30/2023</u>	<u>4/30/2022</u>

E. Pension Cost

Normal Cost ¹	\$428,016	\$397,366
% of Total Annual Payroll ¹	26.0	26.1
Administrative Expenses ¹	7,786	6,333
% of Total Annual Payroll ¹	0.5	0.4
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 19 years (as of 5/1/2021) ¹	440,343	426,539
% of Total Annual Payroll ¹	26.7	28.1
Total Recommended Contribution	876,145	830,238
% of Total Annual Payroll ¹	53.2	54.6
Expected Member Contributions ¹	(163,118)	(150,760)
% of Total Annual Payroll ¹	(9.9)	(9.9)
Expected City Contribution	713,027	679,478
% of Total Annual Payroll ¹	43.3	44.7

F. Past Contributions

Plan Years Ending:	<u>4/30/2021</u>
Total Recommended Contribution	799,969
City	634,090
Actual Contributions Made:	
Members (excluding buyback)	165,879
City	<u>687,092</u>
Total	852,971

G. Net Actuarial (Gain)/Loss	25,800
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¹ Contributions developed as of 5/1/2021 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>
2021	6,019,192
2022	5,985,145
2023	5,933,388
2027	5,512,461
2032	4,334,617
2036	2,640,648
2040	0

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	4/30/2021	4.20%	5.44%
Year Ended	4/30/2020	4.68%	5.67%
Year Ended	4/30/2019	3.67%	6.04%
Year Ended	4/30/2018	3.86%	6.45%
Year Ended	4/30/2017	5.39%	7.34%

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

		<u>Actual MVA</u>	<u>Actual AVA</u>	<u>Assumed</u>
Year Ended	4/30/2021	17.89%	6.74%	6.75%
Year Ended	4/30/2020	0.20%	3.54%	6.75%
Year Ended	4/30/2019	4.44%	4.27%	6.75%
Year Ended	4/30/2018	5.58%	4.43%	6.75%
Year Ended	4/30/2017	7.56%	4.19%	6.75%

DEVELOPMENT OF MAY 1, 2021 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of May 1, 2020	\$6,052,562
(2)	Sponsor Normal Cost developed as of May 1, 2020	221,480
(3)	Expected administrative expenses for the year ended April 30, 2021	5,933
(4)	Expected interest on (1), (2) and (3)	423,698
(5)	Sponsor contributions to the System during the year ended April 30, 2021	687,092
(6)	Expected interest on (5)	23,189
(7)	Expected Unfunded Actuarial Accrued Liability as of April 30, 2021, (1)+(2)+(3)+(4)-(5)-(6)	5,993,392
(8)	Change to UAAL due to Benefits/Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	25,800
(10)	Unfunded Accrued Liability as of May 1, 2021	6,019,192
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	6,019,192

<u>Date Established</u>	<u>Years Remaining</u>	<u>5/1/2021 Amount</u>	<u>Amortization Amount</u>
5/1/2021	19	6,019,192	412,499

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of May 1, 2020	\$6,052,562
(2) Expected UAAL as of May 1, 2021	5,993,392
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	939
Salary Increases	(59,803)
Active Decrements	(80,817)
Inactive Mortality	57,501
Other	<u>107,980</u>
Change in UAAL due to (Gain)/Loss	25,800
Change to UAAL due to Benefits/Assumption Change	<u>0</u>
(4) Actual UAAL as of May 1, 2021	\$6,019,192

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of May 1, 2020	\$ 679,478
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	30,650
Change in Assumed Administrative Expense	1,453
Investment Return (Actuarial Asset Basis)	69
Salary Increases	(4,375)
New Entrants	864
Active Decrements	(5,912)
Inactive Mortality	4,207
Contributions (More) or Less than Recommended	(4,008)
Increase in Amortization Payment Due to Payroll Growth Assumption	14,929
Change in Expected Member Contributions	(12,358)
Benefits/Assumption Change	-
Other	<u>8,030</u>
Total Change in Contribution	33,549
(3) Contribution Determined as of May 1, 2021	\$713,027

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.

Valuation Date	5/1/2021	5/1/2020
Applicable to Fiscal Year Ending	<u>4/30/2023</u>	<u>4/30/2022</u>
Actuarial Accrued Liability (PUC)	14,858,800	14,230,936
Actuarial Value of Assets	<u>9,506,948</u>	<u>8,803,784</u>
Unfunded Actuarial Accrued Liability (UAAL)	5,351,852	5,427,152
UAAL Subject to Amortization	3,865,972	4,004,058
Normal Cost ¹	\$449,060	\$416,302
% of Total Annual Payroll ¹	27.3	27.4
Administrative Expenses ¹	7,786	6,333
% of Total Annual Payroll ¹	0.5	0.4
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 19 years (as of 5/1/2021) ¹	282,821	282,176
% of Total Annual Payroll ¹	17.1	18.5
Total Required Contribution	739,667	704,811
% of Total Annual Payroll ¹	44.9	46.3
Expected Member Contributions ¹	(163,118)	(150,760)
% of Total Annual Payroll ¹	(9.9)	(9.9)
Expected City Contribution	576,549	554,051
% of Total Annual Payroll ¹	35.0	36.4
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 5/1/2021 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
2021	42,134	707,231	749,365
2022	71,075	658,941	730,016
2023	105,608	668,966	774,574
2024	136,213	678,764	814,977
2025	169,974	688,268	858,242
2026	202,209	697,402	899,611
2027	231,695	706,084	937,779
2028	258,864	714,227	973,091
2029	284,431	721,737	1,006,168
2030	326,261	728,518	1,054,779
2031	386,520	734,472	1,120,992
2032	432,294	739,493	1,171,787
2033	487,011	743,466	1,230,477
2034	535,863	746,257	1,282,120
2035	601,438	747,710	1,349,148
2036	661,925	747,641	1,409,566
2037	730,361	745,831	1,476,192
2038	820,117	742,039	1,562,156
2039	899,326	735,999	1,635,325
2040	983,757	727,439	1,711,196
2041	1,069,051	716,082	1,785,133
2042	1,170,459	701,695	1,872,154
2043	1,279,025	684,082	1,963,107
2044	1,386,548	663,142	2,049,690
2045	1,490,116	638,868	2,128,984
2046	1,582,946	611,362	2,194,308
2047	1,679,955	580,808	2,260,763
2048	1,741,185	547,491	2,288,676
2049	1,818,089	511,759	2,329,848
2050	1,867,952	474,065	2,342,017
2051	1,909,440	434,945	2,344,385
2052	1,944,264	394,986	2,339,250
2053	1,973,081	354,786	2,327,867
2054	1,995,138	314,980	2,310,118
2055	2,012,254	276,192	2,288,446
2056	2,023,763	239,023	2,262,786
2057	2,029,920	204,029	2,233,949
2058	2,030,101	171,662	2,201,763
2059	2,025,176	142,242	2,167,418
2060	2,014,576	115,967	2,130,543

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	6.75% per year compounded annually, net of investment related expenses. We will continue to monitor this assumption in light of the target asset allocation of the trust and the expected long-term return by asset class.
Mortality Rate	<p><i>Active Lives:</i> PubS-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2020. 10% of active deaths are assumed to be in the line of duty.</p> <p><i>Inactive Lives:</i> PubS-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2020.</p> <p><i>Beneficiaries:</i> PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2020.</p> <p><i>Disabled Lives:</i> PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2020.</p> <p>The mortality assumptions sufficiently accommodate anticipated future mortality improvements.</p>
Retirement Age	See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance.
Disability Rate	See table later in this section. 60% of the disabilities are assumed to be in the line of duty. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance.
Termination Rate	See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance.
Inflation	2.50%.
Cost-of-Living Adjustment	<p><u>Tier 1:</u> 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.</p> <p><u>Tier 2:</u> 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.</p>

Salary Increases

See table below. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance.

Salary Scale	
Service	Rate
0	11.00%
1	10.75%
2	8.75%
3	8.50%
4	7.00%
5	6.25%
6	5.25%
7	4.25%
8 - 16	4.00%
17 - 32	3.75%
32+	3.50%

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 2040. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.

Payroll Growth

3.50% per year.

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

% Terminating During the Year		% Becoming Disabled During the Year		% Retiring During the Year (Tier 1)		% Retiring During the Year (Tier 2)	
Age	Rate	Age	Rate	Age	Rate	Age	Rate
20	14.00%	20	0.000%	50 - 51	15%	50 - 54	5%
25	10.40%	25	0.030%	52 - 54	20%	55	40%
30	5.60%	30	0.140%	55 - 64	25%	56 - 64	25%
35	3.10%	35	0.260%	65 - 69	40%	65 - 69	40%
40	1.90%	40	0.420%	70+	100%	70+	100%
45	1.50%	45	0.590%				
50	1.50%	50	0.710%				
56+	0.00%	55	0.900%				
		60	1.150%				

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 2040. 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 increased from 133.3% on May 1, 2018 to 137.5% on May 1, 2021, indicating that the plan has experienced a growth in active population.
- 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 61.4%. 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 stayed approximately the same from May 1, 2018 to May 1, 2021.
- 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, 2018 to May 1, 2021. The current Net Cash Flow Ratio of 1.1% 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>5/1/2021</u>	<u>5/1/2020</u>	<u>5/1/2019</u>	<u>5/1/2018</u>
<u>Support Ratio</u>				
Total Actives	22	21	21	20
Total Inactives	16	16	15	15
Actives / Inactives	137.5%	131.3%	140.0%	133.3%

Asset Volatility Ratio

Market Value of Assets (MVA)	9,838,568	8,247,378	8,075,755	7,647,347
Total Annual Payroll	1,645,994	1,521,288	1,473,074	1,369,110
MVA / Total Annual Payroll	597.7%	542.1%	548.2%	558.6%

Accrued Liability (AL) Ratio

Inactive Accrued Liability	9,528,961	9,493,244	9,477,819	8,984,847
Total Accrued Liability	15,526,140	14,856,346	14,081,940	12,846,189
Inactive AL / Total AL	61.4%	63.9%	67.3%	69.9%

Funded Ratio

Actuarial Value of Assets (AVA)	9,506,948	8,803,784	8,350,414	7,923,297
Total Accrued Liability	15,526,140	14,856,346	14,081,940	12,846,189
AVA / Total Accrued Liability	61.2%	59.3%	59.3%	61.7%

Net Cash Flow Ratio

Net Cash Flow ¹	106,261	154,984	86,660	39,025
Market Value of Assets (MVA)	9,838,568	8,247,378	8,075,755	7,647,347
Ratio	1.1%	1.9%	1.1%	0.5%

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

STATEMENT OF FIDUCIARY NET POSITION
April 30, 2021

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Certificates of Deposit	1,059,745
Money Market	1,392,698
Total Cash and Equivalents	2,452,443
Receivables:	
Member Contributions	19,041
From City	666,241
Accrued Past Due Interest	14,502
Total Receivable	699,784
Investments:	
Corporate Bonds	1,942,322
U.S. Gov't and Agency Obligations	457,413
Mutual Funds	4,346,894
Total Investments	6,746,629
Total Assets	9,898,856
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
To Municipality	60,288
Total Liabilities	60,288
Net Assets:	
Active and Retired Members' Equity	9,838,568
NET POSITION RESTRICTED FOR PENSIONS	9,838,568
TOTAL LIABILITIES AND NET ASSETS	9,898,856

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED April 30, 2021
Market Value Basis

ADDITIONS

Contributions:

Member	165,879
Miscellaneous Member Revenue	8,526
City	687,092

Total Contributions		861,497
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Investment Income:

Net Realized Gain (Loss)	157,646	
Unrealized Gain (Loss)	1,051,089	
Net Increase in Fair Value of Investments		1,208,735
Interest & Dividends		302,560
Less Investment Expense ¹		(26,366)

Net Investment Income		1,484,929
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Total Additions		2,346,426
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DEDUCTIONS

Distributions to Members:

Benefit Payments	642,455
Refund of Contributions/Transfers	105,487

Total Distributions		747,942
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Administrative Expenses		7,294
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Total Deductions		755,236
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Net Increase in Net Position		1,591,190
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year		8,247,378
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End of the Year		9,838,568
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¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

April 30, 2021

Development of Actuarial Value of Assets

Market Value of Assets, 4/30/2021	9,838,568
(Gains)/Losses Not Yet Recognized	<u>(331,620)</u>
Actuarial Value of Assets, 4/30/2021	9,506,948
4/30/2021 Limited Actuarial Assets:	9,506,948

Development of Investment Gain/Loss

Market Value of Assets, 4/30/2020	8,247,378
Contributions Less Benefit Payments & Administrative Expenses	106,261
Expected Investment Earnings ¹	560,284
Actual Net Investment Earnings	<u>1,484,929</u>
2021 Actuarial Investment Gain/(Loss)	924,645

¹ Expected Investment Earnings = 6.75% x (8,247,378 + 0.5 x 106,261)

Gains/(Losses) Not Yet Recognized

Plan Year Ending	Gain/(Loss)	Amounts Not Yet Recognized by Valuation Year				
		2021	2022	2023	2024	2025
5/1/2018	(84,619)	(16,924)	0	0	0	0
5/1/2019	(177,373)	(70,949)	(35,475)	0	0	0
5/1/2020	(533,705)	(320,223)	(213,482)	(106,741)	0	0
5/1/2021	924,645	739,716	554,787	369,858	184,929	0
Total		331,620	305,830	263,117	184,929	0

Development of Asset Returns

(A) 4/30/2020 Actuarial Assets:	8,803,784
(I) Net Investment Income:	
1. Interest and Dividends	302,560
2. Realized Gains (Losses)	157,646
3. Change in Actuarial Value	163,063
4. Investment Expenses	<u>(26,366)</u>
Total	596,903
(B) 4/30/2021 Actuarial Assets:	9,506,948
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	6.74%
Market Value of Assets Rate of Return:	17.89%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(939)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

April 30, 2021

Actuarial Asset Basis

INCOME

Contributions:		
Member	165,879	
Miscellaneous Member Revenue	8,526	
City	687,092	
Total Contributions		861,497
Earnings from Investments		
Interest & Dividends	302,560	
Net Realized Gain (Loss)	157,646	
Change in Actuarial Value	163,063	
Total Earnings and Investment Gains		623,269
	EXPENSES	
Administrative Expenses:		
Investment Related ¹	26,366	
Other	7,294	
Total Administrative Expenses		33,660
Distributions to Members:		
Benefit Payments	642,455	
Refund of Contributions/Transfers	105,487	
Total Distributions		747,942
Change in Net Assets for the Year		703,164
Net Assets Beginning of the Year		8,803,784
Net Assets End of the Year ²		9,506,948

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

² Net Assets may be limited for actuarial consideration.

STATISTICAL DATA

	<u>5/1/2021</u>	<u>5/1/2020</u>	<u>5/1/2019</u>	<u>5/1/2018</u>
<u>Actives - Tier 1</u>				
Number	10	10	10	10
Average Current Age	43.6	42.6	41.6	40.6
Average Age at Employment	27.8	27.8	28.3	28.3
Average Past Service	15.8	14.8	13.3	12.3
Average Annual Salary	\$79,942	\$77,792	\$75,331	\$73,982
<u>Actives - Tier 2</u>				
Number	12	11	11	10
Average Current Age	35.4	35.1	34.2	33.9
Average Age at Employment	30.4	30.3	29.9	30.2
Average Past Service	5.0	4.8	4.3	3.7
Average Annual Salary	\$70,548	\$67,579	\$65,433	\$62,929
<u>Service Retirees</u>				
Number	8	8	10	10
Average Current Age	63.8	62.8	64.9	63.9
Average Annual Benefit	\$61,221	\$59,437	\$54,727	\$52,148
<u>Beneficiaries</u>				
Number	4	4	1	1
Average Current Age	72.6	71.6	78.5	77.5
Average Annual Benefit	\$40,550	\$40,550	\$35,587	\$35,587
<u>Disability Retirees</u>				
Number	0	0	1	1
Average Current Age	N/A	N/A	68.2	67.2
Average Annual Benefit	N/A	N/A	\$34,435	\$33,882
<u>Terminated Vested</u>				
Number	4	4	3	3
Average Current Age	35.6	34.6	33.7	32.7
Average Annual Benefit ¹	N/A	N/A	N/A	N/A

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	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	0	1	1	0	0	0	0	0	0	0	2
30 - 34	2	0	0	0	0	3	1	0	0	0	0	6
35 - 39	0	1	0	0	0	1	2	1	0	0	0	5
40 - 44	0	0	0	0	0	0	2	0	0	0	0	2
45 - 49	0	0	0	0	0	3	0	0	0	0	0	3
50 - 54	0	0	0	0	0	0	0	1	2	0	0	3
55 - 59	0	0	0	0	0	0	0	0	1	0	0	1
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	2	1	1	1	0	7	5	2	3	0	0	22

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 5/1/2020	21
b. Terminations	
i. Vested (partial or full) with deferred benefits	0
ii. Non-vested or full lump sum distribution received	0
iii. Transferred service to other fund	(1)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	<u>0</u>
f. Continuing participants	20
g. New entrants	<u>2</u>
h. Total active life participants in valuation	22

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	8	4	0	4	16
Retired	0	0	0	0	0
Vested Deferred	0	0	0	0	0
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	8	4	0	4	16

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:

- 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 (8-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	5/1/2021	5/1/2020
Measurement Date	4/30/2021	4/30/2020
Plan Membership:		
Inactives Currently Receiving Benefits	12	12
Inactives Not Yet Receiving Benefits	4	4
Active Plan Members	<u>22</u>	<u>21</u>
Total	38	37
Covered Payroll	\$ 1,645,994	\$ 1,521,288
Net Pension Liability		
Total Pension Liability	\$ 15,361,997	\$ 14,707,817
Plan Fiduciary Net Position	<u>9,838,568</u>	<u>8,247,378</u>
Net Pension Liability	\$ 5,523,429	\$ 6,460,439
Plan Fiduciary Net Position		
As a Percentage of Total Pension Liability	64.04%	56.07%
Net Pension Liability		
As a Percentage of Covered Payroll	335.57%	424.67%
Total Pension Expense	\$ 722,766	\$ 1,050,239
Development of Single Discount Rate		
Single Discount Rate	6.75%	6.75%
Long-Term Expected Rate of Return	6.75%	6.75%
High-quality Municipal Bond Rate	1.83%	2.85%
Number of Years Future Benefit Payments		
Are Expected to be Paid	99	99

SCHEDULE OF CHANGES IN NET PENSION LIABILITY

GASB 68 Reporting Period Ending Measurement Date	04/30/2022 04/30/2021	04/30/2021 04/30/2020
Total Pension Liability		
Service Cost	372,154	355,536
Interest	992,655	944,014
Changes of Benefit Terms	-	79,002
Differences Between Expected and Actual Experience	28,787	3,798
Changes of Assumptions	-	-
Contributions - Buy Back	8,526	8,211
Benefit Payments, Including Refunds of Employee Contributions	(747,942)	(625,188)
Net Change in Total Pension Liability	654,180	765,373
Total Pension Liability - Beginning	14,707,817	13,942,444
Total Pension Liability - Ending (a)	\$ 15,361,997	\$ 14,707,817
Plan Fiduciary Net Position		
Contributions - Employer	687,092	632,190
Contributions - Employee	165,879	145,704
Contributions - Buy Back	8,526	8,211
Net Investment Income	1,484,929	16,639
Benefit Payments, Including Refunds of Employee Contributions	(747,942)	(625,188)
Administrative Expense	(7,294)	(5,933)
Net Change in Plan Fiduciary Net Position	1,591,190	171,623
Plan Fiduciary Net Position - Beginning	8,247,378	8,075,755
Plan Fiduciary Net Position - Ending (b)	\$ 9,838,568	\$ 8,247,378
Net Pension Liability - Ending (a) - (b)	\$ 5,523,429	\$ 6,460,439
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	64.04%	56.07%
Covered Payroll	\$ 1,645,994	\$ 1,521,288
Net Pension Liability as a Percentage of Covered Payroll	335.57%	424.67%

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)
Reporting Period Ending April 30, 2021	\$ 14,707,817	\$ 8,247,378	\$ 6,460,439
Changes for a Year:			
Service Cost	372,154	-	372,154
Interest	992,655	-	992,655
Differences Between Expected and Actual Experience	28,787	-	28,787
Changes of Assumptions	-	-	-
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	687,092	(687,092)
Contributions - Employee	-	165,879	(165,879)
Contributions - Buy Back	8,526	8,526	-
Net Investment Income	-	1,484,929	(1,484,929)
Benefit Payments, Including Refunds of Employee Contributions	(747,942)	(747,942)	-
Administrative Expense	-	(7,294)	7,294
Net Changes	654,180	1,591,190	(937,010)
Reporting Period Ending April 30, 2022	\$ 15,361,997	\$ 9,838,568	\$ 5,523,429

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	5.75%	6.75%	7.75%
Sponsor's Net Pension Liability	\$ 7,803,370	\$ 5,523,429	\$ 3,670,935

Pension Plan Fiduciary Net Position

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

FINAL PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS
OF RESOURCES RELATED TO PENSIONS
YEAR-END APRIL 30, 2021

For the year ended April 30, 2021, the Sponsor will recognize a pension expense of \$1,050,239.

On April 30, 2021, 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	178,691	222,073
Changes of assumptions	590,783	67,280
Net difference between projected and actual earnings on pension plan investments	556,407	0
Employer contributions after the measurement date	687,092	0
Total	\$2,012,973	\$289,353

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer contributions subsequent to the measurement date has been recognized as a reduction of the Net Pension Liability in the year ended April 30, 2021.

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:

2022	\$258,154
2023	\$268,985
2024	\$252,061
2025	\$148,064
2026	\$28,944
Thereafter	\$80,320

PRELIMINARY 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 \$722,766.

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	170,048	173,012
Changes of assumptions	452,251	53,824
Net difference between projected and actual earnings on pension plan investments	0	331,619
Employer contributions after the measurement date	TBD	0
Total	TBD	\$558,455

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended April 30, 2022.

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	\$87,654
2024	\$70,730
2025	(\$33,267)
2026	(\$152,387)
2027	\$83,443
Thereafter	\$7,671

FINAL COMPONENTS OF PENSION EXPENSE
YEAR-END APRIL 30, 2021

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 5,866,689	\$ 373,531	\$ 1,866,548	
Employer Contributions made after April 30, 2020	-	-	687,092	-
Total Pension Liability Factors:				
Service Cost	355,536	-	-	355,536
Interest	944,014	-	-	944,014
Changes in Benefit Terms	79,002	-	-	79,002
Contributions - Buy Back	8,211	-	-	8,211
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	3,798	-	3,798	-
Current Year Amortization	-	(49,062)	(33,827)	(15,235)
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	-	-	-	-
Current Year Amortization	-	(13,456)	(138,532)	125,076
Benefit Payments, Including Refunds of Employee Contributions	(625,188)	-	-	-
Net Change	765,373	(62,518)	518,531	1,496,604
Plan Fiduciary Net Position:				
Contributions - Employer	632,190	-	(632,190)	-
Contributions - Employee	145,704	-	-	(145,704)
Contributions - Buy Back	8,211	-	-	(8,211)
Projected Net Investment Income	550,344	-	-	(550,344)
Difference Between Projected and Actual Earnings on Pension Plan Investments	(533,705)	-	533,705	-
Current Year Amortization	-	(10,830)	(262,791)	251,961
Benefit Payments, Including Refunds of Employee Contributions	(625,188)	-	-	-
Administrative Expenses	(5,933)	-	-	5,933
Net Change	171,623	(10,830)	(361,276)	(446,365)
Ending Balance	\$ 6,460,439	\$ 300,183	\$ 2,023,803	\$ 1,050,239

PRELIMINARY COMPONENTS OF PENSION EXPENSE
YEAR-END APRIL 30, 2022

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 6,460,439	\$ 300,183	\$ 2,023,803	
Employer Contributions made after April 30, 2021	-	-	TBD ¹	-
Total Pension Liability Factors:				
Service Cost	372,154	-	-	372,154
Interest	992,655	-	-	992,655
Changes in Benefit Terms	-	-	-	-
Contributions - Buy Back	8,526			8,526
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	28,787	-	28,787	-
Current Year Amortization	-	(49,061)	(37,430)	(11,631)
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	-	-	-	-
Current Year Amortization	-	(13,456)	(138,532)	125,076
Benefit Payments, Including Refunds of Employee Contributions	(747,942)	-	-	-
Net Change	654,180	(62,517)	(147,175)	1,486,780
Plan Fiduciary Net Position:				
Contributions - Employer	687,092	-	(687,092)	-
Contributions - Employee	165,879	-	-	(165,879)
Contributions - Buy Back	8,526			(8,526)
Projected Net Investment Income	560,284	-	-	(560,284)
Difference Between Projected and Actual Earnings on Pension Plan Investments	924,645	924,645	-	-
Current Year Amortization	-	(195,759)	(159,140)	(36,619)
Benefit Payments, Including Refunds of Employee Contributions	(747,942)	-	-	-
Administrative Expenses	(7,294)	-	-	7,294
Net Change	1,591,190	728,886	(846,232)	(764,014)
Ending Balance	\$ 5,523,429	\$ 966,552	TBD	\$ 722,766

¹ Employer contributions made after the April 30, 2021 measurement date, but before April 30, 2022 need to be added.

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
2021	\$ 28,787	8	\$ 3,601	\$ 3,598	\$ 3,598	\$ 3,598	\$ 3,598	\$ 10,794
2020	\$ 3,798	8	\$ 475	\$ 475	\$ 475	\$ 475	\$ 475	\$ 950
2019	\$ 167,797	8	\$ 20,975	\$ 20,975	\$ 20,975	\$ 20,975	\$ 20,975	\$ 20,975
2018	\$ (299,557)	8	\$ (37,445)	\$ (37,445)	\$ (37,445)	\$ (37,445)	\$ (37,445)	\$ -
2017	\$ 99,029	8	\$ 12,379	\$ 12,379	\$ 12,379	\$ 12,379	\$ -	\$ -
2016	\$ (92,933)	8	\$ (11,616)	\$ (11,616)	\$ (11,616)	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			(11,631)	(11,634)	(11,634)	(18)	(12,397)	32,719

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
2019	\$ 467,158	8	\$ 58,395	\$ 58,395	\$ 58,395	\$ 58,395	\$ 58,395	\$ 58,395
2018	\$ (107,650)	8	\$ (13,456)	\$ (13,456)	\$ (13,456)	\$ (13,456)	\$ (13,456)	\$ -
2016	\$ 641,098	8	\$ 80,137	\$ 80,138	\$ 80,138	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 125,076	\$ 125,077	\$ 125,077	\$ 44,939	\$ 44,939	\$ 58,395

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 Between Projected and Actual Earnings	Recognition Period (Years)	2022	2023	2024	2025	2026	Thereafter		
2021	\$ (924,645)	5	\$ (184,929)	\$ (184,929)	\$ (184,929)	\$ (184,929)	\$ (184,929)	\$ -	\$ -	
2020	\$ 533,705	5	\$ 106,741	\$ 106,741	\$ 106,741	\$ 106,741	\$ -	\$ -	\$ -	
2019	\$ 177,373	5	\$ 35,475	\$ 35,475	\$ 35,475	\$ -	\$ -	\$ -	\$ -	
2018	\$ 84,619	5	\$ 16,924	\$ 16,924	\$ -	\$ -	\$ -	\$ -	\$ -	
2017	\$ (54,152)	5	\$ (10,830)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Net Increase (Decrease) in Pension Expense			\$ (36,619)	\$ (25,789)	\$ (42,713)	\$ (78,188)	\$ (184,929)	\$ -		

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
04/30/2021	634,090	687,092	(53,002)	1,645,994	41.74%
04/30/2020	550,231	632,190	(81,959)	1,521,288	41.56%

The following assumptions were used to determine the Actuarially Determined Contribution for the plan year ending April 30, 2021:

Calculation Timing	The Actuarially Determined Contribution is calculated using a May 1, 2019 valuation date.
Interest Rate	6.75%
Mortality Rate	<p>Active Lives: PubS-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2018. 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-2018.</p> <p>Beneficiaries: PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2018.</p> <p>Disabled Lives: PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2018.</p>
Assumptions	All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the May 1, 2019 Actuarial Valuation Report for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

SCHEDULE OF INVESTMENT RETURNS

For the year ended April 30, 2021, the annual money-weighted return on Pension Plan investments, net of pension plan investment expense, was unknown. 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
04/30/2021	N/A
04/30/2020	5.82%

ASSUMPTIONS – GASB PENSION LIABILITY AND PENSION EXPENSE

The GASB 67 Pension Liability for Plan reporting as of April 30, 2021 and Preliminary GASB 68 Pension Expense for the City's May 1, 2021 - April 30, 2022 reporting period were determined as follows:

Valuation Date	May 1, 2021
Measurement Date	April 30, 2021
Discount Rate	6.75%
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, 2021 for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

The GASB 68 Pension Liability and Final Pension Expense for the current City reporting period were determined as follows:

Valuation Date	May 1, 2020
Measurement Date	April 30, 2020
GASB 68 Expense Measurement Period	May 1, 2019 - April 30, 2020
Reporting Period	May 1, 2020 - April 30, 2021
Discount Rate	6.75%
Inflation	2.50%
Salary Increases	Service-based rates
Other Assumptions	A summary of complete assumptions can be found in the Actuarial Valuation as of May 1, 2020 for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

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 geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation adopted as of April 30, 2021, as provided by Mitchell, Vaught Taylor Inc., are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Fixed Income	49.50%	3.02%
Corporate Investment Grade	5.50%	0.91%
Domestic Equities	34.00%	8.87%
International Developed	11.00%	2.82%
Total	100.00%	

Inflation rate of investment advisor 3.45%

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 6.75 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 (6.75 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 6.75 percent. The municipal bond rate is 1.83 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 6.75 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, 2021 for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.