



CITY OF WASHINGTON, ILLINOIS

City Council Agenda Communication

Meeting Date: February 1, 2021

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 2, 2020 by Jason Franken of Foster & Foster. With no changes to assumptions, the increase in the City contribution is \$45,388 and the percent funded remains unchanged at 59.3%. This increase is due to the fact that there was an increase in Tier 2 benefits and the interest yield (based on 5-year smoothed actuarial rate of 3.54%) was less than the assumption further offset by gains associated with higher-than-expected inactive mortality.

The interest rate assumption is at 6.75% and it is recommended to maintain this assumption due to potential changes as a result of pending investment consolidation. As such, a total City contribution of \$679,478 is required. This can be reduced by approximately \$22,000 in anticipated personal property replacement tax for a recommended tax levy of \$657,500 for the Police Pension Fund.

The City Council approved to include the contribution of \$657,500 in the tax levy that was recently adopted.

The 47-page report is included in the online packets.

Fiscal Impact: Property taxes approximating \$657,500 will be received in FY 21-22 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, 2020
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING APRIL 30, 2022
GASB 67/68 DISCLOSURE INFORMATION
AS OF APRIL 30, 2020



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

October 26, 2020

City of Washington
c/o Joan E. Baxter, Controller
301 Walnut Street
Washington, IL 61751

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 valuation has 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 reflects 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 valuation, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuation, 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.


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.

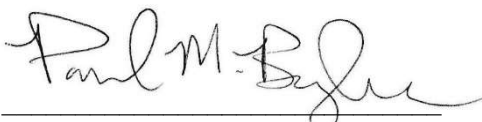
If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

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

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

By: 
Paul M. Baugher, 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, 2020, 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, 2022.

The contribution requirements, compared with those set forth in the May 1, 2019 actuarial report, are as follows:

Valuation Date	5/1/2020	5/1/2019
Applicable to Fiscal Year Ending	<u>4/30/2022</u>	<u>4/30/2021</u>
Total Recommended Contribution	\$830,238	\$780,072
% of Projected Annual Payroll	54.6%	53.0%
Member Contributions (Est.)	150,760	145,982
% of Projected Annual Payroll	9.9%	9.9%
City Recommended Contribution	679,478	634,090
% of Projected Annual Payroll	44.7%	43.1%

As you can see, the Total Recommended Contribution shows an increase when compared to the results determined in the May 1, 2019 actuarial valuation report. The increase is attributable to Tier 2 benefit changes 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. The primary source of unfavorable experience was an investment return of 3.54% (Actuarial Asset Basis) which fell short of the 6.75% assumption. This loss was offset in part by a gain associated with higher than expected inactive mortality.

CHANGES SINCE PRIOR VALUATION

Plan Changes Since Prior Valuation

As a result of Public Act 101-0610, signed into law on December 18, 2019, the following updates were made to the Tier 2 benefits:

- The surviving spouse benefit for non-line of duty death was updated to mirror Tier 1 benefits, whereby Tier 2 surviving spouses will now receive 54% of final average salary, even prior to achieving vesting at 10 years of service.
- The pensionable salary cap increased retroactive to 2011 to alleviate safe harbor concerns, updating the annual adjustment to be CPI-U instead of 50% of CPI-U. The 3% annual growth cap remains in place.
- The final average salary was increased from averaging the highest consecutive 96 of the last 120 months of salary to averaging the highest consecutive 48 of the last 60 months of salary.

Actuarial Assumption/Method Changes Since Prior Valuation

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

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Benefits <u>5/1/2020</u>	Old Benefits <u>5/1/2020</u>	<u>5/1/2019</u>
A. Participant Data			
Number Included			
Actives	21	21	21
Service Retirees	8	8	10
Beneficiaries	4	4	1
Disability Retirees	0	0	1
Terminated Vested	<u>4</u>	<u>4</u>	<u>3</u>
Total	37	37	36
Total Annual Payroll	\$1,521,288	\$1,521,288	\$1,473,074
Payroll Under Assumed Ret. Age	1,521,288	1,521,288	1,473,074
Annual Rate of Payments to:			
Service Retirees	475,499	475,499	547,271
Beneficiaries	162,201	162,201	35,587
Disability Retirees	0	0	34,435
Terminated Vested	0	0	0
B. Assets			
Actuarial Value	8,803,784	8,803,784	8,350,414
Market Value	8,247,378	8,247,378	8,075,755
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	7,617,458	7,364,289	6,822,107
Disability Benefits	819,050	812,050	790,759
Death Benefits	116,253	83,219	76,233
Vested Benefits	543,539	534,688	543,235
Service Retirees	7,929,555	7,929,555	8,741,801
Beneficiaries	1,505,211	1,505,211	282,350
Disability Retirees	0	0	442,129
Terminated Vested	<u>58,478</u>	<u>58,478</u>	<u>11,539</u>
Total	18,589,544	18,287,490	17,710,153

C. Liabilities - (Continued)	New Benefits <u>5/1/2020</u>	Old Benefits <u>5/1/2020</u>	<u>5/1/2019</u>
Present Value of Future Salaries	16,730,680	16,614,432	16,655,936
Present Value of Future Member Contributions	1,658,010	1,646,490	1,650,603
Normal Cost (Retirement)	277,435	264,620	264,439
Normal Cost (Disability)	54,968	54,768	53,611
Normal Cost (Death)	6,890	4,426	4,272
Normal Cost (Vesting)	<u>32,947</u>	<u>32,454</u>	<u>35,243</u>
Total Normal Cost	372,240	356,268	357,565
Present Value of Future Normal Costs	3,733,198	3,512,437	3,628,213
Accrued Liability (Retirement)	4,786,933	4,709,956	4,079,212
Accrued Liability (Disability)	260,228	258,797	230,782
Accrued Liability (Death)	39,193	39,318	33,708
Accrued Liability (Vesting)	276,748	273,738	260,419
Accrued Liability (Inactives)	<u>9,493,244</u>	<u>9,493,244</u>	<u>9,477,819</u>
Total Actuarial Accrued Liability	14,856,346	14,775,053	14,081,940
Unfunded Actuarial Accrued Liability (UAAL)	6,052,562	5,971,269	5,731,526
Funded Ratio (AVA / AL)	59.3%	59.6%	59.3%

	New Benefits <u>5/1/2020</u>	Old Benefits <u>5/1/2020</u>	<u>5/1/2019</u>
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	9,493,244	9,493,244	9,477,819
Actives	1,390,092	1,307,083	904,546
Member Contributions	<u>1,192,633</u>	<u>1,192,633</u>	<u>1,070,332</u>
Total	12,075,969	11,992,960	11,452,697
Non-vested Accrued Benefits	<u>223,000</u>	<u>256,578</u>	<u>376,597</u>
Total Present Value Accrued Benefits	12,298,969	12,249,538	11,829,294
Funded Ratio (MVA / PVAB)	67.1%	67.3%	68.3%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	49,431	0	
Assumption Changes	0	0	
Plan Experience	0	268,055	
Benefits Paid	0	(625,188)	
Interest	0	777,377	
Other	<u>0</u>	<u>0</u>	
Total	49,431	420,244	

Valuation Date	New Benefits 5/1/2020	Old Benefits 5/1/2020	5/1/2019
Applicable to Fiscal Year Ending	<u>4/30/2022</u>	<u>4/30/2022</u>	<u>4/30/2021</u>

E. Pension Cost

Normal Cost ¹	\$397,366	\$380,316	\$381,701
% of Total Annual Payroll ¹	26.1	25.0	25.9
Administrative Expenses ¹	6,333	6,333	8,331
% of Total Annual Payroll ¹	0.4	0.4	0.6
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years (as of 5/1/2020) ¹	426,539	420,810	390,040
% of Total Annual Payroll ¹	28.1	27.7	26.5
Total Recommended Contribution	830,238	807,459	780,072
% of Total Annual Payroll ¹	54.6	53.1	53.0
Expected Member Contributions ¹	150,760	150,760	145,982
% of Total Annual Payroll ¹	9.9	9.9	9.9
Expected City Contribution	679,478	656,699	634,090
% of Total Annual Payroll ¹	44.7	43.2	43.1

F. Past Contributions

Plan Years Ending:	<u>4/30/2020</u>
Total Recommended Contribution	695,935
City	550,231
Actual Contributions Made:	
Members (excluding buyback)	145,704
City	<u>632,190</u>
Total	777,894

G. Net Actuarial (Gain)/Loss	272,459
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¹ Contributions developed as of 5/1/2020 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>
2020	6,052,562
2021	6,034,571
2022	6,000,437
2027	5,526,547
2031	4,654,258
2036	2,647,381
2040	0

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases

		<u>Actual</u>	<u>Assumed</u>
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%

(ii) 3 Year Comparison of Investment Return on Actuarial Value

		<u>Actual</u>	<u>Assumed</u>
Year Ended	4/30/2020	3.54%	6.75%
Year Ended	4/30/2019	4.27%	6.75%
Year Ended	4/30/2018	4.43%	6.75%

DEVELOPMENT OF MAY 1, 2020 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of May 1, 2019	\$5,731,526
(2)	Sponsor Normal Cost developed as of May 1, 2019	211,583
(3)	Expected administrative expenses for the year ended April 30, 2020	7,804
(4)	Expected interest on (1), (2) and (3)	401,423
(5)	Sponsor contributions to the System during the year ended April 30, 2020	632,190
(6)	Expected interest on (5)	21,336
(7)	Expected Unfunded Actuarial Accrued Liability as of April 30, 2020, (1)+(2)+(3)+(4)-(5)-(6)	5,698,810
(8)	Change to UAAL due to Benefits Change	81,293
(9)	Change to UAAL due to Actuarial (Gain)/Loss	272,459
(10)	Unfunded Accrued Liability as of May 1, 2020	6,052,562
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	6,052,562

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>5/1/2020</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
5/1/2020	20	6,052,562	399,568

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of May 1, 2019	\$5,731,526
(2) Expected UAAL as of May 1, 2020	5,698,810
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	270,498
Salary Increases	(36,900)
Active Decrements	(68,661)
Inactive Mortality	(207,539)
Other	<u>315,061</u>
Change in UAAL due to (Gain)/Loss	272,459
Change to UAAL due to Benefits Change	<u>81,293</u>
(4) Actual UAAL as of May 1, 2020	\$6,052,562

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of May 1, 2019	\$ 634,090
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	(1,385)
Change in Assumed Administrative Expense	(1,998)
Investment Return (Actuarial Asset Basis)	19,063
Salary Increases	(2,600)
New Entrants	-
Active Decrements	(4,839)
Inactive Mortality	(14,626)
Contributions (More) or Less than Recommended	(5,971)
Increase in Amortization Payment Due to Payroll Growth Assumption	13,651
Change in Expected Member Contributions	(4,778)
Benefits Change	22,779
Other	<u>26,092</u>
Total Change in Contribution	45,388
(3) Contribution Determined as of May 1, 2020	\$679,478

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 Benefits	Old Benefits	
Valuation Date	5/1/2020	5/1/2020	5/1/2019
Applicable to Fiscal Year Ending	<u>4/30/2022</u>	<u>4/30/2022</u>	<u>4/30/2021</u>
Actuarial Accrued Liability (PUC)	14,230,936	14,167,729	13,635,111
Actuarial Value of Assets	<u>8,803,784</u>	<u>8,803,784</u>	<u>8,350,414</u>
Unfunded Actuarial Accrued Liability (UAAL)	5,427,152	5,363,945	5,284,697
UAAL Subject to Amortization	4,004,058	3,947,172	3,921,186
Normal Cost ¹	\$416,302	\$401,832	\$382,972
% of Total Annual Payroll ¹	27.4	26.4	26.0
Administrative Expenses ¹	6,333	6,333	8,331
% of Total Annual Payroll ¹	0.4	0.4	0.6
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years (as of 5/1/2020) ¹	282,176	278,167	266,844
% of Total Annual Payroll ¹	18.5	18.3	18.1
Total Required Contribution	704,811	686,332	658,147
% of Total Annual Payroll ¹	46.3	45.1	44.7
Expected Member Contributions ¹	150,760	150,760	145,982
% of Total Annual Payroll ¹	9.9	9.9	9.9
Expected City Contribution	554,051	535,572	512,165
% of Total Annual Payroll ¹	36.4	35.2	34.8
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 5/1/2020 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
2020	32,562	693,296	725,858
2021	60,025	645,003	705,028
2022	85,017	655,082	740,099
2023	116,093	665,001	781,094
2024	143,712	674,697	818,409
2025	175,344	684,106	859,450
2026	204,017	693,153	897,170
2027	231,635	701,755	933,390
2028	257,031	709,826	966,857
2029	281,169	717,270	998,439
2030	321,948	723,989	1,045,937
2031	384,201	729,882	1,114,083
2032	429,069	734,843	1,163,912
2033	482,477	738,752	1,221,229
2034	530,275	741,475	1,271,750
2035	594,297	742,853	1,337,150
2036	653,227	742,704	1,395,931
2037	719,819	740,811	1,460,630
2038	806,637	736,938	1,543,575
2039	885,700	730,828	1,616,528
2040	968,651	722,223	1,690,874
2041	1,052,095	710,866	1,762,961
2042	1,148,531	696,534	1,845,065
2043	1,275,991	679,047	1,955,038
2044	1,382,085	658,316	2,040,401
2045	1,466,967	634,337	2,101,304
2046	1,525,759	607,210	2,132,969
2047	1,608,408	577,105	2,185,513
2048	1,658,568	544,298	2,202,866
2049	1,723,932	509,111	2,233,043
2050	1,766,711	471,978	2,238,689
2051	1,802,194	433,415	2,235,609
2052	1,831,597	393,993	2,225,590
2053	1,856,472	354,299	2,210,771
2054	1,875,117	314,956	2,190,073
2055	1,888,782	276,571	2,165,353
2056	1,897,059	239,740	2,136,799
2057	1,900,859	205,022	2,105,881
2058	1,899,505	172,864	2,072,369
2059	1,893,162	143,576	2,036,738

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	6.75% per year compounded annually, net of investment related expenses.
Mortality Rate	<p><i>Active Lives:</i> 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><i>Inactive Lives:</i> PubS-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2019.</p> <p><i>Beneficiaries:</i> PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2019.</p> <p><i>Disabled Lives:</i> PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2019.</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.

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 decreased from 133.3% on May 1, 2017 to 131.3% on May 1, 2020, indicating that the plan has been 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 63.9%. 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, 2017 to May 1, 2020
- 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, 2017 to May 1, 2020. The current Net Cash Flow Ratio of 1.8% 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>5/1/2017</u>	<u>5/1/2018</u>	<u>5/1/2019</u>	<u>5/1/2020</u>
<u>Support Ratio</u>				
Total Actives	20	20	21	21
Total Inactives	15	15	15	16
Actives / Inactives	133.3%	133.3%	140.0%	131.3%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	7,205,268	7,647,347	8,075,755	8,247,378
Total Annual Payroll	1,336,695	1,369,110	1,473,074	1,521,288
MVA / Total Annual Payroll	539.0%	558.6%	548.2%	542.1%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	9,092,009	8,984,847	9,477,819	9,493,244
Total Accrued Liability	12,695,709	12,846,189	14,081,940	14,856,346
Inactive AL / Total AL	71.6%	69.9%	67.3%	63.9%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	7,548,916	7,923,297	8,350,414	8,803,784
Total Accrued Liability	12,695,709	12,846,189	14,081,940	14,856,346
AVA / Total Accrued Liability	59.5%	61.7%	59.3%	59.3%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ¹	69,525	39,025	81,607	146,773
Market Value of Assets (MVA)	7,205,268	7,647,347	8,075,755	8,247,378
Ratio	1.0%	0.5%	1.0%	1.8%

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

STATEMENT OF FIDUCIARY NET POSITION
April 30, 2020

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Certificates of Deposit	1,424,657
Money Market	1,094,921
Cash	1,482
Total Cash and Equivalents	2,521,060
Receivables:	
From City	617,338
Accrued Past Due Interest	15,942
Total Receivable	633,280
Investments:	
Corporate Bonds	1,844,911
U.S. Gov't and Agency Obligations	387,969
Mutual Funds	2,860,158
Total Investments	5,093,038
Total Assets	8,247,378
<u>LIABILITIES</u>	
Total Liabilities	0
Net Assets:	
Active and Retired Members' Equity	8,247,378
NET POSITION RESTRICTED FOR PENSIONS	8,247,378
TOTAL LIABILITIES AND NET ASSETS	8,247,378

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED April 30, 2020
Market Value Basis

ADDITIONS

Contributions:

Member	145,704
Miscellaneous Member Revenue	8,211
City	632,190

Total Contributions	786,105
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Investment Income:

Miscellaneous Income	1,086	
Net Realized Gain (Loss)	142,758	
Unrealized Gain (Loss)	(336,908)	
Net Increase in Fair Value of Investments		(193,064)
Interest & Dividends		233,448
Less Investment Expense ¹		(23,745)

Net Investment Income	16,639
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Total Additions	802,744
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DEDUCTIONS

Distributions to Members:

Benefit Payments	625,188
Refund of Contributions/Transfers	0

Total Distributions	625,188
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Administrative Expenses	5,933
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Total Deductions	631,121
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Net Increase in Net Position	171,623
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	8,075,755
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End of the Year	8,247,378
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¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

April 30, 2020

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five 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.

Plan Year Ending	Gain/(Loss)	Gains/(Losses) Not Yet Recognized				
		Amounts Not Yet Recognized by Valuation Year				
		2020	2021	2022	2023	2024
4/30/2017	54,152	10,830	0	0	0	0
4/30/2018	(84,619)	(33,848)	(16,924)	0	0	0
4/30/2019	(177,373)	(106,424)	(70,949)	(35,475)	0	0
4/30/2020	(533,705)	(426,964)	(320,223)	(213,482)	(106,741)	0
Total		(556,406)	(408,096)	(248,957)	(106,741)	0

Development of Investment Gain/Loss

Market Value of Assets, 4/30/2019	8,075,755
Contributions Less Benefit Payments & Administrative Expenses	154,984
Expected Investment Earnings ¹	550,344
Actual Net Investment Earnings	16,639
2020 Actuarial Investment Gain/(Loss)	(533,705)

¹ Expected Investment Earnings = 6.75% x (8,075,755 + 0.5 x 154,984)

Development of Actuarial Value of Assets

Market Value of Assets, 4/30/2020	8,247,378
(Gains)/Losses Not Yet Recognized	556,406
Actuarial Value of Assets, 4/30/2020	8,803,784
(A) 4/30/2019 Actuarial Assets:	8,350,414
(I) Net Investment Income:	
1. Interest and Dividends	234,534
2. Realized Gains (Losses)	142,758
3. Change in Actuarial Value	(55,161)
4. Investment Expenses	(23,745)
Total	298,386
(B) 4/30/2020 Actuarial Assets:	8,803,784
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	3.54%
Market Value of Assets Rate of Return:	0.20%
4/30/2020 Limited Actuarial Assets:	8,803,784
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(270,498)

April 30, 2020
Actuarial Asset Basis

Contributions:		
Member	145,704	
Miscellaneous Member Revenue	8,211	
City	632,190	
Total Contributions		786,105
Earnings from Investments		
Interest & Dividends	233,448	
Miscellaneous Income	1,086	
Net Realized Gain (Loss)	142,758	
Change in Actuarial Value	(55,161)	
Total Earnings and Investment Gains		322,131
	EXPENSES	
Administrative Expenses:		
Investment Related ¹	23,745	
Other	5,933	
Total Administrative Expenses		29,678
Distributions to Members:		
Benefit Payments	625,188	
Refund of Contributions/Transfers	0	
Total Distributions		625,188
Change in Net Assets for the Year		453,370
Net Assets Beginning of the Year		8,350,414
Net Assets End of the Year ²		8,803,784

² Net Assets may be limited for actuarial consideration.

STATISTICAL DATA

	<u>5/1/2017</u>	<u>5/1/2018</u>	<u>5/1/2019</u>	<u>5/1/2020</u>
<u>Actives - Tier 1</u>				
Number	11	10	10	10
Average Current Age	39.0	40.6	41.6	42.6
Average Age at Employment	27.9	28.3	28.3	27.8
Average Past Service	11.1	12.3	13.3	14.8
Average Annual Salary	\$71,201	\$73,982	\$75,331	\$77,792
<u>Actives - Tier 2</u>				
Number	9	10	11	11
Average Current Age	34.0	33.9	34.2	35.1
Average Age at Employment	30.9	30.2	29.9	30.3
Average Past Service	3.1	3.7	4.3	4.8
Average Annual Salary	\$61,498	\$62,929	\$65,433	\$67,579
<u>Service Retirees</u>				
Number	10	10	10	8
Average Current Age	62.9	63.9	64.9	62.8
Average Annual Benefit	\$50,974	\$52,148	\$54,727	\$59,437
<u>Beneficiaries</u>				
Number	1	1	1	4
Average Current Age	76.5	77.5	78.5	71.6
Average Annual Benefit	\$35,587	\$35,587	\$35,587	\$40,550
<u>Disability Retirees</u>				
Number	1	1	1	0
Average Current Age	66.2	67.2	68.2	N/A
Average Annual Benefit	\$33,330	\$33,882	\$34,435	N/A
<u>Terminated Vested</u>				
Number	3	3	3	4
Average Current Age	31.7	32.7	33.7	34.6
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	1	1	0	0	0	0	0	0	0	0	2
30 - 34	1	0	0	0	1	4	0	0	0	0	0	6
35 - 39	0	0	0	0	1	1	2	0	0	0	0	4
40 - 44	0	0	0	0	0	2	2	0	0	0	0	4
45 - 49	0	0	0	0	0	1	0	1	0	0	0	2
50 - 54	0	0	0	0	0	0	0	0	2	0	0	2
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	1	1	1	0	2	8	4	1	3	0	0	21

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 5/1/2019	21
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
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>0</u>
f. Continuing participants	20
g. New entrants	<u>1</u>
h. Total active life participants in valuation	21

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	10	1	1	3	15
Retired	0	0	0	0	0
Vested Deferred	0	0	0	1	1
Death, With Survivor	(2)	3	(1)	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	5/1/2020	5/1/2019
Measurement Date	4/30/2020	4/30/2019
Plan Membership:		
Inactives Currently Receiving Benefits	12	12
Inactives Not Yet Receiving Benefits	4	3
Active Plan Members	<u>21</u>	<u>21</u>
Total	37	36
Covered Payroll	\$ 1,521,288	\$ 1,473,074
Net Pension Liability		
Total Pension Liability	\$ 14,707,817	\$ 13,942,444
Plan Fiduciary Net Position	<u>8,247,378</u>	<u>8,075,755</u>
Net Pension Liability	\$ 6,460,439	\$ 5,866,689
Plan Fiduciary Net Position		
As a Percentage of Total Pension Liability	56.07%	57.92%
Net Pension Liability		
As a Percentage of Covered Payroll	424.67%	398.26%
Total Pension Expense	\$ 1,050,239	\$ 783,835
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	2.85%	3.21%
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	04/30/2021	04/30/2020
Measurement Date	04/30/2020	04/30/2019
Total Pension Liability		
Service Cost	355,536	322,692
Interest	944,014	860,298
Changes of Benefit Terms	79,002	-
Differences Between Expected and Actual Experience	3,798	167,797
Changes of Assumptions	-	467,158
Contributions - Buy Back	8,211	5,053
Benefit Payments, Including Refunds of Employee Contributions	(625,188)	(606,049)
Net Change in Total Pension Liability	765,373	1,216,949
Total Pension Liability - Beginning	13,942,444	12,725,495
Total Pension Liability - Ending (a)	\$ 14,707,817	\$ 13,942,444
Plan Fiduciary Net Position		
Contributions - Employer	632,190	553,041
Contributions - Employee	145,704	142,419
Contributions - Buy Back	8,211	5,053
Net Investment Income	16,639	341,748
Benefit Payments, Including Refunds of Employee Contributions	(625,188)	(606,049)
Administrative Expense	(5,933)	(7,804)
Net Change in Plan Fiduciary Net Position	171,623	428,408
Plan Fiduciary Net Position - Beginning	8,075,755	7,647,347
Plan Fiduciary Net Position - Ending (b)	\$ 8,247,378	\$ 8,075,755
Net Pension Liability - Ending (a) - (b)	\$ 6,460,439	\$ 5,866,689
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	56.07%	57.92%
Covered Payroll	\$ 1,521,288	\$ 1,473,074
Net Pension Liability as a Percentage of Covered Payroll	424.67%	398.26%

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, 2020	\$ 13,942,444	\$ 8,075,755	\$ 5,866,689
Changes for a Year:			
Service Cost	355,536	-	355,536
Interest	944,014	-	944,014
Differences Between Expected and Actual Experience	3,798	-	3,798
Changes of Assumptions	-	-	-
Changes of Benefit Terms	79,002	-	79,002
Contributions - Employer	-	632,190	(632,190)
Contributions - Employee	-	145,704	(145,704)
Contributions - Buy Back	8,211	8,211	-
Net Investment Income	-	16,639	(16,639)
Benefit Payments, Including Refunds of Employee Contributions	(625,188)	(625,188)	-
Administrative Expense	-	(5,933)	5,933
Net Changes	765,373	171,623	593,750
Reporting Period Ending April 30, 2021	\$ 14,707,817	\$ 8,247,378	\$ 6,460,439

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	\$ 8,657,589	\$ 6,460,439	\$ 4,678,776

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, 2020

For the year ended April 30, 2020, the Sponsor will recognize a pension expense of \$783,835.

On April 30, 2020, 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	208,720	271,135
Changes of assumptions	729,315	80,736
Net difference between projected and actual earnings on pension plan investments	274,663	0
Employer contributions after the measurement date	632,190	0
Total	\$1,844,888	\$351,871

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 4/30/2020.

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:

2021	\$254,588
2022	\$150,938
2023	\$161,769
2024	\$144,845
2025	\$40,848
Thereafter	\$107,839

PRELIMINARY 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	TBD	0
Total	TBD	\$289,353

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 4/30/2021.

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

FINAL COMPONENTS OF PENSION EXPENSE
YEAR-END APRIL 30, 2020

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 5,078,148	\$ 446,879	\$ 1,303,000	
Employer Contributions made after April 30, 2019	-	-	632,190	-
Total Pension Liability Factors:				
Service Cost	322,692	-	-	322,692
Interest	860,298	-	-	860,298
Changes in Benefit Terms	-	-	-	-
Contributions - Buy Back	5,053	-	-	5,053
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	167,797	-	167,797	-
Current Year Amortization	-	(49,062)	(33,351)	(15,711)
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	467,158	-	467,158	-
Current Year Amortization	-	(13,456)	(138,530)	125,074
Benefit Payments, Including Refunds of Employee Contributions	(606,049)	-	-	-
Net Change	1,216,949	(62,518)	1,095,264	1,297,406
Plan Fiduciary Net Position:				
Contributions - Employer	553,041	-	(553,041)	-
Contributions - Employee	142,419	-	-	(142,419)
Contributions - Buy Back	5,053	-	-	(5,053)
Projected Net Investment Income	519,121	-	-	(519,121)
Difference Between Projected and Actual Earnings on Pension Plan Investments	(177,373)	-	177,373	-
Current Year Amortization	-	(10,830)	(156,048)	145,218
Benefit Payments, Including Refunds of Employee Contributions	(606,049)	-	-	-
Administrative Expenses	(7,804)	-	-	7,804
Net Change	428,408	(10,830)	(531,716)	(513,571)
Ending Balance	\$ 5,866,689	\$ 373,531	\$ 1,866,548	\$ 783,835

PRELIMINARY 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	-	-	TBD ¹	-
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)	(168,561)	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	TBD	\$ 1,050,239

¹ Employer contributions made after the April 30, 2020 measurement date, but before April 30, 2021 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)	2021	2022	2023	2024	2025	Thereafter
2020	\$ 3,798	8	\$ 473	\$ 475	\$ 475	\$ 475	\$ 475	\$ 1,425
2019	\$ 167,797	8	\$ 20,975	\$ 20,975	\$ 20,975	\$ 20,975	\$ 20,975	\$ 41,950
2018	\$ (299,557)	8	\$ (37,445)	\$ (37,445)	\$ (37,445)	\$ (37,445)	\$ (37,445)	\$ (37,445)
2017	\$ 99,029	8	\$ 12,379	\$ 12,379	\$ 12,379	\$ 12,379	\$ 12,379	\$ -
2016	\$ (92,933)	8	\$ (11,617)	\$ (11,616)	\$ (11,616)	\$ (11,616)	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			(15,235)	(15,232)	(15,232)	(15,232)	(3,616)	5,930

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)	2021	2022	2023	2024	2025	Thereafter
2019	\$ 467,158	8	\$ 58,395	\$ 58,395	\$ 58,395	\$ 58,395	\$ 58,395	\$ 116,790
2018	\$ (107,650)	8	\$ (13,456)	\$ (13,456)	\$ (13,456)	\$ (13,456)	\$ (13,456)	\$ (13,456)
2016	\$ 641,098	8	\$ 80,137	\$ 80,137	\$ 80,138	\$ 80,138	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 125,076	\$ 125,076	\$ 125,077	\$ 125,077	\$ 44,939	\$ 103,334

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)	2021	2022	2023	2024	2025	Thereafter
2020	\$ 533,705	5	\$ 106,741	\$ 106,741	\$ 106,741	\$ 106,741	\$ 106,741	\$ -
2019	\$ 177,373	5	\$ 35,475	\$ 35,475	\$ 35,475	\$ 35,475	\$ -	\$ -
2018	\$ 84,619	5	\$ 16,924	\$ 16,924	\$ 16,924	\$ -	\$ -	\$ -
2017	\$ (54,152)	5	\$ (10,830)	\$ (10,830)	\$ -	\$ -	\$ -	\$ -
2016	\$ 518,254	5	\$ 103,651	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 251,961	\$ 148,310	\$ 159,140	\$ 142,216	\$ 106,741	\$ -

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
04/30/2020	550,231	632,190	(81,959)	1,521,288	41.56%
04/30/2019	550,691	553,041	(2,350)	1,473,074	37.54%

The following assumptions were used to determine the Actuarially Determined Contribution for the plan year ending April 30, 2020:

Calculation Timing	The Actuarially Determined Contribution is calculated using a May 1, 2018 valuation date.
Interest Rate	6.75%
Mortality Rate	RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date with Scale BB.
Disabled Mortality Rate	RP-2000 Disabled Retiree Mortality, projected to the valuation date with Scale BB.
Assumptions	All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the May 1, 2018 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, 2020, the annual money-weighted return on Pension Plan investments, net of pension plan investment expense, was 5.82 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
04/30/2020	5.82%
04/30/2019	4.88%

ASSUMPTIONS – GASB PENSION LIABILITY AND PENSION EXPENSE

The GASB 67 Pension Liability for Plan reporting as of April 30, 2020 and Preliminary GASB 68 Pension Expense for the City's May 1, 2020 - April 30, 2021 reporting period were determined as follows:

Valuation Date	May 1, 2020
Measurement Date	April 30, 2020
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, 2020 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, 2019
Measurement Date	April 30, 2019
GASB 68 Expense Measurement Period	May 1, 2019 - April 30, 2019
Reporting Period	May 1, 2019 - April 30, 2020
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, 2019 for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

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

- The mortality rates were updated to reflect the PubS-2010 tables.

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, 2020, as provided by MVT Invest, are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return ¹
Fixed Income	5.00%	0.50%
Corporate Investment Grade	20.00%	0.75%
Domestic Equities	33.75%	6.60%
International Developed	11.25%	6.00%
Cash and Equivalents	30.00%	0.00%
Total	100.00%	

¹ Based on historical return data.

Inflation rate of investment advisor N/A

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 2.85 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, 2020 for the City of Washington Police Pension Fund prepared by Foster & Foster Actuaries and Consultants.

The valuation reflects benefit changes noted on the page “Changes Since Prior Valuation”.