



City of Livonia Police and Fire Revised Retirement Plan

November 30, 2022
GASB Nos. 67 & 68 Report

Actuarial Certification	3
Summary	5
Statement of Fiduciary Net Position	6
Statement of Changes in Fiduciary Net Position	7
Schedule of Changes in Net Pension Liability and Related Ratios	8
Pension Expense	9
Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions	10
Discount Rate and Net Pension Liability Sensitivity	12
Schedule of Contributions	13
Actuarial Assumptions for Total Pension Liability	14
Actuarial Assumptions for Actuarially Determined Contributions	15
Plan Provisions	17

This report is prepared in accordance with our understanding of GASB Nos. 67 & 68 for the purpose of disclosing pension plans in financial statements. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report.

The information presented in this report is based on:

- the actuarial assumptions included in this report;
- the plan provisions;
- participant information furnished to us by the Plan Administrator;
- asset information furnished to us by the Plan Trustee.

We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we may have made assumptions we believe are reasonable for the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report.

The interest rate, other economic assumptions, and demographic assumptions have been selected by the plan sponsor with our recommendations. The assumptions used, in our opinion, are reasonable and represent a reasonable expectation of future experience under the plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

A summary of any assumptions not included in this report, the plan provisions and the participant information is included in the Actuarial Valuation Report for funding purposes.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

In preparing the results, Nyhart used Proval valuation software developed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing pension valuations. We coded the plan provisions, assumptions, methods, and participant data summarized in this report, and reviewed the liability and cost outputs for reasonableness. We are not aware of any material weaknesses or limitations in the software, and have determined it is appropriate for performing this valuation.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.

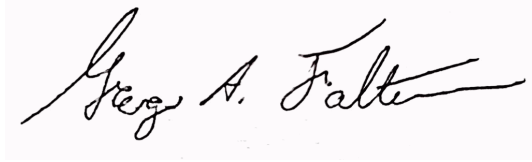
To our knowledge there have been no significant events prior to the current year's measurement date or as of the date of this report which could materially affect the results contained herein.

Neither Nyhart nor any of its employees have any relationships with the plan or plan sponsor which could impair or appear to impair the objectivity of this report.

Nyhart



Danielle Winegardner, FSA, EA, MAAA



Greg Faltenovich, EA, FCA, MAAA

03/22/2023

Net Pension Liability

The components of the net pension liability at November 30

	<u>11/30/2022</u>	<u>11/30/2021</u>
Total pension liability	\$ 4,817,234	\$ 1,698,117
Plan fiduciary net position	(4,292,540)	(1,966,156)
Net pension liability	\$ 524,694	\$ (268,039)
Plan fiduciary net position as a percent of the total pension liability	89.11%	115.78%
Pension Expense for the Fiscal Year Ended November 30	\$ 1,856,065	\$ 768,990

Actuarial Assumptions

The total pension liability was determined using the following actuarial assumptions

Inflation	2.50%	2.50%
Salary increases, including inflation	6.00%	600.00%
Investment rate of return, including inflation, and net of investment expense	7.00%	7.00%

Plan Membership

The total pension liability was determined based on the plan membership as of November 30

	<u>2022</u>	<u>2021</u>
Inactive plan members and beneficiaries currently receiving benefits	0	0
Inactive plan members entitled to but not yet receiving benefits	11	1
Active plan members	159	133
Total members	170	134

City of Livonia Police and Fire Revised Retirement Plan
GASB Nos. 67 & 68 Report as of Fiscal Year Ending November 30, 2022
Statement of Fiduciary Net Position

Assets	11/30/2022	11/30/2021
Cash and deposits	\$ 0	\$ 0
Securities lending cash collateral	0	0
Total cash	\$ 0	\$ 0
Receivables:		
Contributions	\$ 224,661	\$ 175,446
Due from broker for investments sold	0	0
Investment income	2,801	0
Other	0	0
Total receivables	\$ 227,462	\$ 175,446
Investments:		
Short Term Investments	\$ 998,496	\$ 0
Fixed Income	203,254	0
Equities	2,866,970	0
Real Estate	0	0
Other	0	1,798,010
Total investments	\$ 4,068,720	\$ 1,798,010
Total assets	\$ 4,296,182	\$ 1,973,456
 Liabilities		
Payables:		
Investment management fees	\$ 0	\$ 0
Due to broker for investments purchased	0	0
Collateral payable for securities lending	0	0
Other	3,642	7,300
Total liabilities	\$ 3,642	\$ 7,300
 Net position restricted for pensions	 \$ 4,292,540	 \$ 1,966,156

City of Livonia Police and Fire Revised Retirement Plan
GASB Nos. 67 & 68 Report as of Fiscal Year Ending November 30, 2022
Statement of Changes in Fiduciary Net Position

	<u>11/30/2022</u>	<u>11/30/2021</u>
Additions		
Contributions:		
Employer	\$ 1,756,383	\$ 1,037,029
Member	935,795	506,744
Buy Back	0	429,683
Total contributions	<u>\$ 2,692,178</u>	<u>\$ 1,973,456</u>
Investment income:		
Net increase in fair value of investments	\$ (468,092)	\$ 0
Interest and dividends	151,663	0
Less investment expense, other than from securities lending	<u>(13,021)</u>	<u>0</u>
Net income other than from securities lending	\$ (329,450)	\$ 0
Securities lending income	0	0
Less securities lending expense	<u>0</u>	<u>0</u>
Net income from securities lending	<u>\$ 0</u>	<u>\$ 0</u>
Net investment income	<u>\$ (329,450)</u>	<u>\$ 0</u>
Other	0	0
Total additions	<u>\$ 2,362,728</u>	<u>\$ 1,973,456</u>
Deductions		
Benefit payments, including refunds of member contributions	\$ 8,790	\$ 0
Administrative expense	27,554	7,300
Other	<u>0</u>	<u>0</u>
Total deductions	<u>\$ 36,344</u>	<u>\$ 7,300</u>
Net increase in net position	<u>\$ 2,326,384</u>	<u>\$ 1,966,156</u>
Net position restricted for pensions		
Beginning of year	1,966,156	0
End of year	<u>\$ 4,292,540</u>	<u>\$ 1,966,156</u>

City of Livonia Police and Fire Revised Retirement Plan
GASB Nos. 67 & 68 Report as of Fiscal Year Ending November 30, 2022
Schedule of Changes in Net Pension Liability and Related Ratios

	11/30/2022	11/30/2021
Total pension liability		
Service cost	\$ 2,565,865	\$ 0
Interest	298,171	0
Changes of benefit terms	0	1,698,117
Differences between expected and actual experience	263,871	0
Changes of assumptions	0	0
Benefit payments, including refunds of member contributions	(8,790)	0
Net change in total pension liability	<u>3,119,117</u>	<u>1,698,117</u>
Total pension liability - beginning	1,698,117	0
Total pension liability - ending (a)	\$ 4,817,234	\$ 1,698,117
Plan fiduciary net position		
Contributions - employer	\$ 1,756,383	1,037,029
Contributions - member	935,795	506,744
Contributions - buy back	0	429,683
Net investment income	(329,450)	0
Benefit payments, including refunds of member contributions	(8,790)	0
Administrative expenses	(27,554)	(7,300)
Other	0	0
Net change in plan fiduciary net position	<u>\$ 2,326,384</u>	<u>\$ 1,966,156</u>
Plan fiduciary net position - beginning	1,966,156	0
Plan fiduciary net position - ending (b)	\$ 4,292,540	\$ 1,966,156
Net pension liability - ending (a) - (b)	\$ 524,694	\$ (268,039)
Plan fiduciary net position as a percentage of the total pension liability	89.11%	115.78%
Covered-employee payroll	\$ 12,593,492	\$ 6,715,276
Net pension liability as percentage of covered-employee payroll	4.17%	-3.99%

City of Livonia Police and Fire Revised Retirement Plan
GASB Nos. 67 & 68 Report as of Fiscal Year Ending November 30, 2022
Pension Expense

Fiscal year ending	<u>11/30/2022</u>	<u>11/30/2021</u>
Service cost	\$ 2,565,865	\$ 0
Interest on total pension liability	298,171	0
Projected earnings on pension plan investments	(230,585)	0
Changes of benefit terms	0	1,698,117
Employee contributions	(935,795)	(936,427)
Pension plan administrative expense	27,554	7,300
Other changes	0	0
Current period recognition of deferred outflows/(inflows) of resources		
Differences between Expected & Actual Experience in measurement of the Total Pension Liability	\$ 18,848	\$ 0
Changes of assumptions	0	0
Differences between Projected & Actual Earnings on Pension Plan Investments	112,007	0
Total	<u>\$ 1,856,065</u>	<u>\$ 768,990</u>

City of Livonia Police and Fire Revised Retirement Plan
GASB Nos. 67 & 68 Report as of Fiscal Year Ending November 30, 2022
Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

Differences between expected and actual experience in measurement of the total pension liability for fiscal year ending:	Initial Balance	Amortization Period	Annual Recognition	11/30/2022 Balance
November 30, 2022	\$ 263,871	14.0	\$ 18,848	\$ 245,023
			<u>\$ 18,848</u>	<u>\$ 245,023</u>
Changes in assumptions for fiscal year ending:	Initial Balance	Initial Amortization Period	Annual Recognition	11/30/2022 Balance
November 30, 2022	\$ 0	14.0	\$ 0	\$ 0
			<u>\$ 0</u>	<u>\$ 0</u>
Differences between projected and actual earnings on pension plan investments for fiscal year ending:	Initial Balance	Initial Amortization Period	Annual Recognition	11/30/2022 Balance
November 30, 2022	\$ 560,035	5.0	\$ 112,007	\$ 448,028
			<u>\$ 112,007</u>	<u>\$ 448,028</u>

City of Livonia Police and Fire Revised Retirement Plan
GASB Nos. 67 & 68 Report as of Fiscal Year Ending November 30, 2022
Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 245,023	\$ 0
Changes of Assumptions	\$ 0	\$ 0
Net difference between projected and actual earnings on pension plan investments	\$ 448,028	\$ 0
	<u>\$ 693,051</u>	<u>\$ 0</u>

The balances as of November 30, 2022 of the deferred outflows/(inflows) of resources will be recognized in pension expense for the fiscal year ending November 30.

11/30/2023	\$ 130,855
11/30/2024	\$ 130,855
11/30/2025	\$ 130,855
11/30/2026	\$ 130,855
11/30/2027	\$ 18,848
Thereafter	\$ 150,783

Discount rate

The discount rate used to measure the total pension liability was 7.00%. 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 contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Professional judgment on future contributions has been applied in those cases where contribution patterns deviate from the actuarially determined rates. 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 was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability to changes in the discount rate

The following presents the net pension liability, calculated using the discount rate of 7.00%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net pension liability	\$ 1,440,551	\$ 524,694	\$ (208,740)

City of Livonia Police and Fire Revised Retirement Plan
GASB Nos. 67 & 68 Report as of Fiscal Year Ending November 30, 2022
Schedule of Contributions

	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>
Actuarially determined contribution	\$ 1,756,383	\$ 1,037,029	\$ 0	\$ 0	\$ 0
Contributions in relation to the actuarially determined contribution	1,756,383	1,037,029	0	0	0
Contribution deficiency (excess)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Covered-employee payroll	\$ 12,593,492	\$ 6,715,276	Not Applicable	Not Applicable	Not Applicable
Contributions as a percentage of covered-employee payroll	13.95%	15.44%	Not Applicable	Not Applicable	Not Applicable
	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Actuarially determined contribution	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Contributions in relation to the actuarially determined contribution	0	0	0	0	0
Contribution deficiency (excess)	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Covered-employee payroll	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Contributions as a percentage of covered-employee payroll	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

The total pension liability as of November 30, 2022 was determined using the following actuarial assumptions:

Measurement Date	November 30, 2022
Actuarial Cost Method	Entry Age Normal
Asset Method	Market Value of Assets
Interest Rates	
Discount Rate	7.00%
Expected Long Term Rate of Return	7.00%
Municipal Bond Rate	N/A
Inflation	2.50%
Annual Pay Increases	6.00%
Mortality Rates	
Active Lives	PubS-2010 Employee mortality projected using fully generational improvements based on the Society of Actuaries' MP-2021 Projection Scale
Inactive Lives	PubS-2010 Healthy Retiree mortality projected using fully generational improvements based on the Society of Actuaries' MP-2021 Projection Scale
All other assumptions	As described in the assumptions section of the actuarial determined contribution

Valuation Date	November 30, 2022
Participant and Asset Information Collected as of	November 30, 2022
Actuarial Cost Method	Entry Age Normal
Amortization Method	Closed level percentage of payroll amortization of the Unfunded Actuarial Accrued Liability using a 2.50% payroll growth assumption over the period ending on November 30, 2039 (17-year amortization in 2022)
Asset Method	5 year smoothing of asset gains and losses
Interest Rates	7.00%, net of investment expenses
Inflation	2.50%
Annual Pay Increases	6.00%
Mortality Rates	
Active Lives	PubS-2010 Employee mortality projected using fully generational improvements based on the Society of Actuaries' MP-2021 Projection Scale
Inactive Lives	PubS-2010 Healthy Retiree mortality projected using fully generational improvements based on the Society of Actuaries' MP-2021 Projection Scale
Martical Status and Ages	90% of Participants assumed to be married with wives assumed to be 3 years younger than husbands.

Retirement Rates (Police)

	<u>Age</u>		
Service	<52	52-59	60+
<25	0%	10%	100%
25	75%	75%	100%
26-29	25%	25%	100%
30	100%	100%	100%

Retirement Rates (Fire)

	<u>Age</u>				
Service	<52	52	53	54-59	60+
<25	0%	35%	20%	10%	100%
25-29	40%	40%	40%	40%	100%
30	100%	100%	100%	100%	100%

Termination Rates

Recommended rates from 2021 experience study:

Age	Rates
20	1.62%
25	1.62%
30	1.40%
35	0.83%
40	0.32%
45	0.18%
50	0.18%
55	0.18%
60	0.18%
66+	0.00%

Disability Rates

Age	Rates
20	0.035%
25	0.060%
30	0.120%
35	0.200%
40	0.275%
45	0.355%
50	0.435%
55	0.515%
60	0.515%

Plan Administration:

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

- a.) The mayor or mayor's designated administrative representative,
- b.) A member of the City Council, selected by the Council,
- c.) A member of the Civil Service Commission,
- d.) A police or fire member, elected by police and fire members,
- e.) A member of any retirement plan established by city ordinance who is not a police or fire member.

Effective Date:

The plan is effective as follows for newly employed and otherwise eligible individuals:

Non-Union Police Command:	July 12, 2021
Non-Union Fire Command:	January 23, 2021
Police Officers:	February 27, 2021
Police Lieutenants, Sergeants and Command:	April 10, 2021
Fire Members:	January 30, 2021

Average Final Compensation:

The average of the highest annual compensations received during any 3 years of service contained within the 10 years of service immediately preceding retirement. Compensation includes base salary or wages, Worker's Compensation wage loss benefits (supplemental pay not to exceed regular base wages), and any other financial compensation from which pension contributions are withheld.

Service:

Member's service earned in the Police and Fire Revised Retirement Plan. Service is used for benefit calculation purposes.

Total Service:

The sum of service earned in the Police and Fire Revised Retirement Plan and applicable prior service. Total Service is used for vesting service.

Voluntary Retirement Eligibility:

25 years of service regardless of age, or age 52 with 15 years of service.

Normal Pension Amount:

2.5% of the member's average final compensation (AFC) times years of credited service; maximum is 75% of AFC at 30 years.

Deferred Pension (Vesting):

Eligibility: Termination of City employment, other than by death or disability, prior to attaining voluntary retirement age but after completing at least 15 full years of credited service.

Amount: A monthly pension, payable beginning at voluntary retirement age, computed in the same manner as a normal pension but based on credited service and AFC at time of termination of City employment

Disability Retirement:

Eligibility: Termination of City employment by reason of total and permanent disability after completing at least 10 full years of credited service, except that in the event of a duty disability the 10-year service requirement is waived.

Amount: 1) Disability incurred after age 55: A monthly pension computed in the same manner as a normal pension but based on credited service and AFC at the time of termination. (2) Disability incurred before age 55: A monthly pension computed in the same manner as a normal pension but based on AFC at time of termination and the credited service the member would have completed had employment continued until age 55, provided that in the event of a duty disability the pension payable to age 55 shall not be less than 75% of AFC. Worker's compensation benefits are deducted. For non-duty disability cases, the following limitations apply:

Maximum Total Actual Years Of Service	Maximum Benefit Years Used to Compute Benefit	As a Percent of AFC
10-15	20	50.0%
16-20	25	62.5
Over 20	30- or actual service if greater	75.0

Non-Duty Death:

- Eligibility:** Death after completing 10 years of credited service, but before termination of City employment. If member had not attained age 55 at the time of death, the death benefit shall commence at the time they would have attained voluntary retirement age. Member must either: (1) have elected Option A and named a beneficiary, or (2) leave a surviving spouse in the event Option A was not elected.
- Amount:** Monthly pension the beneficiary would have received had the member retired the day before death (notwithstanding that he might not have attained his voluntary retirement age) and elected the 100% joint and survivor Option A.

Duty Death:

- Eligibility:** Death from causes arising solely and exclusively out of and in the course of a member's City employment.
- Amount:** Surviving spouse, or unmarried children under age 18 (if no surviving spouse), or dependent parents (if no surviving spouse or children) shall receive a monthly pension equal to the pension payable if the member had become duty disabled, elected the 100% survivor option and subsequently died. The option factor for children or parents is assumed to equal 80%. The benefit shall continue until: (a) death in the case of the widow, (b) death, marriage, adoption or attainment of age 18 in the case of the children. Worker's compensation benefits are deducted.

Employee Contributions:

Members contribute 4.00% of base wages, plus additional amounts dependent upon the actuarially determined contribution "ADC":

ADC greater than 8.00%:

- City contributes next 10% of base wages towards ADC (between 8% and 18%)
- Employees contribute next 4% of base wages toward the ADC (between 18% and 22%)
- City contributes the required ADC above 22% of base wages