

CITY OF MARYSVILLE
GENERAL CITY EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL VALUATION
AS OF JUNE 30, 2021
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR BEGINNING JULY 1, 2021
GASB 67/68 DISCLOSURE INFORMATION
AS OF JUNE 30, 2021



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS



November 17, 2021

The Retirement Board
City of Marysville General City Employees Retirement System

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68)– City of Marysville
General City Employees Retirement System

Dear Board Members:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Marysville General City Employees Retirement System. 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 Retirement System, 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 Board, 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.

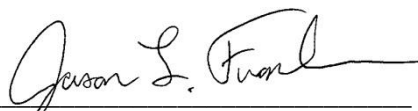
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Marysville, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Marysville General City Employees Retirement System. 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: 
Sandra W. Rodwan, EA, MAAA

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

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Marysville General City Employees Retirement System, performed as of June 30, 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 beginning July 1, 2021.

The contribution requirements, compared with those set forth in the June 30, 2020 actuarial report, are as follows:

Valuation Date	6/30/2021	6/30/2020
Applicable to Fiscal Year Beginning	<u>7/1/2021</u>	<u>7/1/2020</u>
Total Recommended Contribution	\$951,328	\$897,984
% of Projected Annual Payroll	40.42%	38.31%
Member Contributions (Est.)	(202,434)	(169,041)
% of Projected Annual Payroll	(8.60%)	(8.00%)
City Recommended Contribution	748,894	728,943
% of Projected Annual Payroll	31.82%	30.31%

As you can see, the Total Recommended Contribution shows an increase from the June 30, 2020 actuarial valuation report. The increase is attributable changes in actuarial methods and the natural increase in the amortization payment due to payroll growth assumptions. These increase were offset somewhat by favorable plan experience.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. The primary source of favorable experience was an investment return of 9.75% (Actuarial Asset Basis) which exceeded the 7.50% assumption. There were no significant sources of unfavorable experience.

CHANGES SINCE THE PRIOR VALUATION

The valuation reflects no plan changes.

The valuation reflects no assumption changes since the prior valuation.

The valuation reflects the following method changes:

- In conjunction with the acquisition of Rodwan Consulting Company by Foster & Foster, the valuation reflects a change in actuarial software.
- The calculation of the recommended contribution was updated as follows:
 - The recommended contribution calculation includes an adjustment for assumed interest.
 - The amortization payment calculation reflects beginning of year amortization factors rather than continuous factors.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

Valuation Date	<u>6/30/2021</u>	<u>6/30/2020</u>
A. Participant Data		
Number Included		
Actives	38	38
Service Retirees	45	45
Beneficiaries	7	9
Disability Retirees	1	1
Terminated Vested	<u>8</u>	<u>8</u>
Total	99	101
Total Projected Annual Payroll	\$2,579,838	\$2,227,803
Payroll Under Assumed Ret. Age	2,353,887	2,227,803
Annual Rate of Payments to:		
Service Retirees	1,607,700	1,805,346 ¹
Beneficiaries	126,529	0
Disability Retirees	31,105	0
Terminated Vested	124,450	124,450
B. Assets		
Actuarial Value	18,818,595	17,630,868
Market Value	20,590,367	17,225,551
C. Liabilities		
Present Value of Benefits (PVB)		
Actives		
Retirement Benefits	8,832,019	7,984,166
Disability Benefits	252,480	282,700
Death Benefits	179,468	161,923
Vested Benefits	666,672	517,765
Service Retirees ²	18,474,060	19,988,932 ¹
Beneficiaries	954,216	0
Disability Retirees	342,929	0
Terminated Vested	<u>928,525</u>	<u>885,167</u>
Total	30,630,369	29,820,653

¹ The 6/30/2020 Retiree annual payments and present value of benefits include retirees and beneficiaries.

C. Liabilities - (Continued)	<u>6/30/2021</u>	<u>6/30/2020</u>
Present Value of Future Salaries	17,584,574	N/A
Normal Cost (Retirement)	225,026	217,562
Normal Cost (Disability)	11,590	15,043
Normal Cost (Death)	8,288	8,017
Normal Cost (Vesting)	<u>48,676</u>	<u>49,879</u>
Total Normal Cost (EAN)	293,580	290,501
Present Value of Future Normal Costs	2,131,272	2,129,650
Accrued Liability (Retirement)	7,212,095	6,384,693
Accrued Liability (Disability)	166,602	170,619
Accrued Liability (Death)	118,449	102,496
Accrued Liability (Vesting)	302,221	159,096
Accrued Liability (Inactives)	<u>20,699,730</u>	<u>20,874,099</u>
Total Actuarial Accrued Liability	28,499,097	27,691,003
Unfunded Actuarial Accrued Liability (UAAL)	9,680,502	10,060,135
Funded Ratio (AVA / AL)	66.0%	63.7%

	<u>6/30/2021</u>	<u>6/30/2020</u>
D. Actuarial Present Value of Accrued Benefits		
Vested Accrued Benefits		
Inactives	20,699,730	N/A
Actives	2,994,414	N/A
Member Contributions	<u>2,503,069</u>	<u>N/A</u>
Total	26,197,213	N/A
Non-vested Accrued Benefits	<u>34,614</u>	<u>N/A</u>
Total Present Value Accrued Benefits	26,231,827	N/A
Funded Ratio (MVA / PVAB)	78.5%	N/A
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	0	
Benefits Paid	0	
Interest	0	
Other	<u>0</u>	
Total	0	

Valuation Date	6/30/2021	6/30/2020
Applicable to Fiscal Year Beginning	<u>7/1/2021</u>	<u>7/1/2020</u>

E. Pension Cost

Normal Cost ¹	\$315,599	\$290,501
% of Total Annual Payroll ¹	13.41	13.05
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 6/30/2021) ¹	635,751	607,483
% of Total Annual Payroll ¹	27.01	25.26
Total Recommended Contribution	951,350	897,984
% of Total Annual Payroll ¹	40.42	38.31
Expected Member Contributions ¹	(202,434)	(169,041)
% of Total Annual Payroll ¹	(8.60)	(8.00)
Expected City Contribution	748,916	728,943
% of Total Annual Payroll ¹	31.82	30.31

F. Past Contributions

Plan Years Ending:	<u>6/30/2021</u>
Total Recommended Contribution	932,110
City Requirement	728,943
Actual Contributions Made:	
Members (excluding buyback)	203,167
City	<u>1,074,810</u>
Total	1,277,977

G. Net Actuarial (Gain)/Loss (139,726)

¹ Contributions developed as of 6/30/2021 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	9,680,502
2022	9,770,789
2023	9,842,417
2028	9,827,938
2034	8,522,860
2039	5,612,746
2044	0

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	6/30/2021	4.32%	4.00%
Year Ended	6/30/2020	N/A	N/A
Year Ended	6/30/2019	N/A	N/A

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	6/30/2021	9.75%	7.50%
Year Ended	6/30/2020	4.06%	7.50%
Year Ended	6/30/2019	2.19%	7.50%

DEVELOPMENT OF JUNE 30, 2021 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of June 30, 2020	\$10,060,135
(2)	Sponsor Normal Cost developed as of June 30, 2020	112,277
(3)	Expected administrative expenses for the year ended June 30, 2021	0
(4)	Expected interest on (1), (2) and (3)	762,931
(5)	Sponsor contributions to the System during the year ended June 30, 2021	1,074,810
(6)	Expected interest on (5)	40,305
(7)	Expected Unfunded Actuarial Accrued Liability as of June 30, 2021, (1)+(2)+(3)+(4)-(5)-(6)	9,820,228
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(139,726)
(10)	Unfunded Accrued Liability as of June 30, 2021	9,680,502
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	9,680,502

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>6/30/2021</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
6/30/2021	23	9,680,502	591,396

P.A. 202 REPORTING
AS OF JUNE 30, 2021

Michigan Public Act 202 of 2017 requires municipal retirement systems in the state to submit information concerning their actuarial accrued liabilities and funded status based on uniform assumptions. The information is to be furnished by the municipality on Form 5572.

Form 5572

Line

24	Actuarial Value of Assets	18,818,595
25	Actuarial Accrued Liabilities	32,159,403
26	Funded Ratio	58.5%
27	Actuarially Determined Contribution	1,369,370

The information was calculated based on the following assumptions, in compliance with the Uniform Assumptions pursuant to PA 202, applicable for fiscal year 2021. All other assumptions are as described in the Actuarial Assumptions and Methods section of this report.

Investment Rate of Return	7.00%
Discount Rate (equivalent single rate used)	7.00%
Periods with sufficient assets	7.00%
Periods without sufficient assets	2.20%
Salary Increase	4.00%
Mortality Table	Pub-2010 with MP-2019
Amortization Period for Unfunded Actuarial Accrued Liability	18 years
Cost Method	Entry Age Normal
Amortization Method	Level percent of pay
Payroll Growth Assumption	4.00%

FUNDING HISTORY

Valuation Date	Applicable Fiscal Year Beginning	Valuation Assets	Actuarial Accrued Liabilities	Funded Ratio	Unfunded Actuarial Accrued Liabilities	Recommended Employer Contribution - as a% of Payroll
6/30/2001	7/1/2002	17,335,570	16,242,162	106.7%	(1,093,408)	
6/30/2002	7/1/2003	17,040,860	16,746,879	101.8%	(293,981)	
6/30/2003	7/1/2004	16,803,758	17,831,503	94.2%	1,027,745	
6/30/2004	7/1/2005	17,172,124	18,776,905	91.5%	1,604,781	16.01%
6/30/2005	7/1/2006	17,857,731	19,593,933	91.1%	1,736,202	18.69%
6/30/2006	7/1/2007	18,783,632	20,814,117	90.2%	2,030,485	18.95%
6/30/2007	7/1/2008	20,043,092	21,644,008	92.6%	1,600,916	16.05%
6/30/2008	7/1/2009	20,291,835	23,682,028	85.7%	3,390,193	19.76%
6/30/2009	7/1/2010	19,981,016	24,475,812	81.6%	4,494,796	21.79%
6/30/2010	7/1/2011	19,685,258	22,872,797	86.1%	3,187,539	19.11%
6/30/2011	7/1/2012	19,385,974	23,661,130	81.9%	4,275,156	22.30%
6/30/2012	7/1/2013	18,672,826	22,895,219	81.6%	4,222,393	20.02%
6/30/2013	7/1/2014	17,805,313	23,461,641	75.9%	5,656,328	24.82%
6/30/2014	7/1/2015	18,238,440	25,272,742	72.2%	7,034,302	23.44%
6/30/2015	7/1/2016	18,366,503	24,567,768	74.8%	6,201,265	20.78%
6/30/2016	7/1/2017	17,718,804	24,589,791	72.1%	6,870,987	23.09%
6/30/2017	7/1/2018	17,470,657	26,286,823	66.5%	8,816,166	27.90%
6/30/2018	7/1/2019	17,682,351	26,305,228	67.2%	8,622,877	26.94%
6/30/2019	7/1/2020	17,508,058	27,098,881	64.6%	9,590,823	31.24%
6/30/2020	7/1/2021	17,630,868	27,691,003	63.7%	10,060,135	30.31%
6/30/2021	7/1/2022	18,818,595	28,499,097	66.0%	9,680,502	31.82%

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2021	45,803	1,773,322	1,819,125
2022	113,246	1,787,563	1,900,809
2023	201,437	1,799,695	2,001,132
2024	257,865	1,812,669	2,070,534
2025	261,073	1,821,080	2,082,153
2026	353,160	1,841,795	2,194,955
2027	426,190	1,853,509	2,279,699
2028	539,958	1,860,415	2,400,373
2029	629,521	1,848,935	2,478,456
2030	794,029	1,832,316	2,626,345
2031	878,501	1,810,507	2,689,008
2032	895,673	1,788,246	2,683,919
2033	901,416	1,762,095	2,663,511
2034	1,058,449	1,727,868	2,786,317
2035	1,158,791	1,711,290	2,870,081
2036	1,218,786	1,661,381	2,880,167
2037	1,256,324	1,602,918	2,859,242
2038	1,260,156	1,538,852	2,799,008
2039	1,263,601	1,467,993	2,731,594
2040	1,370,247	1,392,421	2,762,668
2041	1,377,502	1,311,233	2,688,735
2042	1,414,632	1,226,222	2,640,854
2043	1,461,070	1,137,912	2,598,982
2044	1,536,505	1,048,107	2,584,612
2045	1,524,673	958,275	2,482,948
2046	1,523,106	870,037	2,393,143
2047	1,556,705	784,582	2,341,287
2048	1,529,789	702,884	2,232,673
2049	1,548,127	625,782	2,173,909
2050	1,511,471	553,617	2,065,088
2051	1,483,639	486,617	1,970,256
2052	1,485,199	425,177	1,910,376
2053	1,433,116	369,580	1,802,696
2054	1,374,779	319,729	1,694,508
2055	1,312,197	275,386	1,587,583
2056	1,247,423	236,182	1,483,605
2057	1,180,972	201,459	1,382,431
2058	1,111,429	171,145	1,282,574
2059	1,040,669	144,302	1,184,971
2060	969,628	121,089	1,090,717

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	7.50% per year compounded annually, net of investment related expenses.
Mortality Rate	RP-2000 Combined Healthy Mortality Table Projected to 2014.
Retirement Age	Retirement assumed at earliest age member become eligible for normal retirement.
Disability Rate	See table later in this section. 100% of disabilities are assumed to be non-duty-related.
Termination Rate	See table later in this section.
Inflation	2.50%.
Salary Increases	4.00%.
Marital Status	100% of Members are assumed to be married.
Spouse's Age	Males are assumed to be three years older than females.
Member Contribution Interest	2.00%.
Funding Method	Entry Age Normal.
Actuarial Asset Method	Investment gains and losses are smoothed 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.
Funding Policy Amortization Method	The unfunded actuarial accrued liability is amortized according to a level percentage of payroll method over a closed period. 23 years as of June 30, 2021.
Payroll Growth	4.00%.
Cost of Living Increase	3.00% per year for members retired on or after 7/1/1995 and prior to 7/1/2011; 2.00% per year after having been retired for 3 years and cease after 23 full years of retirement for members retired on or after 7/1/2011; none for members hired after 6/30/2011.

Decrement Tables

% Terminating During the Year							% Becoming Disabled During the Year		
Service									
Age	0	1	2	3	4	5+	Age	Male	Female
20	20.00%	15.00%	10.00%	8.00%	7.00%	6.00%	20	0.020%	0.010%
25	20.00%	15.00%	10.00%	8.00%	7.00%	6.00%	25	0.020%	0.010%
30	20.00%	15.00%	10.00%	8.00%	7.00%	5.50%	30	0.050%	0.040%
35	20.00%	15.00%	10.00%	8.00%	7.00%	4.40%	35	0.080%	0.070%
40	20.00%	15.00%	10.00%	8.00%	7.00%	1.85%	40	0.110%	0.100%
45	20.00%	15.00%	10.00%	8.00%	7.00%	1.25%	45	0.190%	0.170%
50	20.00%	15.00%	10.00%	8.00%	7.00%	1.25%	50	0.270%	0.230%
55	20.00%	15.00%	10.00%	8.00%	7.00%	1.25%	55	0.470%	0.350%
60	20.00%	15.00%	10.00%	8.00%	7.00%	1.25%	60	0.670%	0.460%
66+	20.00%	15.00%	10.00%	8.00%	7.00%	1.25%			

GLOSSARY

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

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

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

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

Total Recommended Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over closed period (23 years as of June 30, 2021). 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 stayed about the same from June 30, 2020 to June 30, 2021, indicating that the plan's maturity level has not significantly changed during the period.
- 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 72.6%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors will need to be made up for over a shorter time horizon than would be needed for a less mature plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 63.7% on June 30, 2020 to 66.0% on June 30, 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 June 30, 2020 to June 30, 2021. The current Net Cash Flow Ratio of -2.5% indicates that contributions are not currently 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>6/30/2021</u>	<u>6/30/2020</u>
<u>Support Ratio</u>		
Total Actives	38	38
Total Inactives	61	63
Actives / Inactives	62.3%	60.3%
 <u>Asset Volatility Ratio</u>		
Market Value of Assets (MVA)	20,590,367	17,225,551
Total Annual Payroll	2,579,838	2,227,803
MVA / Total Annual Payroll	798.1%	773.2%
 <u>Accrued Liability (AL) Ratio</u>		
Inactive Accrued Liability	20,699,730	20,874,099
Total Accrued Liability	28,499,097	27,691,003
Inactive AL / Total AL	72.6%	75.4%
 <u>Funded Ratio</u>		
Actuarial Value of Assets (AVA)	18,818,595	17,630,868
Total Accrued Liability	28,499,097	27,691,003
AVA / Total Accrued Liability	66.0%	63.7%
 <u>Net Cash Flow Ratio</u>		
Net Cash Flow ¹	(506,190)	(575,591)
Market Value of Assets (MVA)	20,590,367	17,225,551
Ratio	-2.5%	-3.3%

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

STATEMENT OF FIDUCIARY NET POSITION
June 30, 2021

<u>ASSETS</u>	MARKET VALUE
Money market funds	564,436
Cash and Cash Equivalents	4,856
Total Cash and Equivalents	569,292
Receivables:	
Contributions Receivable	15,458
Accrued interest and dividends	23,368
Total Receivable	38,826
Investments:	
Corporate bonds	2,050,136
Commons stocks	14,609,709
U.S. Government bonds	2,817,001
Total Investments	19,476,846
Other Asset Backed	532,630
Total Assets	20,617,594
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
Accounts Payable	27,227
Total Liabilities	27,227
Net Assets:	
Active and Retired Members' Equity	20,590,367
NET POSITION RESTRICTED FOR PENSIONS	20,590,367
TOTAL LIABILITIES AND NET ASSETS	20,617,594

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

ADDITIONS

Contributions:

Member	203,167	
City	1,074,810	

Total Contributions		1,277,977
---------------------	--	-----------

Investment Income:

Net Increase in Fair Value of Investments		3,681,303
Interest & Dividends		294,965
Less Expenses ¹		(105,262)

Net Investment Income		3,871,006
-----------------------	--	-----------

Other		0
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Total Additions		5,148,983
-----------------	--	-----------

DEDUCTIONS

Distributions to Members:

Benefit Payments	1,770,696	
------------------	-----------	--

Total Distributions		1,770,696
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Administrative Expenses		13,471
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Other		0
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Total Deductions		1,784,167
------------------	--	-----------

Net Increase in Net Position		3,364,816
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year		17,225,551
-----------------------	--	------------

End of the Year		20,590,367
-----------------	--	------------

¹ Expenses include investment advisory, custodial and performance monitoring fees

ACTUARIAL ASSET VALUATION

June 30, 2021

Development of Actuarial Value of Assets

Market Value of Assets, 6/30/2021	20,590,367
(Gains)/Losses Not Yet Recognized	<u>(1,771,772)</u>
Preliminary Actuarial Value of Assets, 6/30/2021	18,818,595
6/30/2021 Limited Actuarial Assets, Total	18,818,595

Development of Investment Gain/Loss

Market Value of Assets, 6/30/2020	17,225,551
Actuarial Value of Assets, 6/30/2020	17,630,868
Contributions Less Benefit Payments and Administrative Expenses	(506,190)
Expected Investment Earnings ¹	1,303,333
Actual Net Investment Earnings	<u>3,871,006</u>
2021 Actuarial Investment Gain/(Loss)	2,567,673

¹ Expected Investment Earnings = 7.50% x (17,630,868 + 0.5 x -506,190)

Gains/(Losses) Not Yet Recognized

Plan Year Ending	Gain/(Loss)	Amounts Not Yet Recognized by Valuation Year				
		2021	2022	2023	2024	2025
6/30/2018	19,368	3,874	0	0	0	0
6/30/2019	(343,765)	(137,506)	(68,753)	(0)	0	0
6/30/2020	(247,888)	(148,733)	(99,155)	(49,578)	0	0
6/30/2021	2,567,673	2,054,138	1,540,604	1,027,069	513,535	0
Total		1,771,772	1,372,696	977,491	513,535	0

Development of Asset Returns

(A) 6/30/2020 Actuarial Assets:	17,630,868
(I) Net Investment Income:	
1. Interest and Dividends	294,965
2. Change in Actuarial Value	1,504,214
3. Investment Expenses	<u>(105,262)</u>
Total	1,693,917
(B) 6/30/2021 Preliminary Actuarial Assets:	18,818,595
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	9.75%
Market Value of Assets Rate of Return:	22.81%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	390,584

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

June 30, 2021

Actuarial Asset Basis

INCOME

Contributions:		
Member	203,167	
City	1,074,810	
Total Contributions		1,277,977
Earnings from Investments		
Interest & Dividends	294,965	
Change in Actuarial Value	1,504,214	
Total Earnings and Investment Gains		1,799,179

EXPENSES

Administrative Expenses:		
Investment Related ¹	105,262	
Other	13,471	
Total Administrative Expenses		118,733
Distributions to Members:		
Benefit Payments	1,770,696	
Total Distributions		1,770,696
Change in Net Assets for the Year		1,187,727
Net Assets Beginning of the Year		17,630,868
Net Assets End of the Year		18,818,595

Excess Earnings Reserve

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

STATISTICAL DATA

Valuation Date	6/30/2021	6/30/2020
<u>Actives</u>		
Number	38	38
Average Current Age	46.7	45.1
Average Age at Employment	34.0	33.7
Average Past Service	12.7	11.4
Average Annual Salary	\$65,279	\$63,288
<u>Service Retirees</u>		
Number	45	45
Average Current Age	71.0	70.7
Average Annual Benefit	\$35,727	\$33,432 ¹
<u>Beneficiaries</u>		
Number	7	9
Average Current Age	79.4	83.9
Average Annual Benefit	\$18,076	N/A
EDROs incl. in Beneficiaries	1	1
<u>Disability Retirees</u>		
Number	1	1
Average Current Age	67.9	66.9
Average Annual Benefit	\$31,105	N/A
<u>Terminated Vested</u>		
Number	8	8
Average Current Age	52.4	51.4
Average Annual Benefit	\$15,556	\$15,556

¹ 6/30/2020 Retiree average annual benefit amount includes retirees, beneficiaries and disableds.

AGE AND SERVICE DISTRIBUTION
TOTAL

AGE	PAST SERVICE											Total	Total Pay ¹	
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+			
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0	\$	0
25 - 29	0	0	2	0	0	0	0	0	0	0	0	2	\$	123,632
30 - 34	0	0	0	1	0	2	0	0	0	0	0	3	\$	170,932
35 - 39	0	0	1	0	0	2	1	0	0	0	0	4	\$	180,025
40 - 44	0	1	0	0	0	1	1	1	0	0	0	4	\$	237,320
45 - 49	0	0	0	0	0	2	2	1	5	0	0	10	\$	669,302
50 - 54	0	1	1	0	0	1	0	2	2	0	0	7	\$	491,882
55 - 59	0	0	0	1	0	0	0	1	2	0	1	5	\$	341,968
60 - 64	0	0	0	0	0	0	0	0	1	0	0	1	\$	48,292
65+	0	0	0	0	0	2	0	0	0	0	0	2	\$	217,260
Total	0	2	4	2	0	10	4	5	10	0	1	38	\$	2,480,613

¹ Total Pay is salaries for the period ending 6/30/2021.

AGE DISTRIBUTION
RETIREES, DISABLEDS AND BENEFICIARIES

AGE	Count	Annual Pensions
< 45	0	\$ 0
45 - 49	0	\$ 0
50 - 54	0	\$ 0
55 - 59	0	\$ 0
60 - 64	8	\$ 236,029
65 - 69	17	\$ 585,556
70 - 74	9	\$ 338,409
75 - 79	9	\$ 317,589
80 - 84	6	\$ 180,774
85 - 89	3	\$ 75,277
90 - 94	0	\$ 0
95 - 99	1	\$ 31,701
100 +	0	\$ 0
Total	53	\$ 1,765,334

AGE DISTRIBUTION
INACTIVE VESTED MEMBERS

AGE	Count	<u>Total</u> Annual Pensions
< 45	0	\$ 0
45 - 49	3	\$ 50,479
50 - 54	2	\$ 36,278
55 - 59	2	\$ 15,237
60 - 64	1	\$ 22,456
Total	8	\$ 124,450

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 6/30/2020	38
b. Terminations	
i. Vested (partial or full) with deferred benefits	0
ii. Non-vested or full lump sum distribution received	0
iii. Refunded	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(1)
f. Continuing participants	37
g. New entrants	<u>1</u>
h. Total active life participants in valuation	38

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

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	45	9	1	8	63
Retired	1	0	0	0	1
Vested Deferred	0	0	0	0	0
Death, With Survivor	0	0	0	0	0
Death, No Survivor	(1)	(2)	0	0	(3)
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	0	0
New EDROs	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	45	7	1	8	61

SUMMARY OF CURRENT PLAN PROVISIONS

Plan Administration	<p>The Plan is a single employer defined benefit pension plan administered by City of Marysville, Michigan.</p> <p>The Pension Commission has the authority to amend the terms of the Plan and is comprised of:</p> <ul style="list-style-type: none">a.) Mayor of the City of Maryville.b.) One council member selected by the City Council,c.) Two members of General City Employees Retirement System (GCERS),d.) A citizen who is not a member.
Final Average Salary (FAS)	<p>Average of highest 3 of the final 5 years of employment. Capped at 40 hours of overtime if hired on or after 7/1/2019.</p>
Normal Retirement	
Eligibility	
General	<p>Age 60 with 5 (10 if hired on or after 7/1/2019) or more years of service or age 55 and 25 years of service.</p>
516M(Hired before 7/1/1984)	<p>Age 60 with 5 or more years of service.</p>
516M(Hired after 7/1/1984)	<p>Age 62 with 5 or more years of service or age 55 and 25 years of service regardless of date of hire.</p>
Annual Benefit	<p>2.25% (1.50% if hired on or after 7/1/2019) of FAS time years of service. Minimum benefit is \$99.96 plus 1% of FAS times years of service plus the actuarial equivalent of the participant's accumulated contributions at retirement.</p>
Duty Disability Retirement	
Eligibility	<p>No age or service requirements. Must also be in receipt of Workers Compensation.</p>
Annual Benefit	<p>Computed as a regular retirement based on credited service at the date of disability. A minimum of 50% of FAS applies if the disability occurs prior to age 60 (age 62 for member of 516M who were hired after 7/1/1984).</p>
Non-Duty Disability Retirement	
Eligibility	<p>Total and permanent disability of a member with 5 (10 if hired on or after 7/1/2019) or more years of credited service.</p>
Annual Benefit	<p>Accrued regular retirement amount.</p>

Deferred Retirement

Eligibility 5 (10 if hired on or after 7/1/2019) or more years of service regardless of age. Benefit begins at regular retirement age.

Annual Benefit Computed as regular retirement but based on service and final average salary at time of termination.

Duty Death

Eligibility No age or service requirement.

Annual Benefit Refund of participant's accumulated contributions, plus 1/3 of final compensation payable to surviving spouse until death or remarriage. Unmarried children under 18 receive equal shares of final compensation subject to a maximum of 1/3 of final compensation, until earlier of marriage, death, or attainment of age 18. If no benefits are payable to a spouse or dependent children, a dependent mother or father shall each be paid 1/6 of final compensation not to exceed \$600.00 annually. These amounts are offset by any amount payable due to worker's compensation.

Non-Duty Death Before Retirement

Eligibility 5 (10 if hired on or after 7/1/2019) or more years of service or age 55 with 5 (10 if hired on or after 7/1/2019) years of service.

Annual Benefit Regular retirement amount reduced actuarially in accordance with a 100% joint and survivor election.

Member Contributions

8.00% of annual salary.

Cost-of-Living Adjustments

An annual cost of living supplement is payable and is determined by multiplying each .4(as a unit) change in the Consumer Price Index (CPI-W 1967=100) by one cent (\$.01) and multiplying that product by 2080. For retirements on or after July 1, 1995, the annual cost of living adjustment will be the rate of inflation measured by the Consumer Price Index (CPI-U). General benefit group members and members of group 516M who retire on or after 7/1/2011, the annual cost of living adjustment shall not exceed 2% of the base benefit amount and shall commence after the first three full years of retirement and shall cease after 23 full years of retirement. Members hired after June 30, 2011 are not eligible for the post-retirement cost of living supplement.

SUMMARY

Valuation Date	6/30/2021	6/30/2020
Measurement Date	6/30/2021	6/30/2020
Plan Membership:		
Inactives Currently Receiving Benefits ¹	52	54
Inactives Not Yet Receiving Benefits	8	8
Active Plan Members	<u>38</u>	<u>38</u>
Total	98	100
Covered Payroll	\$ 2,480,613	\$ 2,404,958
Net Pension Liability		
Total Pension Liability	\$ 28,499,097	\$ 27,691,003
Plan Fiduciary Net Position	<u>20,590,367</u>	<u>17,225,551</u>
Net Pension Liability	\$ 7,908,730	\$ 10,465,452
Plan Fiduciary Net Position		
As a Percentage of Total Pension Liability	72.25%	62.21%
Net Pension Liability		
As a Percentage of Covered Payroll	318.82%	435.16%
Total Pension Expense	\$ 464,498	\$ 1,253,780
Development of Single Discount Rate		
Single Discount Rate	7.50%	7.50%
Long-Term Expected Rate of Return	7.50%	7.50%
High-quality Municipal Bond Rate	2.18%	2.45%
Number of Years Future Benefit Payments		
Are Expected to be Paid	99	99

¹ Excludes members with EDRO (1 for both the 6/30/2021 and 6/30/2020 measurement dates).

SCHEDULE OF CHANGES IN NET PENSION LIABILITY
PLAN AND CITY REPORTING

GASB 68 Reporting Period Ending Measurement Date	06/30/2021 <u>06/30/2021</u>	06/30/2020 <u>06/30/2020</u>
Total Pension Liability		
Service Cost	290,501	270,830
Interest	2,032,212	1,975,612
Changes of Benefit Terms	-	-
Differences Between Expected and Actual Experience	256,077	131,286
Changes of Assumptions	-	-
Benefit Payments, Including Refunds of Employee Contributions	<u>(1,770,696)</u>	<u>(1,785,606)</u>
Net Change in Total Pension Liability	808,094	592,122
Total Pension Liability - Beginning	<u>27,691,003</u>	<u>27,098,881</u>
Total Pension Liability - Ending (a)	\$ 28,499,097	\$ 27,691,003
Plan Fiduciary Net Position		
Contributions - Employer	1,074,810	1,041,867
Contributions - Employee	203,167	192,471
Net Investment Income	3,871,006	1,043,632
Benefit Payments, Including Refunds of Employee Contributions	(1,770,696)	(1,785,606)
Administrative Expense	<u>(13,471)</u>	<u>(24,323)</u>
Net Change in Plan Fiduciary Net Position	3,364,816	468,041
Plan Fiduciary Net Position - Beginning	<u>17,225,551</u>	<u>16,757,510</u>
Plan Fiduciary Net Position - Ending (b)	\$ 20,590,367	\$ 17,225,551
Net Pension Liability - Ending (a) - (b)	\$ 7,908,730	\$ 10,465,452
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	72.25%	62.21%
Covered Payroll	\$ 2,480,613	\$ 2,404,958
Net Pension Liability as a Percentage of Covered Payroll	318.82%	435.16%

STATEMENT OF CHANGES IN NET PENSION LIABILITY
CITY REPORTING

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Balances at June 30, 2020	\$ 27,691,003	\$ 17,225,551	\$ 10,465,452
Changes for a Year:			
Service Cost	290,501	-	290,501
Interest	2,032,212	-	2,032,212
Differences Between Expected and Actual Experience	256,077	-	256,077
Changes of Assumptions	-	-	-
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	1,074,810	(1,074,810)
Contributions - Employee	-	203,167	(203,167)
Net Investment Income	-	3,871,006	(3,871,006)
Benefit Payments, Including Refunds of Employee Contributions	(1,770,696)	(1,770,696)	-
Administrative Expense	-	(13,471)	13,471
Net Changes	808,094	3,364,816	(2,556,722)
Balances at June 30, 2021	\$ 28,499,097	\$ 20,590,367	\$ 7,908,730

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.50%	7.50%	8.50%
Sponsor's Net Pension Liability	\$ 10,978,774	\$ 7,908,730	\$ 5,296,788

Pension Plan Fiduciary Net Position

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

GASB 68

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

For the year ended June 30, 2021, the Sponsor will recognize a pension expense of \$464,498, which included a prior period adjustment (\$5,199). On June 30, 2021, the Sponsor reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between actual and expected experience	269,634	0
Changes of assumptions	0	0
Net difference between projected and actual earnings on pension plan investments	<u>0</u>	<u>1,896,395</u>
Total	\$269,634	\$1,896,395

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 June 30:

2022	(\$334,790)
2023	(\$355,083)
2024	(\$417,274)
2025	(\$519,614)
2026	\$0
Thereafter	\$0

COMPONENTS OF PENSION EXPENSE
YEAR-END JUNE 30, 2021

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense	Balance Sheet
Beginning Balance, Before Adjustments	\$ 10,465,452	\$ 76,880	\$ 396,529		\$ 10,145,803
Difference Between Projected and Actual Earnings on Pension Plan Investments		-	5,199	(5,199)	
Revised Beginning Balance	\$ 10,465,452	\$ 76,880	\$ 401,728		\$ 10,140,604
Total Pension Liability Factors:					
Service Cost	290,501	-	-	290,501	
Interest	2,032,212	-	-	2,032,212	
Changes in Benefit Terms	-	-	-	-	
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	256,077	-	256,077	-	
Current Year Amortization	-	(76,880)	(190,000)	113,120	
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	-	-	-	-	
Current Year Amortization	-	-	-	-	
Benefit Payments, Including Refunds of Employee Contributions	(1,770,696)	-	-	-	
Net Change	808,094	(76,880)	66,077	2,435,833	
Plan Fiduciary Net Position:					
Contributions - Employer	1,074,810	-	-	-	
Contributions - Employee	203,167	-	-	(203,167)	
Projected Net Investment Income	1,272,934	-	-	(1,272,934)	
Difference Between Projected and Actual Earnings on Pension Plan Investments	2,598,072	2,598,072	-	-	
Current Year Amortization	-	(592,084)	(88,578)	(503,506)	
Benefit Payments, Including Refunds of Employee Contributions	(1,770,696)	-	-	-	
Administrative Expenses	(13,471)	-	-	13,471	
Net Change	3,364,816	2,005,988	(88,578)	(1,966,136)	
Ending Balance	\$ 7,908,730	\$ 2,005,988	\$ 379,227	\$ 469,697	
Prior Period Adjustment				(5,199)	
Final Expense				464,498	

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
2021	\$ 256,077	4	\$ 64,020	\$ 64,019	\$ 64,019	\$ 64,019	\$ -	\$ -
2020	\$ 131,286	3.3	\$ 39,784	\$ 39,784	\$ 11,934	\$ -	\$ -	\$ -
2019	\$ 284,447	3.3	\$ 86,196	\$ 25,859	\$ -	\$ -	\$ -	\$ -
2018	\$ (538,157)	3.5	\$ (76,880)	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			113,120	129,662	75,953	64,019	-	-

AMORTIZATION SCHEDULE – INVESTMENTS

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

Year Base Established	Differences		Increase (Decrease) in Pension Expense Arising from the Recognition of the Differences Between Projected and Actual Earnings on Pension Plan Investments						
	Between Projected and Actual Earnings	Recognition Period (Years)	2021	2022	2023	2024	2025	Thereafter	
2021	\$ (2,598,072)	5	\$ (519,616)	\$ (519,614)	\$ (519,614)	\$ (519,614)	\$ (519,614)	\$ -	
2020	\$ 191,597	5	\$ 38,319	\$ 38,319	\$ 38,319	\$ 38,321	\$ -	\$ -	
2019	\$ 251,295	5	\$ 50,259	\$ 50,259	\$ 50,259	\$ -	\$ -	\$ -	
2018	\$ (167,084)	5	\$ (33,417)	\$ (33,416)	\$ -	\$ -	\$ -	\$ -	
2017	\$ (195,255)	5	\$ (39,051)	\$ -	\$ -	\$ -	\$ -	\$ -	
Net Increase (Decrease) in Pension Expense			\$ (503,506)	\$ (464,452)	\$ (431,036)	\$ (481,293)	\$ (519,614)	\$ -	

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
06/30/2021	728,943	1,074,810	(345,867)	2,480,613	43.33%
06/30/2020	684,137	1,041,867	(357,730)	2,404,958	43.32%

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

Calculation Timing	The Actuarially Determined Contribution is calculated using a June 30, 2020 valuation date.
Interest Rate	7.50%
Mortality Rate	RP-2000 Combined Healthy Mortality Table projected to 2014.
Assumptions	All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the June 30, 2020 Actuarial Valuation Report for the City of Marysville General Employees Retirement System prepared by Rodwan Consulting Company.

GASB 67/68

ASSUMPTIONS – GASB PENSION LIABILITY AND PENSION EXPENSE

The GASB 67/GASB 68 Pension Liability as of June 30, 2021 and GASB 68 Pension Expense were determined as follows:

Valuation Date	June 30, 2021
Measurement Date	June 30, 2021
GASB 68 Expense Measurement Period	July 1, 2020 - June 30, 2021
Reporting Period	July 1, 2020 - June 30, 2021
Discount Rate	7.50%
Inflation	2.50%
Salary Increases	4.00%
Other Assumptions	A summary of complete assumptions can be found in the accompanying Actuarial Valuation as of June 30, 2021 for the City of Marysville General Employees Retirement System prepared by Foster & Foster Actuaries and Consultants.

NOTES TO THE FINANCIAL STATEMENTS

Discount Rate

The Discount Rate used to measure the Total Pension Liability was 7.50 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments (7.50 percent) was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.50 percent. The municipal bond rate is 2.18 percent (based on the daily rate closest to, but not later than the measurement date of the S&P Municipal Bond 20 Year High Grade Rate Index). The resulting single discount rate is 7.50 percent.

SUMMARY OF CURRENT PLAN

Pension Fund

The Plan was established by City Council in 1945 for the purpose of continuing and providing retirement income to certain employees and retired employees and survivor benefits to their eligible beneficiaries.

Plan Administration

The Plan is a single employer defined benefit pension plan administered by the City of Marysville, Michigan.

The Pension Commission has the authority to amend the terms of the Plan and consist of:

- a.) The Mayor of the City of Marysville;
- b.) One council member selected by the City Council;
- c.) A citizen who is not a member;
- d.) Two members of the Plan.

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 June 30, 2021 for the City of Marysville General Employees Retirement System prepared by Foster & Foster Actuaries and Consultants.