CITY OF GROSSE POINTE WOODS
MEMORANDUM

Date: June 27, 2023

RECEIVED
JUN 30 2023
CITY OF GROSSE POINTE WOODS
CLERK'S DEPARTMENT

To: Mayor Bryant and City Council

From: Shawn Murphy, Treasurer/Comptroller
Frank Schulte, City Administrator

Re: Public Act 202 – Corrective Action Plan-Pension and Supplemental Annuity

On January 6, 2023, the City received the attached letter from the State of Michigan Local Retirement Reporting Team that pursuant to Public Act 202 of 2017 (the Act), one (or more) of our retirement systems has triggered a preliminary review of underfunded status.

Based on the State's review, the GPW Retirement System and GPW Supplemental Annuity are underfunded as of fiscal year end June 30, 2022. Primary government triggers of underfunded status are less than 60% funded AND greater than 10% Actuarial Determined Contributions (ADC)/Governmental fund revenues.

June 30, 2022 funding status is as follows:

GPW Retirement System	GPW Supplemental Annuity
Funded Ratio: 54.8%	Funded Ratio: 59.7%
ADC/Governmental Fund Revenues: 10.3%	ADC/Governmental Fund Revenues: 10.3%

At the February 2, 2023 Pension Board meeting Foster and Foster Actuaries and Consultants presented fiscal year June 30, 2022 actuary reports to the Pension Board. Discussion regarding the reports resulted in the Pension Board to accept the actuarial recommendation of performing an Actuarial Experience Study as required by Public Act 202.

The Actuarial Experience Study was presented to the Pension Board at the May 4, 2023 board meeting, with additional recommendations presented at a Special Pension Board meeting on June 1, 2023. After reviewing the information presented, the board approved the following recommendations:

- Decrease the amortization period from 25 years to a 20 year closed amortization for a period of 5 years and after 5 years the plan will remain at a 15 year open amortization period
- Decrease the assumed rate of investment return from 7.5% to 7.4% with an intention of lowering it .1% a year for the next 5 years
- Update the payroll growth assumption from 3.5% to 3.00%,
- Adjust the age based retirement tables
- Adjust the age and service-based retirement rates
- Simplify the disability rate to 0.20% for general employees and 0.60% for public safety employees
- Add the cost of administrative expenses paid from the trust

20025 Mack Plaza Drive, Grosse Pointe Woods, Michigan 48236-2397
Phone: (313) 343-2604 • Fax: (313) 343-2785 • Email: smurphy@gpwmi.us

The City is required to submit a Corrective Action Plan for both the GPW Retirement System and the GPW Supplemental Annuity. The following documents were submitted to the State of Michigan Local Retirement Reporting Team for review on June 26, 2023.

- Corrective Action Plan application for the GPW Retirement System and GPW Supplemental Annuity
- Actuarial Experience Study dated April 24, 2023 prepared by Foster and Foster Actuaries and Consultants with supplement information dated May 16, 2023 and June 20, 2023
- Approved motion by the Pension Board authorizing the recommendations of the assumption changes made by Foster and Foster Actuaries and Consultants
- ADC Analysis
- Cost impacts of the EROP program and multiplier changes for Public Safety and Command Officers as prepared by Foster and Foster Actuaries and Consultants
- City Council approval of the FOP Collective Bargaining Agreement that included the EROP program and the proposed change to the PSO pension multiplier.
- City Council approval of the budget transfer of $39,704 to the GPW Retirement System as required under Section 5 of 2017 Public Act 202

I respectfully request City Council approve the Corrective Action Plan as presented. Upon approval, the approved motion will be forward to the State of Michigan Local Retirement Reporting Team.

The assumption changes that were approved by the Pension Board on June 1, 2023 will be applied to the pension valuation dated June 30, 2023 and will be applicable to fiscal year beginning on July 1, 2024.

The combination of the newly adopted plan assumptions will create an increase in annual retirement system contributions of approximately $320,400, totaling $2,199,401 and a decrease in the supplemental annuity benefit contributions of approximately $6,000, totaling $271,292.

With the implementation of the assumption changes not being applicable until fiscal year beginning July 1, 2024 and a current General Fund Balance in excess of 5.6 million dollars, we respectfully request City Council to consider approving a budget transfer in the amount of $300,000 from General Fund to the Retirement System in fiscal year 2023-2024. The budget transfer will require budget amendment from account 101-000-692.100-Transfer from Prior Year Reserve to account 101-967-995.731-Transfer to Pension Fund. Upon approval, a transfer of $300,000 to the Grosse Pointe Woods Retirement System fund held at Charles Schwab will be completed.

In addition, we also recommend to City Council that during future budget discussions, the City consider adding funding to the annual budget in addition to the ADC. This will help reduce the unfunded liabilities and allow for potential increased investment income.

Thank you for your consideration.

Shawn Murphy

Shawn Murphy, Treasurer/Comptroller

Frank Schulte, City Administrator

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STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

GRETCHEN WHITMER
GOVERNOR

RACHAEL EUBANKS
STATE TREASURER

January 6, 2023

Retirement System Annual Report:
Preliminary Review of Underfunded Status
and In Corrective Action

Fiscal Year: 2022
Municipality Code: 822130
Report ID Number: 137875

Sent Via Email
City of Grosse Pointe Woods
smurphy@gpwmi.us

Dear Administrative Officer or Designee:

Based upon review of your most recently submitted Retirement System Annual Report (Form 5572) and pursuant to Public Act 202 of 2017 (the Act), one (or more) of your retirement systems has triggered a preliminary review of underfunded status, in addition to the underfunded system(s) identified in the prior fiscal year. Unless you apply for a waiver within **45 days** and your application is granted, your local government will receive a determination of underfunded status. If you have any questions or concerns, please contact our office at LocalRetirementReporting@michigan.gov. If you would prefer to speak with a member of our team, please schedule a phone call appointment using the Local Retirement Calendar. A team member will email you a conference number to call at your scheduled time.

Based upon review, the following retirement system(s) are in corrective action as identified in the prior fiscal year:

GPW Retiree Health Care

Please continue to follow the guidance previously issued for corrective action plan compliance for the systems listed above. The Municipal Stability Board (the Board) will evaluate if the local government is addressing its underfunded status.

Additionally, the following system(s) are preliminarily underfunded as of the most recent fiscal year:

GPW Retirement System

GPW Supplemental Annuity

Optional: How to Apply for a Waiver of Underfunded Status

In accordance with the Act, you **may** apply for a waiver for each newly underfunded system. The attached Application for Waiver has detailed instructions on how to complete the application, as well as waiver criteria. The completed application is due back to the Department of Treasury (Treasury) within **45 days** from the date of this letter, via email to LocalRetirementReporting@Michigan.gov.

If you have multiple newly underfunded retirement systems, you are required to complete a separate waiver application for each system and send a separate email for each system. Please attach each application as a separate PDF document in addition to all applicable supporting documentation. The subject line of the email should be in the following format: **Waiver-20XX, Local Government Name, Retirement System Name** (e.g. Waiver-2019, City of Lansing, Employees' Retirement System Pension Plan).

Early submission of your Application for Waiver allows greater opportunity for conversation and clarification with Treasury, and is strongly encouraged.

If the state treasurer determines that the underfunded status is adequately being addressed by the local government, the state treasurer shall issue a waiver of the determination of underfunded status.

Treasury will send a letter informing your local government if the waiver is granted. If the waiver is not granted, Treasury will provide a letter detailing the reasons for disapproval.

Next Steps: If a Waiver is Disapproved or You Do Not Apply for a Waiver

- Treasury will notify the local government and request a corrective action plan for the Board to review;

- After receipt of this notification from Treasury, your local government must develop a corrective action plan for each newly underfunded system to submit to the Board for review. The local government is responsible for determining the components of the corrective action plan(s). The governing body of the local government must approve the corrective action plan(s) before submission to the Board;

- The corrective action plan(s) must be submitted to the Board within 180 days after the notification of underfunded status;

- Once your corrective action plan(s) is submitted, the Board will officially receive your plan at their next scheduled meeting;

- The Board shall then approve or disapprove a corrective action plan(s) within 45 days after it is received.

Locating Retirement Data Online

The Michigan Department of Treasury (Treasury) posts Form 5572 data online as well as the funding status of each local government under the Act. This can be viewed by visiting our website, selecting the applicable fiscal year under the "Reports and Documents" header, and selecting the "Local Retirement System Status Report." Your local government information may not be immediately available. In general, the Form 5572 data is updated weekly.

You may notice variations in the data your local government submitted to Treasury compared to the data found online. Data modifications may be a result of Treasury reviewing your Form 5572 and making corrections based on information found in the local government's audited financial statement. **Please note, if your local government's data has been corrected, you do not need to resubmit your Form 5572.**

Required Payments for Retirement Health Benefits

Pursuant to Section 4(1)(a) of the Act, local governments that offer a retirement health benefit system are required to pay the following:

1.) **Normal costs for employees first hired after June 30, 2018.**
2.) Any retiree premiums that are due for retirants in the retirement system.

Thank you for your commitment to fiscal stability and compliance with the Act. For more information regarding the Act, please visit Michigan.gov/LocalRetirementReporting for step-by-step reporting instructions and helpful FAQs. If you would like to speak with a member of our team, please email our office at LocalRetirementReporting@michigan.gov or schedule a phone call appointment using the Local Retirement Calendar. A team member will contact you with a conference number to call at your scheduled time.

Sincerely,

Local Retirement Reporting Team
Community Engagement and Finance Division

Michigan Department of Treasury
Form 5572 (7-20)

The Protecting Local Government Retirement and Benefits Act (PA 202 of 2017) & Public Act 530 of 2016 Pension Report

Enter Local Government Name	City of Grosse Pointe Woods	Instructions: For a list of detailed instructions on how to complete and submit this form, visit michigan.gov/LocalRetirementReporting.
Enter Six-Digit Municode	822130	
Unit Type	City	
Fiscal Year End Month	June	
Fiscal Year (four-digit year only, e.g. 2019)	2022	
Contact Name (Chief Administrative Officer)	Shawn Murphy	Questions: For questions, please email LocalRetirementReporting@michigan.gov. Return this original Excel file. Do not submit a scanned image or PDF.
Title if not CAO	Treasurer/Comptroller	
CAO (or designee) Email Address	smurphy@gpwmi.us	
Contact Telephone Number	313-343-2604	

Pension System Name (not division) 1	GPW Retirement System	If your pension system is separated by divisions, you would only enter one system. For example, one could have different divisions of the same system for union and non-union employees. However, these would be only one system and should be reported as such on this form.
Pension System Name (not division) 2	GPW Supplemental Annuity	
Pension System Name (not division) 3		
Pension System Name (not division) 4		
Pension System Name (not division) 5		

Line	Descriptive Information	Source of Data	System 1	System 2	System 3	System 4	System 5
1	Is this unit a primary government (County, Township, City, Village)?	Calculated	YES	YES	YES	YES	YES
2	Provide the name of your retirement pension system	Calculated from above	GPW Retirement System	GPW Supplemental Annuity			
3	**Financial Information**						
4	Enter retirement pension system's assets (system fiduciary net position ending)	Most Recent Audit Report	38,115,937	2,314,927			
5	Enter retirement pension system's liabilities (total pension liability ending)	Most Recent Audit Report	69,496,136	3,878,998			
6	Funded ratio	Calculated	54.8%	59.7%			
7	Actuarially Determined Contribution (ADC)	Most Recent Audit Report	2,044,000	349,494			
8	Governmental Fund Revenues	Most Recent Audit Report	23,292,071	23,292,071			
9	All systems combined ADC/Governmental fund revenues	Calculated	10.3%	10.3%			
10	**Membership**						
11	Indicate number of active members	Actuarial Funding Valuation used in Most Recent Audit Report	79	50			
12	Indicate number of inactive members	Actuarial Funding Valuation used in Most Recent Audit Report	16	-			
13	Indicate number of retirees and beneficiaries	Actuarial Funding Valuation used in Most Recent Audit Report	103	57			
14	**Investment Performance**						
15	Enter actual rate of return - prior 1-year period	Actuarial Funding Valuation used in Most Recent Audit Report or System Investment Provider	-14.50%	-14.50%			
16	Enter actual rate of return - prior 5-year period	Actuarial Funding Valuation used in Most Recent Audit Report or System Investment Provider	5.00%	5.00%			
17	Enter actual rate of return - prior 10-year period	Actuarial Funding Valuation used in Most Recent Audit Report or System Investment Provider	6.30%	6.30%			
18	**Actuarial Assumptions**						
19	Actuarial assumed rate of investment return	Actuarial Funding Valuation used in Most Recent Audit Report	7.50%	7.50%			
20	Amortization method utilized for funding the system's unfunded actuarial accrued liability, if any	Actuarial Funding Valuation used in Most Recent Audit Report	Level Percent	Level Percent			
21	Amortization period utilized for funding the system's unfunded actuarial accrued liability, if any	Actuarial Funding Valuation used in Most Recent Audit Report	25	25			
22	Is each division within the system closed to new employees?	Actuarial Funding Valuation used in Most Recent Audit Report	No	No			
23	**Uniform Assumptions**						
24	Enter retirement pension system's actuarial value of assets using uniform assumptions	Actuarial Funding Valuation used in Most Recent Audit Report	41,703,710	41,703,710			
25	Enter retirement pension system's actuarial accrued liabilities using uniform assumptions	Actuarial Funding Valuation used in Most Recent Audit Report	84,764,731	84,764,731			
26	Funded ratio using uniform assumptions	Calculated	49.2%	49.2%			
27	Actuarially Determined Contribution (ADC) using uniform assumptions	Actuarial Funding Valuation used in Most Recent Audit Report	4,617,875	4,617,875			
28	All systems combined ADC/Governmental fund revenues	Calculated	39.7%	39.7%			
29	**Pension Trigger Summary**						
30	Does this system trigger "underfunded status" as defined by PA 202 of 2017?	Primary government triggers: Less than 60% funded AND greater than 10% ADC/Governmental fund revenues. Non-Primary government triggers: Less than 60% funded	YES	YES	NO	NO	NO

Requirements (For your information, the following are requirements of P.A. 202 of 2017)
Local governments must post the current year report on their website or in a public place.
The local government must electronically submit the form to its governing body.
Local governments must have had an actuarial experience study conducted by the plan actuary for each retirement system at least every 5 years.
Local governments must have had a peer actuarial audit conducted by an actuary that is not the plan actuary OR replace the plan actuary at least every 8 years.

By emailing this report to the Michigan Department of Treasury, the local government acknowledges that this report is complete and accurate in all known respects.

Required Supplemental Information
Schedule of Changes in the Net Pension Liability and Related Ratios
Pension Plan

Last Nine Fiscal Years

	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability									
Service cost	$ 1,080,805	$ 1,459,769	$ 1,381,734	$ 1,419,981	$ 872,705	$ 812,794	$ 893,380	$ 692,961	$ 675,799
Interest	4,517,849	4,149,881	4,160,628	4,115,769	3,739,452	3,713,413	3,802,189	3,521,128	3,499,326
Changes in benefit terms	196,683	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(630,363)	(219,966)	(2,041,992)	61,396	1,898,141	(1,943,674)	(509,341)	501,262	(579,977)
Changes in assumptions	(2,730,443)	(13,509,818)	1,372,928	(2,730,629)	17,877,664	(3,946,934)	7,000,034	5,686,156	-
Benefit payments, including refunds	(3,586,669)	(3,570,576)	(3,403,902)	(3,346,109)	(3,354,997)	(3,215,776)	(3,187,512)	(3,315,548)	(3,092,014)
Net Change in Total Pension Liability	(1,152,138)	(11,690,710)	1,469,396	(479,592)	21,032,965	(4,580,177)	7,998,750	7,085,959	503,134
Total Pension Liability - Beginning of year	70,648,274	82,338,984	80,869,588	81,349,180	60,316,215	64,896,392	56,897,642	49,811,683	49,308,549
Total Pension Liability - End of year	**$ 69,496,136**	**$ 70,648,274**	**$ 82,338,984**	**$ 80,869,588**	**$ 81,349,180**	**$ 60,316,215**	**$ 64,896,392**	**$ 56,897,642**	**$ 49,811,683**
Plan Fiduciary Net Position									
Contributions - Employer	$ 2,044,344	$ 1,623,076	$ 1,406,409	$ 1,215,450	$ 1,230,649	$ 1,076,052	$ 925,683	$ 889,829	$ 888,696
Contributions - Member	290,887	282,203	262,296	263,799	249,835	243,096	252,579	258,967	275,808
Net investment (loss) income	(6,523,478)	12,109,682	157,140	1,291,520	2,128,175	3,992,724	(1,359,930)	15,073	6,669,874
Administrative expenses	(52,775)	(46,967)	(70,669)	(58,125)	(62,843)	(37,168)	(51,765)	(69,537)	(44,753)
Benefit payments, including refunds	(3,586,669)	(3,570,576)	(3,403,902)	(3,346,109)	(3,354,997)	(3,215,776)	(3,187,512)	(3,315,548)	(3,092,015)
Other	-	-	-	-	22,728	12,254	-	-	-
Net Change in Plan Fiduciary Net Position	(7,827,691)	10,397,418	(1,648,726)	(633,465)	213,547	2,071,182	(3,420,945)	(2,221,216)	4,697,610
Plan Fiduciary Net Position - Beginning of year	45,943,628	35,546,210	37,194,936	37,828,401	37,614,854	35,543,672	38,964,617	41,185,833	36,488,223
Plan Fiduciary Net Position - End of year	**$ 38,115,937**	**$ 45,943,628**	**$ 35,546,210**	**$ 37,194,936**	**$ 37,828,401**	**$ 37,614,854**	**$ 35,543,672**	**$ 38,964,617**	**$ 41,185,833**
City's Net Pension Liability - Ending	**$ 31,380,199**	**$ 24,704,646**	**$ 46,792,774**	**$ 43,674,652**	**$ 43,520,779**	**$ 22,701,361**	**$ 29,352,720**	**$ 17,933,025**	**$ 8,625,850**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	54.85 %	65.03 %	43.17 %	45.99 %	46.50 %	62.36 %	55.02 %	68.48 %	82.69 %
Covered Payroll	$ 5,425,650	$ 5,372,630	$ 4,791,109	$ 4,716,600	$ 4,544,155	$ 4,493,845	$ 4,592,611	$ 4,651,563	$ 4,411,702
City's Net Pension Liability as a Percentage of Covered Payroll	578.37 %	459.82 %	976.66 %	925.98 %	957.73 %	505.17 %	632.60 %	385.53 %	195.50 %

See notes to required supplemental information.

Required Supplemental Information
Schedule of Changes in the Net Pension Liability and Related Ratios
Supplemental Annuity

Last Nine Fiscal Years

	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability									
Service cost	$ 45,787	$ 43,432	$ 51,793	$ 47,748	$ 59,640	$ 39,299	$ 37,233	$ 28,387	$ 33,212
Interest	281,506	275,505	272,594	259,909	239,740	254,061	269,224	234,285	236,533
Differences between expected and actual experience	(22,217)	21,271	(151,559)	136,155	161,463	(227,980)	(232,788)	(399,452)	(42,908)
Changes in assumptions	-	(15,148)	(198,496)	(57,257)	567,907	-	86,953	831,276	-
Benefit payments, including refunds	(267,409)	(266,789)	(278,103)	(275,592)	(242,921)	(257,534)	(263,715)	(247,158)	(257,888)
Net Change in Total Pension Liability	37,667	58,271	(303,771)	110,963	785,829	(192,154)	(103,093)	447,338	(31,051)
Total Pension Liability - Beginning of year	3,841,331	3,783,060	4,086,831	3,975,868	3,190,039	3,382,193	3,485,286	3,037,948	3,068,999
Total Pension Liability - End of year	**$ 3,878,998**	**$ 3,841,331**	**$ 3,783,060**	**$ 4,086,831**	**$ 3,975,868**	**$ 3,190,039**	**$ 3,382,193**	**$ 3,485,286**	**$ 3,037,948**
Plan Fiduciary Net Position									
Contributions - Employer	$ 349,494	$ 318,174	$ 335,830	$ 311,792	$ 298,389	$ 290,000	$ 297,360	$ 286,439	$ 277,776
Net investment (loss) income	(368,012)	649,743	7,796	59,811	91,098	159,415	3,963	(9,093)	230,642
Administrative expenses	(7,005)	(2,519)	(3,506)	(2,693)	(5,768)	(995)	-	(22,140)	-
Benefit payments, including refunds	(267,409)	(266,789)	(278,103)	(275,592)	(242,921)	(257,534)	(263,715)	(247,158)	(257,888)
Other	2,024	-	-	-	960	-	-	-	-
Net Change in Plan Fiduciary Net Position	(290,908)	698,609	62,017	93,318	141,758	190,886	37,608	8,048	250,530
Plan Fiduciary Net Position - Beginning of year	2,605,835	1,907,226	1,845,209	1,751,891	1,610,133	1,419,247	1,381,639	1,373,591	1,123,061
Plan Fiduciary Net Position - End of year	**$ 2,314,927**	**$ 2,605,835**	**$ 1,907,226**	**$ 1,845,209**	**$ 1,751,891**	**$ 1,610,133**	**$ 1,419,247**	**$ 1,381,639**	**$ 1,373,591**
City's Net Pension Liability - Ending	**$ 1,564,071**	**$ 1,235,496**	**$ 1,875,834**	**$ 2,241,622**	**$ 2,223,977**	**$ 1,579,906**	**$ 1,962,946**	**$ 2,103,647**	**$ 1,664,357**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	59.68 %	67.84 %	50.41 %	45.15 %	44.06 %	50.47 %	41.96 %	39.64 %	45.21 %
Covered Payroll	$ 2,810,667	$ 2,816,325	$ 2,475,978	$ 2,525,337	$ 2,231,884	$ 2,258,831	$ 2,347,151	$ 2,358,679	$ 2,196,932
City's Net Pension Liability as a Percentage of Covered Payroll	55.65 %	43.87 %	75.76 %	88.77 %	99.65 %	69.94 %	83.63 %	89.19 %	75.76 %

See notes to required supplemental information.

Michigan Department of Treasury
5598 (Rev. 10-19)

Protecting Local Government Retirement and Benefits Act Corrective Action Plan:
Defined Benefit Pension Retirement Systems

Issued under authority of Public Act 202 of 2017 (The Act).

1. LOCAL GOVERNMENT INFORMATION

Local Government Name: City of Grosse Pointe Woods Six-Digit Muni Code: 822130

Defined Benefit Pension System Name: GPW Retirement System

Contact Name (Administrative Officer): Shawn Murphy

Title if not Administrative Officer: Treasurer/Comptroller Telephone: (313) 343-2604

Email (Communication will be sent here): smurphy@gpwmi.us

Fiscal Year System was Determined to be Underfunded: 2022

2. GENERAL INFORMATION

Corrective Action Plan: An underfunded local government shall develop and submit for approval a corrective action plan for the local government. The local government shall determine the components of the corrective action plan. This corrective action plan shall be submitted by any local government with at least one defined benefit pension retirement system that has been determined to have an underfunded status. Underfunded status for a defined benefit pension system is defined as being less than 60% funded according to the most recent audited financial statements, and, if the local government is a city, village, township, or county, the actuarially determined contribution (ADC) for all of the defined benefit pension retirement systems of the local government is greater than 10% of the local government's annual governmental fund revenues, based on the most recent fiscal year.

Due Date: The local government has **180 days from the date of notification** to submit a corrective action plan to the Municipal Stability Board (the Board). The Board may extend the 180-day deadline by up to an additional 45 days if the local government submits a reasonable draft of a corrective action plan and requests an extension.

Filing: Per Sec. 10(1) of PA 202 of 2017 (the Act), this corrective action plan must be approved by the local government's administrative officer and its governing body. ***You must provide proof of your governing body approving this corrective action plan and attach the documentation as a separate PDF document.*** Failure to provide documentation that demonstrates approval from your governing body will automatically result in a disapproval of the corrective action plan.

The submitted plan must demonstrate through distinct supporting documentation how and when the local government will reach the 60% funded ratio. Or, if the local government is a city, village, township, or county, the submitted plan may demonstrate how and when the ADC for all defined benefit pension systems will be less than 10% of annual governmental fund revenues, as defined by the Act. Supporting documentation for the funding ratio and/or ADC must include an actuarial projection, an actuarial valuation, or an internally developed analysis. The local government must project governmental fund revenues using a reasonable forecast based on historical trends and projected rates of inflation.

The completed plan must be submitted via email to Treasury at LocalRetirementReporting@michigan.gov for review by the Board. **If you have multiple underfunded retirement systems, you are required to**

complete separate plans and send a separate email for each underfunded system. Please attach each plan as a separate PDF document in addition to all applicable supporting documentation.

The subject line of the email(s) should be in the following format: **Corrective Action Plan-20XX, Local Government Name, Retirement System Name** (e.g. Corrective Action Plan-2017, City of Lansing, Employees' Retirement System Pension Plan). Treasury will send an automatic reply acknowledging receipt of the email. Your individual email settings must allow for receipt of Treasury's automatic reply. This will be the only notification confirming receipt of the application(s).

Municipal Stability Board: The Board shall review and vote on the approval of a corrective action plan submitted by a local government. If a corrective action plan is approved, the Board will monitor the corrective action plan and report on the local government's compliance with the Act not less than every two years.

Review Process: Following receipt of the email by Treasury, the Board will receive the corrective action plan submission at the Board's next scheduled meeting. The Board shall then approve or reject the corrective action plan within 45 days from the date of the meeting.

Considerations for Approval: A successful corrective action plan will demonstrate the actions for correcting underfunded status as set forth in Sec. 10(7) of the Act (listed below), as well as any additional solutions to address the underfunded status. Please also include steps already taken to address your underfunded status as well as the date prospective actions will be taken. A local government may also include in its corrective action plan a review of the local government's budget and finances to determine any alternative methods available to address its underfunded status. A corrective action plan under this section may include the development and implementation of corrective options for the local government to address its underfunded status. The corrective options as described in Sec. 10(7) may include, but are not limited to, any of the following:

(i) Closing the current defined benefit plan;

(ii) Implementing a multiplier limit;

(iii) Reducing or eliminating new accrued benefits;

(iv) Implementing final average compensation standards.

Implementation: The local government has up to 180 days after the approval of a corrective action plan to begin to implement the corrective action plan to address its underfunded status. The Board shall monitor each underfunded local government's compliance with this Act and any corrective action plan. The Board shall adopt a schedule, not less than every 2 years, to certify that the underfunded local government is in substantial compliance with the Act. If the Board determines that an underfunded local government is not in substantial compliance under this subsection, the Board shall within 15 days provide notification and report to the local government detailing the reasons for the determination of noncompliance with the corrective action plan. The local government has 60 days from the date of the notification to address the determination of noncompliance.

3. DESCRIPTIONS OF PRIOR ACTIONS

Prior actions are separated into three categories below: System Design Changes, Additional Funding, and Other Considerations. Please provide a brief description of the prior actions implemented by the local government to address the retirement system's underfunded status within the appropriate category section. Within each category are sample statements that you may choose to use to indicate the changes to your system that will positively affect your funded status. For retirement systems that have multiple divisions, departments, or plans within the same retirement system, please indicate how these changes impact the retirement system as a whole.

- If applicable, prior actions listed within your waiver application(s) may also be included in your corrective action plan.

Please indicate where in the attached supporting documentation these changes are described and the impact of those changes (i.e. what has the local government done to improve its underfunded status, and which attachment(s) supports your actions).

- Please provide the name of the system impacted, the date you made the change, the relevant page number(s) within the supporting documentation, and the resulting change to the system's funded ratio.

Category of Prior Actions:

☐ **System Design Changes** - System design changes may include the following: lower tier of benefits for new hires, final average compensation limitations, freeze future benefit accruals for active employees in the defined benefit system, defined contribution system for new hires, hybrid system for new hires, bridged multiplier for active employees, etc.

Sample Statement: *The system's multiplier for current employees was lowered from 2.5X to 2X for the* ***General Employees' Retirement System*** *on* ***January 1, 2019****. On page* ***8*** *of the attached actuarial supplemental valuation, it shows our funded ratio will be* ***60%*** *by fiscal year* ***2022.***

☐ **Additional Funding –** Additional funding may include the following: voluntary contributions above the ADC, bonding, millage increases, restricted funds, etc.

Sample Statement: *The local government provided a lump sum payment of* ***$1 million*** *to the* ***General Employees' Retirement System*** *on* ***January 1, 2019****. This lump sum payment was in addition to the ADC of the system. The additional contribution will increase the retirement system's funded ratio to* ***61% by 2027****. Please see page* ***10*** *of the attached enacted budget, which highlights this contribution of* ***$1 million****.*

☐ **Other Considerations** – Other considerations may include the following: outdated Form 5572 information, actuarial assumption changes, amortization policy changes, etc.

Sample Statement: *The information provided on the Form 5572 from the audit used actuarial data from* ***2017****. Attached is an updated actuarial valuation from* ***2019*** *that shows our funded ratio has improved to* ***62%*** *as indicated on page* ***13****.*

4. DESCRIPTION OF PROSPECTIVE ACTIONS

The corrective action plan allows you to submit a plan of prospective actions which are separated into three categories below: System Design Changes, Additional Funding, and Other Considerations. Please provide a brief description of the additional actions the local government is planning to implement to address the retirement system's underfunded status within the appropriate category section. Within each category are sample statements that you may choose to use to indicate the changes to your system that will positively affect your funding status. For retirement systems that have multiple divisions, departments, or plans within the same retirement system, please indicate how these changes impact the retirement system as a whole.

Please indicate where in the attached supporting documentation these changes are described and the impact of those changes (i.e. what will the local government do to improve its underfunded status, and which attachment(s) supports your actions).

Category of Prospective Actions:

☒ **System Design Changes** - System design changes may include the following: Lower tier of benefits for new hires, final average compensation limitations, freeze future benefit accruals for active employees in the defined benefit system, defined contribution system for new hires, hybrid system for new hires, bridged multiplier for active employees, etc.

Sample Statement: *Beginning with **summer 2019** contract negotiations, the local government will seek to lower the system's multiplier for current employees from 2.5X to 2X for the **General Employees' Retirement System**. On page **8** of the attached actuarial supplemental valuation, it shows our funded ratio would be **60%** funded by **fiscal year 2021** if these changes were adopted and implemented by **fiscal year 2020.***

The system implemented an Employee Retention Option Plan (EROP) and also increased the multiplier for Public Safety Officers hired after July 1, 2011 from 2.0% to 2.50% in fiscal year 22-23. The net affect of both changes will decrease FY 23-24 contributions by $146,000 and decrease the unfunded accrued liability by 1.7 million. Attached is the analysis of implementing the EROP and increasing the multiplier completed by Foster & Foster Actuaries and Consultants.

☒ **Additional Funding** – Additional funding may include the following: voluntary contributions above the ADC, bonding, millage increases, restricted funds, etc.

Sample Statement: Beginning in **fiscal year 2020,** *the local government will provide a lump sum payment of **$1 million** to the **General Employees' Retirement System**. This lump sum payment will be in addition to the ADC of the system. The additional contribution will increase the retirement system's funded ratio to **61% by 2026**. Please see page **10** of the attached enacted budget, which highlights this contribution of **$1 million**. Please see page **12** of the attached supplemental actuarial valuation showing the projected change to the system's funded ratio with this additional contribution.*

Additional funding included the CVTRS requirement - (A city, village, or township that has a retirement pension benefit system in underfunded status (under Section 5 of 2017 Public Act 202) must allocate, to the local unit's pension unfunded liability, an amount equal to the sum of the local unit's FY 2022 eligible CVTRS payment amount less the sum of the local unit's FY 2020 eligible CVTRS payment amounts.)
Additional funding included $39,704 in fiscal year 22-23 and additional funding of $52,719 in fiscal year 23-24.

☒ **Other Considerations** – Other considerations may include the following: outdated Form 5572 information, actuarial assumption changes, amortization policy changes, etc.

Sample Statement: *Beginning in **fiscal year 2020**, the local government will begin amortizing the unfunded portion of the pension liability using a **level-dollar amortization method over a closed period of 10 years**. This will allow the retirement system to reach a funded status of **62%** by **2023** as shown in the attached actuarial analysis on page **13**.*

On June 1, 2023, The Pension Board approved the following system design changes as the result of an Experience Study completed by Foster & Foster Actuaries and Consultants:
- Decrease the amortization period from 25 years to a 20 year closed amortization for a period of 5 years and after 5 years the plan will remain at a 15 year open amortization period
- Decrease the assumed rate of investment return from 7.5% to 7.4% with an intention of lowering it .1% a year for the next 5 years
- Update the payroll growth assumption from 3.5% to 3.00%,
- Adjust the age based retirement tables

5. CONFIRMATION OF FUNDING

Please check the applicable answer:

Do the corrective actions listed in this plan allow for your local government to make, at a minimum, the ADC payment for the defined benefit pension system according to your long-term budget forecast?

☒ **Yes**

☐ **No, Explain:**

6. DOCUMENTATION ATTACHED TO THIS CORRECTIVE ACTION PLAN

Documentation should be attached as a PDF to this corrective action plan. The documentation should detail the corrective action plan that would be implemented to adequately address the local government's underfunded status. Please check all documents that are included as part of this plan and attach in successive order as provided below:

Naming Convention: When attaching documents, please use the naming convention shown below. If there is more than one document in a specific category that needs to be submitted, include a, b, or c for each document. For example, if you are submitting two supplemental valuations, you would name the first document "Attachment 2a" and the second document "Attachment 2b".

Naming Convention:	**Type of Document:**
☒ Attachment – 1	**This corrective action plan form (required);**
☒ Attachment – 1a	**Documentation from the governing body approving this corrective action plan (required);**
☒ Attachment – 2a	**An actuarial projection, an actuarial valuation, or an internally developed analysis (in accordance with GASB and/or actuarial standards of practice), which illustrates how and when the local government will reach the 60% funded ratio. Or, if the local government is a city, village, township, or county, how and when the ADC will be less than 10% of governmental fund revenues, as defined by the Act (required);**
☐ Attachment – 3a	Documentation of additional payments in past years that are not reflected in your audited financial statements (e.g. enacted budget, system provided information);
☐ Attachment – 4a	Documentation of commitment to additional payments in future years (e.g. resolution, ordinance);
☐ Attachment – 5a	A separate corrective action plan that the local government has approved to address its underfunded status, which includes documentation of prior actions, prospective actions, and the positive impact on the system's funded ratio;
☒ Attachment – 6a	Other documentation not categorized above.

7. CORRECTIVE ACTION PLAN CRITERIA

Please confirm that each of the three corrective action plan criteria listed below have been satisfied when submitting this document. Specific detail on corrective action plan criteria can be found in the Corrective Action Plan Development: Best Practices and Strategies document.

Corrective Action Plan Criteria:	Description:
☒ Underfunded Status	Is there a description and adequate supporting documentation of how and when the retirement system will reach the 60% funded ratio? Or, if your local government is a city, village, township, or county, how and when the ADC of all pension systems will be less than 10% of governmental fund revenues? Do the corrective actions address the underfunded status in a reasonable timeframe?
☒ Legality	Does the corrective action plan follow all applicable laws? Are all required administrative certifications and governing body approvals included?
☒ Affordability	Do the corrective action(s) listed allow the local government to make the ADC payment for the pension system now and into the future without additional changes to this corrective action plan?

8. LOCAL GOVERNMENT'S ADMINISTRATIVE OFFICER APPROVAL OF CORRECTIVE ACTION PLAN

I, Shawn Murphy, as the government's administrative officer (Ex. City/Township Manager, Executive Director, Chief Executive Officer, etc.) **(insert title)** Treasurer/Comptroller approve this corrective action plan and will implement the prospective actions contained in this corrective action plan.

I confirm to the best of my knowledge that because of the changes listed above, one of the following statements will occur:

☐ The ________________ ***(insert retirement pension system name)*** will achieve a funded status of at least 60% by fiscal year ________ as demonstrated by required supporting documentation listed in Section 6.

OR, if the local government is a city, village, township, or county:

☒ The ADC for all the defined benefit pension retirement systems of the local government will be less than 10% of the local government's annual governmental fund revenues by fiscal year 2023 as demonstrated by required supporting documentation listed in Section 6.

Signature: Shawn Murphy Digitally signed by Shawn Murphy Date: 2023.06.26 15:25:37 -04'00' Date: ________

Michigan Department of Treasury
5598 (Rev. 10-19)

Protecting Local Government Retirement and Benefits Act Corrective Action Plan:
Defined Benefit Pension Retirement Systems

Issued under authority of Public Act 202 of 2017 (The Act).

1. LOCAL GOVERNMENT INFORMATION

Local Government Name: City of Grosse Pointe Woods Six-Digit Muni Code: 822130

Defined Benefit Pension System Name: GPW Supplemental Annuity

Contact Name (Administrative Officer): Shawn Murphy

Title if not Administrative Officer: Treasurer/Comptroller Telephone: (313) 343-2604

Email (Communication will be sent here): smurphy@gpwmi.us

Fiscal Year System was Determined to be Underfunded: 2022

2. GENERAL INFORMATION

Corrective Action Plan: An underfunded local government shall develop and submit for approval a corrective action plan for the local government. The local government shall determine the components of the corrective action plan. This corrective action plan shall be submitted by any local government with at least one defined benefit pension retirement system that has been determined to have an underfunded status. Underfunded status for a defined benefit pension system is defined as being less than 60% funded according to the most recent audited financial statements, and, if the local government is a city, village, township, or county, the actuarially determined contribution (ADC) for all of the defined benefit pension retirement systems of the local government is greater than 10% of the local government's annual governmental fund revenues, based on the most recent fiscal year.

Due Date: The local government has **180 days from the date of notification** to submit a corrective action plan to the Municipal Stability Board (the Board). The Board may extend the 180-day deadline by up to an additional 45 days if the local government submits a reasonable draft of a corrective action plan and requests an extension.

Filing: Per Sec. 10(1) of PA 202 of 2017 (the Act), this corrective action plan must be approved by the local government's administrative officer and its governing body. ***You must provide proof of your governing body approving this corrective action plan and attach the documentation as a separate PDF document.*** Failure to provide documentation that demonstrates approval from your governing body will automatically result in a disapproval of the corrective action plan.

The submitted plan must demonstrate through distinct supporting documentation how and when the local government will reach the 60% funded ratio. Or, if the local government is a city, village, township, or county, the submitted plan may demonstrate how and when the ADC for all defined benefit pension systems will be less than 10% of annual governmental fund revenues, as defined by the Act. Supporting documentation for the funding ratio and/or ADC must include an actuarial projection, an actuarial valuation, or an internally developed analysis. The local government must project governmental fund revenues using a reasonable forecast based on historical trends and projected rates of inflation.

The completed plan must be submitted via email to Treasury at LocalRetirementReporting@michigan.gov for review by the Board. **If you have multiple underfunded retirement systems, you are required to**

complete separate plans and send a separate email for each underfunded system. Please attach each plan as a separate PDF document in addition to all applicable supporting documentation.

The subject line of the email(s) should be in the following format: **Corrective Action Plan-20XX, Local Government Name, Retirement System Name** (e.g. Corrective Action Plan-2017, City of Lansing, Employees' Retirement System Pension Plan). Treasury will send an automatic reply acknowledging receipt of the email. Your individual email settings must allow for receipt of Treasury's automatic reply. This will be the only notification confirming receipt of the application(s).

Municipal Stability Board: The Board shall review and vote on the approval of a corrective action plan submitted by a local government. If a corrective action plan is approved, the Board will monitor the corrective action plan and report on the local government's compliance with the Act not less than every two years.

Review Process: Following receipt of the email by Treasury, the Board will receive the corrective action plan submission at the Board's next scheduled meeting. The Board shall then approve or reject the corrective action plan within 45 days from the date of the meeting.

Considerations for Approval: A successful corrective action plan will demonstrate the actions for correcting underfunded status as set forth in Sec. 10(7) of the Act (listed below), as well as any additional solutions to address the underfunded status. Please also include steps already taken to address your underfunded status as well as the date prospective actions will be taken. A local government may also include in its corrective action plan a review of the local government's budget and finances to determine any alternative methods available to address its underfunded status. A corrective action plan under this section may include the development and implementation of corrective options for the local government to address its underfunded status. The corrective options as described in Sec. 10(7) may include, but are not limited to, any of the following:

(i) Closing the current defined benefit plan;

(ii) Implementing a multiplier limit;

(iii) Reducing or eliminating new accrued benefits;

(iv) Implementing final average compensation standards.

Implementation: The local government has up to 180 days after the approval of a corrective action plan to begin to implement the corrective action plan to address its underfunded status. The Board shall monitor each underfunded local government's compliance with this Act and any corrective action plan. The Board shall adopt a schedule, not less than every 2 years, to certify that the underfunded local government is in substantial compliance with the Act. If the Board determines that an underfunded local government is not in substantial compliance under this subsection, the Board shall within 15 days provide notification and report to the local government detailing the reasons for the determination of noncompliance with the corrective action plan. The local government has 60 days from the date of the notification to address the determination of noncompliance.

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Sample Statement: *The local government provided a lump sum payment of* ***$1 million*** *to the* ***General Employees' Retirement System*** *on* ***January 1, 2019****. This lump sum payment was in addition to the ADC of the system. The additional contribution will increase the retirement system's funded ratio to* ***61% by 2027****. Please see page* ***10*** *of the attached enacted budget, which highlights this contribution of* ***$1 million****.*

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The system implemented an Employee Retention Option Plan (EROP) and also increased the multiplier for Public Safety Officers hired after July 1, 2011 from 2.0% to 2.50% in fiscal year 22-23. The net affect of both changes will decrease FY 23-24 contributions by $146,000 and decrease the unfunded accrued liability by 1.7 million. Attached is the analysis of implementing the EROP and increasing the multiplier completed by Foster & Foster Actuaries and Consultants.

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Additional funding included the CVTRS requirement - (A city, village, or township that has a retirement pension benefit system in underfunded status (under Section 5 of 2017 Public Act 202) must allocate, to the local unit's pension unfunded liability, an amount equal to the sum of the local unit's FY 2022 eligible CVTRS payment amount less the sum of the local unit's FY 2020 eligible CVTRS payment amounts.)
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5. CONFIRMATION OF FUNDING

Please check the applicable answer:

Do the corrective actions listed in this plan allow for your local government to make, at a minimum, the ADC payment for the defined benefit pension system according to your long-term budget forecast?

☒ **Yes**

☐ **No, Explain:**

6. DOCUMENTATION ATTACHED TO THIS CORRECTIVE ACTION PLAN

Documentation should be attached as a PDF to this corrective action plan. The documentation should detail the corrective action plan that would be implemented to adequately address the local government's underfunded status. Please check all documents that are included as part of this plan and attach in successive order as provided below:

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Corrective Action Plan Criteria:	Description:
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☒ Legality	Does the corrective action plan follow all applicable laws? Are all required administrative certifications and governing body approvals included?
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I, Shawn Murphy, as the government's administrative officer (Ex. City/Township Manager, Executive Director, Chief Executive Officer, etc.) **(insert title)** Treasurer/Comptroller approve this corrective action plan and will implement the prospective actions contained in this corrective action plan.

I confirm to the best of my knowledge that because of the changes listed above, one of the following statements will occur:

☐ The ________________ ***(insert retirement pension system name)*** will achieve a funded status of at least 60% by fiscal year ____________ as demonstrated by required supporting documentation listed in Section 6.

OR, if the local government is a city, village, township, or county:

☒ The ADC for all the defined benefit pension retirement systems of the local government will be less than 10% of the local government's annual governmental fund revenues by fiscal year 2023 as demonstrated by required supporting documentation listed in Section 6.

Signature: Shawn Murphy Digitally signed by Shawn Murphy Date: 2023.06.26 15:23:55 -04'00' Date: ____________

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

June 20, 2023

VIA EMAIL

Board of Trustees
City of Grosse Pointe Woods Employees Retirement System

Re: *Cost Impact of Newly Adopted Assumption Changes*

To whom it may concern:

As requested, we have prepared revised contribution amounts based on the newly adopted assumption changes. This letter will outline our work and summarize the results of our analysis.

Assumptions Considered
This report shows the impact on the contribution amount due to assumption changes. The following assumptions were adopted in light of the most recent experience study:

- The Investment Return rate was updated from 7.5% to 7.4%.
- The Payroll Growth rate was updated from 3.5% to 3.0%.
- The Retirement Rates were adjusted.
- The Termination Rates were adjusted.
- The Disability Rate was simplified to 0.02% for general employees and 0.06% for public safety employees.
- The cost of administrative expenses paid from the trust were added.
- The Amortization Period was changed from an open 25-year period to a closed 20-year period (until 15 years remain).

Approach to Analysis
Our analysis shows liabilities based on the member data, methods, and plan provisions reflected in the June 30, 2022 actuarial valuation with updated plan assumptions.

Contribution Impact
The attached exhibit summarizes the results. The combination of the newly adopted plan assumptions creates an increase in annual contributions of approximately $320,400. However, the recommended contributions to fund the supplemental benefit annuity decreased by approximately $6,000. The initial funded ratio from the June 30, 2022 actuarial valuation of 66.7% decreased to 66.5% with the assumption updates.

Actuarial Certification
The undersigned is 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. This letter and the supporting actuarial valuation report are considered an integral part of our 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 that apply the funding and accounting rules to generate the results. All internally developed models are reviewed as part of the valuation 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.

Future actuarial measurements may differ significantly from current measurements due to such factors as the following: plan experience differing from that anticipated by assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used (such as the end of an amortization period); changes in plan provisions or applicable law.

The June 30, 2022 consolidated actuarial valuation report is considered an integral part of this actuarial opinion. Note that changes to benefit provisions may impact the risk assessment under ASOP 51, as provided in the June 30, 2022 consolidated actuarial valuation report. While we don't anticipate significant changes based on the analysis above, we will continue to monitor the risks to the System.

If there are any questions, concerns or comments about any of the information provided herein, please contact us.

Respectively submitted,

FOSTER & FOSTER INC.

Jason L. Franken, FSA, EA, MAAA

City of Grosse Pointe Woods Employees Retirement System

Impact of Assumption Changes

Based on June 30, 2022 Actuarial Valuation

	6/30/2022 Valuation	6/30/2022 Valuation with Assumption Changes
Present Value of Benefits (PVB)	69,017,325	68,853,256
Total Actuarial Accrued Liability (AL)	62,517,270	62,723,494
Actuarial Value of Assets (AVA)	41,703,710	41,703,710
Unfunded Actuarial Accrued Liability (UAAL)	20,813,560	21,019,784
Funded Ratio	66.7%	66.5%
Normal Cost	846,361	830,537
As a % of Projected Payroll	14.93	14.77
UAAL Amortization	1,359,303	1,631,655
As a % of Projected Payroll	23.98	29.01
Administrative expenses	-	61,218
As a % of Projected Payroll	0.00	1.09
Total Recommended Contribution	2,205,664	2,523,410
As a % of Projected Payroll	38.91	44.87
Expected Member Contributions	(326,695)	(324,009)
As a % of Projected Payroll	(5.76)	(5.76)
Expected City Contribution	1,878,969	2,199,401
As a % of Projected Payroll	33.15	39.11
Increase in Recommended Contribution		320,432
As a % of Projected Payroll		5.96
Projected Payroll	5,668,368	5,624,285
Interest Rate	7.50%	7.40%
Payroll Growth	3.50%	3.00%
Amortization Period	25	20

City of Grosse Pointe Woods Employees Retirement System

Impact of Assumption Changes on Supplemental Benefit Annuity

Based on June 30, 2022 Actuarial Valuation

	6/30/2022 Valuation	6/30/2022 Valuation with Assumption Changes
Total Actuarial Accrued Liability (AL)	3,885,922	3,902,773
Market Value of Assets (MVA)	2,314,927	2,314,927
Unfunded Actuarial Accrued Liability (UAAL)	1,570,995	1,587,846
Normal Cost	48,336	41,020
UAAL Amortization	228,872	230,272
Total Recommended Contribution	277,208	271,292
Increase in Recommended Contribution		(5,916)
Interest Rate	7.50%	7.40%
Payroll Growth	0.00%	0.00%
Amortization Period	10	10

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

May 16, 2023

Board of Trustees
City of Grosse Pointe Woods Employees Retirement System

Re: Actuarial Experience Study – Amortization period and investment rate of return

Dear Board:

As requested, we have prepared an estimate for the cost of adopting a new amortization period in combination with a new interest rate of return assumption. This letter will outline our work and summarize the results of our analysis.

Benefits Considered
The assumed rate of investment return is currently 7.50% per year compounded annually, net of both investment-related expenses and administrative expenses. The amortization schedule is currently a 25-year open period. The study measures the impact of changing the current 7.50% assumed interest rate to 7.25% or 7.00% and updating the amortization period to a 20-year or 15-year open amortization schedule.

Approach to Analysis
Our analysis estimates liabilities based on the member data, assumptions, methods, and plan provisions reflected in the June 30, 2022, actuarial valuation report for the Retirement System. The study assumes that all other assumption changes recommended in the most recent experience study will be adopted.

Estimated Impact
The lower interest rates and shorter amortization period increases the expected annual contributions. While the 15-year open amortization schedule results in the highest contribution amount, it also is the most effective in immediately paying down a portion of the unfunded liability. The attached appendix on page 3 shows the projected impact of each scenario on the initial unfunded liability.

The table below summarizes the results of the different amortization and interest rate combinations in comparison to the June 30, 2022, actuarial valuation report.

Change	Assumption	Increase / (Decrease) City Contrib.	Increase / (Decrease) City Contrib. as % of Payroll	Increase / (Decrease) UAAL	Funded Ratio (EAN)
	Current	1,878,969		20,813,560	66.7%
(1)	All - 7.25%/15 Yr. Amort.	783,550	14.28%	1,295,538	65.4%
(2)	All - 7.25%/20 Yr. Amort.	411,262	7.66%	1,295,538	65.4%
(3)	All - 7.00%/15 Yr. Amort.	961,326	17.44%	3,070,195	63.6%
(4)	All - 7.00%/20 Yr. Amort.	557,830	10.27%	3,070,195	63.6%

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In addition to displaying the impact of the amortization schedule we have also included the effect of the investment rate of return assumption on the supplemental annuity as shown below.

Supplemental Annuity				
Change	Assumption	Increase / (Decrease) City Contrib.	Increase / (Decrease) UAAL	Funded Ratio (EAN)
	Current	277,208	1,570,995	59.6%
(1)	Combination 7.25% [1]	2,474	1,647,010	58.1%
(2)	Combination 7.00% [1]	16,853	1,749,189	56.7%

[1] Reflects the combination of all the proposed assumption changes from the most recent experience study with the investment return as shown.

Actuarial Certification

The undersigned is 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. This letter and the supporting actuarial valuation report are considered an integral part of our 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 that apply the funding and accounting rules to generate the results. All internally developed models are reviewed as part of the valuation 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.

Future actuarial measurements may differ significantly from current measurements due to such factors as the following: plan experience differing from that anticipated by assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used (such as the end of an amortization period); changes in plan provisions or applicable law.

The June 30, 2022, actuarial valuation report is considered an integral part of this actuarial opinion. Note that changes to benefit provisions may impact the risk assessment under ASOP 51, as provided in the June 30, 2022, consolidated actuarial valuation report. While we don't anticipate significant changes based on the analysis above, we will continue to monitor the risks to the System.

If there are any questions, concerns or comments about any of the information provided herein, please contact us.

Respectively submitted,

FOSTER & FOSTER INC.

Jason L. Franken

Jason L. Franken, FSA, EA, MAAA

Appendix - Projected Unfunded Liabilities

The table below illustrates the impact of the amortization period on the projected funding progress.

	7.25% 15-Year Amort.		7.25% 20-Year Amort.		7.00% 15-Year Amort.		7.00% 20-Year Amort.	
Year	Balance	Payment	Balance	Payment	Balance	Payment	Balance	Payment
2022	22,109,098	1,926,610	22,109,098	1,579,871	23,883,755	2,051,017	23,883,755	1,674,305
2023	21,645,719	1,886,230	22,017,596	1,573,332	23,361,030	2,006,128	23,764,112	1,665,917
2024	21,192,052	1,846,697	21,926,473	1,566,821	22,849,745	1,962,222	23,645,069	1,657,572
2025	20,747,893	1,807,993	21,835,727	1,560,336	22,349,650	1,919,276	23,526,622	1,649,269
2026	20,313,043	1,770,100	21,745,357	1,553,879	21,860,500	1,877,270	23,408,768	1,641,007
2027	19,887,306	1,733,001	21,655,360	1,547,448	21,382,056	1,836,184	23,291,504	1,632,787
2028	19,470,492	1,696,679	21,565,736	1,541,043	20,914,083	1,795,997	23,174,827	1,624,607
2029	19,062,414	1,661,119	21,476,483	1,534,665	20,456,352	1,756,689	23,058,735	1,616,469
2030	18,662,889	1,626,304	21,387,600	1,528,314	20,008,639	1,718,242	22,943,225	1,608,371
2031	18,271,737	1,592,218	21,299,084	1,521,989	19,570,725	1,680,636	22,828,294	1,600,314
2032	17,888,784	1,558,847	21,210,934	1,515,690	19,142,395	1,643,853	22,713,939	1,592,298
2033	17,513,857	1,526,176	21,123,149	1,509,417	18,723,440	1,607,875	22,600,156	1,584,322
2034	17,146,788	1,494,189	21,035,728	1,503,170	18,313,655	1,572,685	22,486,942	1,576,385
2035	16,787,412	1,462,873	20,948,668	1,496,949	17,912,838	1,538,265	22,374,296	1,568,488
2036	16,435,568	1,432,212	20,861,969	1,490,753	17,520,793	1,504,598	22,262,215	1,560,631
2037	16,091,099	1,402,195	20,775,629	1,484,584	17,137,329	1,471,668	22,150,695	1,552,813
2038	15,753,850	1,372,807	20,689,646	1,478,440	16,762,257	1,439,459	22,039,734	1,545,035
2039	15,423,669	1,344,035	20,604,018	1,472,321	16,395,394	1,407,954	21,929,328	1,537,295
2040	15,100,407	1,315,865	20,518,745	1,466,227	16,036,561	1,377,139	21,819,475	1,529,594
2041	14,783,921	1,288,286	20,433,826	1,460,159	15,685,582	1,346,999	21,710,173	1,521,932
2042	14,474,069	1,261,285	20,349,258	1,454,116	15,342,284	1,317,518	21,601,418	1,514,308
2043	14,170,711	1,234,850	20,265,040	1,448,098	15,006,500	1,288,683	21,493,208	1,506,722
2044	13,873,711	1,208,970	20,181,170	1,442,105	14,678,064	1,260,479	21,385,540	1,499,174
2045	13,582,935	1,183,631	20,097,647	1,436,137	14,356,816	1,232,891	21,278,412	1,491,664
2046	13,298,254	1,158,824	20,014,469	1,430,193	14,042,600	1,205,908	21,171,820	1,484,192
2047	13,019,539	1,134,536	19,931,636	1,424,274	13,735,260	1,179,515	21,065,762	1,476,757
2048	12,746,666	1,110,758	19,849,146	1,418,379	13,434,647	1,153,700	20,960,235	1,469,359
2049	12,479,511	1,087,478	19,766,998	1,412,509	13,140,613	1,128,450	20,855,237	1,461,999
2050	12,217,955	1,064,685	19,685,189	1,406,663	12,853,014	1,103,752	20,750,765	1,454,675
2051	11,961,882	1,042,371	19,603,719	1,400,841	12,571,710	1,079,595	20,646,816	1,447,388
2052	11,711,176	1,020,524	19,522,587	1,395,044	12,296,563	1,055,967	20,543,388	1,440,137
2053	11,465,724	999,135	19,441,790	1,389,270	12,027,438	1,032,856	20,440,479	1,432,923
2054	11,225,417	978,195	19,361,328	1,383,521	11,764,203	1,010,251	20,338,085	1,425,745
2055	10,990,146	957,693	19,281,198	1,377,795	11,506,729	988,140	20,236,204	1,418,603
2056	10,759,806	937,621	19,201,400	1,372,093	11,254,890	966,514	20,134,833	1,411,497
2057	10,534,293	917,969	19,121,932	1,366,414	11,008,562	945,360	20,033,970	1,404,426
2058	10,313,507	898,730	19,042,793	1,360,759	10,767,626	924,670	19,933,612	1,397,391
2059	10,097,348	879,893	18,963,981	1,355,127	10,531,963	904,432	19,833,756	1,390,391
2060	9,885,720	861,452	18,885,496	1,349,519	10,301,458	884,638	19,734,401	1,383,426
2061	9,678,527	843,397	18,807,335	1,343,934	10,075,997	865,276	19,635,543	1,376,496

CITY OF GROSSE POINTE WOODS
EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL EXPERIENCE STUDY

April 24, 2023

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

April 24, 2023

Board of Trustees
City of Grosse Pointe Woods Employees Retirement System

Re: Actuarial Experience Study

Dear Board:

The following report presents the results of an actuarial experience study of the assumptions and methods used for actuarial valuation purposes for the City of Grosse Pointe Woods Employees Retirement System. In the course of the analysis, we compiled plan experience from 2017 through 2022. While we cannot verify the accuracy of all the information provided, the supplied information used for performance of the annual actuarial valuations or compiled from prior year annual reports 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 it has produced appropriate results.

The report includes a review of demographic and economic experience, a comparison of this experience to current actuarial assumptions, our recommendations for consideration regarding changes in assumptions or methods to be effective for the July 1, 2023 actuarial valuation, and the estimated actuarial impact of these suggested changes. We believe implementing the recommended changes will assist in achieving the objective of developing costs that are stable, predictable, and represent our best estimate of anticipated experience.

It is important to remember that the ultimate cost of your retirement plan is independent of any actuarial assumptions or methods used throughout the valuation process. This cost will be the sum of the benefits paid from the fund and the administrative expenses incurred, less any net investment gains received. Future actuarial measurements may differ significantly from current measurements due to such factors as: plan experience differing from that anticipated by assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used (such as the end of an amortization period); changes in plan provisions or applicable law.

The actuarial measurements included in this report are based on actuarial asset values as of July 1, 2022 and would be different if market asset values were used instead of actuarial asset values.

Our analysis 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 that apply the funding and accounting rules to generate the results. All internally developed models are reviewed as part of the valuation 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.

Foster & Foster does not provide legal, investment or accounting advice. Thus, the information in this report is not intended to supersede or supplant the advice or the interpretations of the plan or its affiliated legal, investing or accounting partners.

The undersigned is 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 sections of this report are considered an integral part of the actuarial opinions.

Respectfully submitted,

FOSTER & FOSTER INC.

Jason L. Franken, FSA, EA, MAAA

ACTUARIAL STANDARDS OF PRACTICE

The Actuarial Standards Board (ASB) is responsible for determining which actuarial activities are the best representations of generally accepted actuarial principles, and is also responsible for issuing guidance in the form of Actuarial Standards of Practice (ASOPs) to help actuaries in various practice areas deliver results and recommendations that are consistent with those representations. Generally speaking, ASOPs identify what the actuary should consider, document, and disclose when performing actuarial assignments.

The experience study and related measurements of benefit obligations for the plan are subject to the "coordinated guidance" provided in various ASOPs, including but not limited to:

- ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, which ties together the standards shown below, provides guidance on actuarial cost methods, and addresses overall considerations for measuring pension obligations and determining plan costs or contributions

- ASOP No. 23, *Data Quality*

- ASOP No. 25, *Credibility Procedures*

- ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*

- ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*

- ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*

- ASOP No. 51, *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*

- ASOP No. 56, *Modeling*

This report refers to ASOPs by number (e.g. ASOP No. 4) throughout. It is important to keep in mind that this experience study report only reflects the guidance provided in the final releases of the above-mentioned ASOPs issued by the ASB on or before the date of this report. The results provided in this report reflect the requirements of, and are consistent with, the applicable above-mentioned Actuarial Standards of Practice. When applicable, details from the relevant ASOP will be provided in the report section associated with a particular analysis or topic.

EXPERIENCE REVIEW SUMMARY

Below is a summary of our key findings and suggested changes for your consideration. The remainder of the document provides details of our analysis, documents our suggestions, and determines the estimated corresponding actuarial impact.

- Investment Return – We propose a discussion with your investment advisor on the long-term expected return of the current asset allocation, with consideration given to what expenses are netted against such returns.
- Payroll Growth – We recommend updating the payroll growth assumption from 3.50% to 3.00%.
- Retirement Rates – We recommend adjusting the age-based retirement tables.
- Termination Rates – We recommend adjusting the age and service-based termination rates.
- Disability Rates – We recommend simplifying the disability rate to 0.20% for general employees and 0.60% for public safety employees.
- Assumed Expenses – We recommend adding the cost of administrative expenses paid from the trust.
- Amortization Period – We recommend decreasing the amortization period from 25 years to 15 years.

REVIEW OF ECONOMIC ASSUMPTIONS

ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, provides guidance to actuaries in selecting (including giving advice on selecting) economic assumptions – primarily investment return, discount rate, post-retirement benefit increases, inflation, and compensation increases – for measuring obligations under defined benefit pension plans.

Throughout the remainder of this section, we have used the standards set forth in ASOP No. 27 as a guideline for reviewing and if applicable, selecting recommended changes to the following economic actuarial assumptions and methods:

- Investment Return
- Salary Increases
- Payroll Growth

Please keep in mind that ASOP No. 27 (and ASOP No. 35) recognizes a range of reasonable assumptions and states "the actuary should recognize the uncertain nature of the items for which assumptions are selected and, as a result, may consider several different assumptions reasonable for a given measurement. The actuary should also recognize that different actuaries will apply different professional judgment and may choose different reasonable assumptions. As a result, a range of reasonable assumptions may develop both for an individual actuary and across actuarial practice."

Investment Return

The investment return assumption is critical in the actuarial valuation since it determines the portion of assets that will come from investment income rather than contributions from the plan sponsor and its participants. The investment return assumption should be determined based on the long-term rate of return (net of investment-related fees) the plan expects to earn over the life of the plan. The assumed rate of investment return is currently 7.50% per year compounded annually, net of both investment-related expenses and administrative expenses.

We believe that the decision to modify the investment return assumption shall be made based upon input from your investment professionals, reflecting any significant changes to the asset allocation, and their judgment of capital market returns. Keep in mind, however, that this assumption should reflect the best estimate of investment returns expected to be realized until no participants remain, which could be 50+ years from now.

ASOP No. 27 provides that in developing a reasonable assumption, the actuary may consider a broad range of data and other inputs, including the judgment of investment professionals. The data that may be considered includes: current yields to maturity of fixed income securities; forecasts of inflation, GDP growth, and total returns for each asset class; historical and current investment data (including real and nominal returns); the inflation and inflation risk components implicit in the yield of inflation-protected securities; dividend yields, earnings yields, real estate capitalization rates; and historical plan performance.

For purposes of reviewing the investment return assumption, a building block approach is often used, whereby the actuary determines the weighted average expected real rate of return for the plan's target investment portfolio and then adjusts for inflation and expenses not reflected in the real rates of return. Foster & Foster is an actuarial firm, and we do not have the required expertise to produce our own capital market assumptions. For this reason, ASOP No. 27 addresses that the actuary will often collect capital market assumptions from external sources in order to determine the forward-looking expected arithmetic and/or geometric returns. The capital market assumptions can be broadly classified into the following categories: expected returns by asset class; standard deviation by asset class; and correlation coefficients between asset classes. This information was not available for our analysis as part of this study, but if it can be provided, we can revisit to give additional insight.

In the meantime, we can look to national assumption surveys for additional information. NASRA released updated information in November 2022 to their ongoing summary of investment return assumptions used by public employers. While their survey looks at large statewide funds (e.g., Michigan Municipal, Public Schools, and State Employees' systems are included), the results are a common source for information for all public systems. Figure 1 below, taken from NASRA's website, shows that an assumption from 7.0% to 7.5% is most common among respondents. Figure 2 shows how discount rates are trending down over the last 22 years, with a current median of 7.00%.

Figure 1

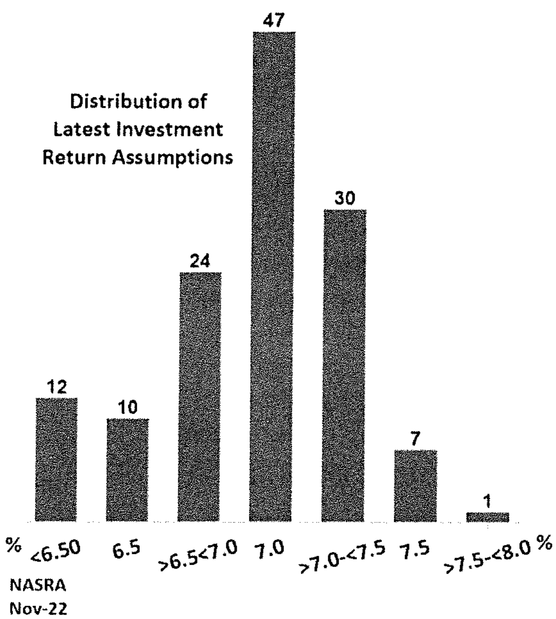
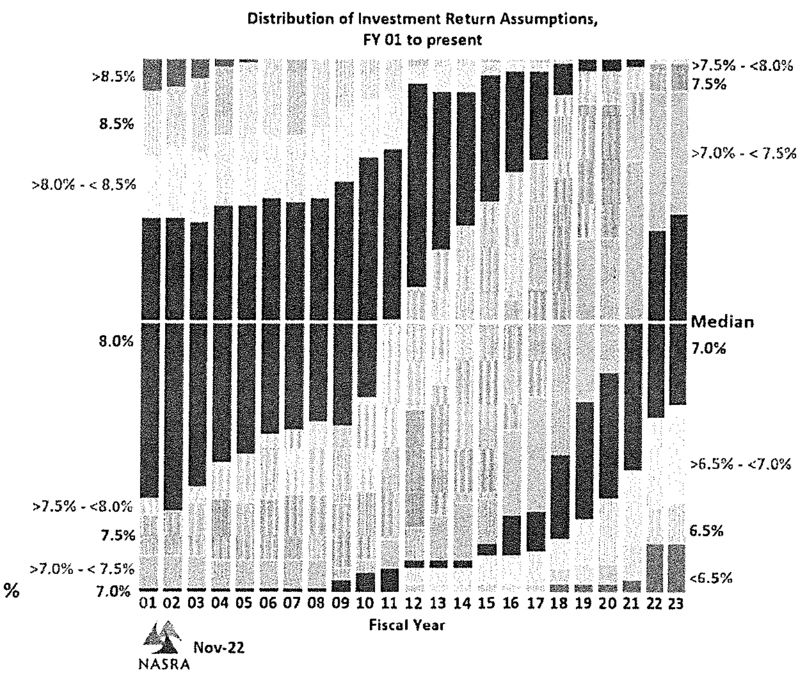


Figure 2



Based on the relevant data discussed in this section, we believe there should be a discussion surrounding the continued use of the current 7.50% assumption. Included in that discussion should be consideration of what expenses (e.g., investment related, administrative) are netted against expected returns to arrive at the final investment return assumption. The Michigan Public Act 202 requires municipal retirement systems in the state to submit information concerning their actuarial accrued liabilities and funded status based on uniform assumptions. The P.A. 202 interest rate assumption for the 2022 reporting year was 6.85%. For informational purposes, we have illustrated the impact of lowering the investment return assumption from 7.50% to 7.00% or 6.85% per year.

Investment Return	City Contribution	Increase / (Decrease)	City Contrib. as % of Payroll	UAAL	Funded Ratio
Current (7.50%)	1,878,969		33.15%	20,813,560	66.7%
6.85%	2,222,498	343,529	39.30%	25,594,709	62.0%
7.00%	2,141,055	262,086	37.86%	24,438,975	63.1%

Salary Increases

The salary increase assumption is used to project a participant's compensation while actively employed, from the valuation date until the assumed retirement age. This allows the actuary to estimate the pension benefit the member will be entitled to at retirement. Generally, a participant's compensation will increase over the long term in accordance with inflation, productivity growth, and merit adjustments. Currently, the valuation uses age-based assumption tables.

When reviewing the experience, we found that the salary increases were consistent with expectations. Due to the strong correlation between experience and expectations, we recommend keeping the existing age-based assumption tables.

Group	Total Expected Increase	Total Actual Increase
General	4.98%	5.11%
Public Safety	4.05%	3.95%
Total	4.51%	4.52%

Payroll Growth

The payroll growth assumption is used as part of the unfunded liability amortization calculation, allowing for the amortization rate to remain level as a percentage of payroll over time, assuming all assumptions are met. This is different from the salary increase assumption, since it is looking at the payroll for the entire membership, rather than any individual member. Currently, the valuation assumes that payroll will increase 3.50% each year.

We reviewed total payroll, as reported in the annual valuation report, over the last nine years. The results of this review across different time periods is shown below. The current assumption is higher than the historical data supports. We would recommend lowering the assumption to 3.00% to better reflect actual experience.

Lookback Period	Total
1 year	-4.2%
3 years	3.0%
5 years	2.8%
9 years	0.3%

The impact of the recommended changes will only impact contribution rates, since liabilities are not influenced by the payroll growth assumption. This assumption is used only for the amortization of the unfunded liabilities. The impact of only the recommended changes to the payroll growth rate assumption is an increase in the funding requirement.

Payroll Growth	City Contribution	Increase / (Decrease)	City Contrib. as % of Payroll	UAAL	Funded Ratio
Current	1,878,969		33.15%	20,813,560	66.7%
Proposed	1,940,657	61,688	34.33%	20,813,560	66.7%

REVIEW OF DEMOGRAPHIC/OTHER ASSUMPTIONS

ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*, provides guidance to actuaries in selecting (including giving advice on selecting) demographic and other noneconomic assumptions for measuring obligations under defined benefit pension plans.

Throughout the remainder of this section, we have used the standards set forth in ASOP No. 35 as a guideline for reviewing and if applicable, selecting recommended changes to the following demographic and other noneconomic actuarial assumptions:

- Mortality Rates
- Retirement Rates
- Withdrawal Rates
- Disability Rates
- Administrative Expenses

Generally, demographic assumptions are based on actual plan experience with additional consideration for current trends. ASOP No. 35 states "the actuary should use professional judgment to estimate possible future outcomes based on past experience and future expectations and select assumptions based upon application of that professional judgment. For any given measurement, the actuary will typically be able to identify two or more reasonable assumptions for the same contingency."

Demographic trends generally remain consistent over time, absent significant changes in plan provisions. Therefore, the best true indicator of future experience is past experience. For each assumption, this analysis compares actual experience for the studied time period to the current assumptions used for purposes of the actuarial valuations. Note that actuarial assumptions reflect average experience over long periods of time. A change in actuarial assumptions generally occurs when experience over a period of years indicates a consistent pattern.

Mid-Year Decrements

Currently, the valuation assumes members will decrement at the beginning of the year. To better capture actual decrement timing, we developed the proposed decrement rates assuming mid-year decrements. The exhibits detailing the impact of the proposed changes illustrate the impact of the change in decrement timing.

Mortality Rates

The rate of mortality is the probability of death at a given age. As mortality rates have continued to decline over time, concern has increased about the impact of potential future mortality improvement on the magnitude of pension obligations. ASOP No. 35 discusses the importance of actuaries considering mortality improvements when measuring pension obligations. Specifically, an actuary should adjust mortality rates to reflect mortality improvement prior to the measurement date and include an assumption as to the expected mortality improvement after the measurement date, if reasonable.

The Society of Actuaries underwent a comprehensive experience study with the primary objective to develop mortality tables comprised solely of public-sector lives. Additionally, contributors to the study were asked to identify plan members as teachers, public safety personnel, or general employees. This helped provide new insights into the composition of gender-specific pension mortality by factors such as job category, specifically in the public sector. The published tables were released as the Pub-2010 Public Retirement Plans Mortality Tables.

The Retirement System is currently using the Pub-2010 Mortality Tables including generational improvements with Scale MP-2018. We believe that this is an appropriate assumption and recommend continued use of the Pub-2010 Mortality Tables.

Retirement Rates

Regular Retirement requires attainment of age 50 with 25 years of service, or age 55 with 20 years of service, or age 60 with 10 years of service. Currently, the valuation uses separate age-based tables.

Actual experience over the timespan of the study has shown fewer retirements than expected. Public Safety employees generally retire by age 65. While some general employees may not retire until age 70. Both groups experienced a spike in retirements around reaching regular retirement ages 55 and 60. Based on the recent retirements, we would recommend modifying the current assumption to use the following age-based tables.

Retirement Rates		
ge	General	Public Safety
50-53	20%	20%
54	35%	20%
55	35%	30%
56	35%	10%
57-58	20%	10%
59	40%	10%
60	40%	40%
61-62	10%	40%
63	10%	50%
64	10%	70%
65-66	30%	100%
67	40%	100%
68	50%	100%
69	70%	100%
70+	100%	100%

Adopting the recommended changes to the retirement rates would result in a decrease to the City's contribution when compared to the current assumptions.

Retirement Rates	City Contribution	Increase / (Decrease)	City Contrib. as % of Payroll	UAAL	Funded Ratio
Current	1,878,969		33.15%	20,813,560	66.7%
Mid-Year Decr	1,927,555	48,586	34.36%	21,139,361	66.4%
Proposed	1,868,667	(58,888)	33.32%	20,568,159	67.0%

Withdrawal Rates

The withdrawal rate, or termination rate, is the probability that a participant will separate employment from a cause other than disability, death, or retirement. Currently, the valuation uses service and age-based tables with a higher rate for participants with less than 5 years of service.

When reviewing the experience, we noticed terminations at a higher rate than expected for general employees and a lower rate than expected for public safety employees. Overall, general employees terminate at a higher rate than public safety employees while both have the highest termination rates at three years of service in the select period. We recommend maintaining the 5-year select period but modifying the current assumption rates to better reflect experience. See below for the proposed termination rate tables.

General Termination Rates						
Age	Service					
	0	1	2	3	4	5+
< 27	10.0%	15.0%	15.0%	20.0%	8.0%	7.0%
30	10.0%	15.0%	15.0%	20.0%	8.0%	7.0%
35	10.0%	15.0%	15.0%	20.0%	8.0%	5.0%
40	10.0%	15.0%	15.0%	20.0%	8.0%	4.0%
45	10.0%	15.0%	15.0%	20.0%	8.0%	3.0%
50	10.0%	15.0%	15.0%	20.0%	8.0%	3.0%
55+	10.0%	15.0%	15.0%	20.0%	8.0%	2.0%

Public Safety Termination Rates						
Age	Service					
	0	1	2	3	4	5+
< 27	3.0%	3.0%	4.0%	8.0%	3.0%	3.0%
30	3.0%	3.0%	4.0%	8.0%	3.0%	3.0%
35	3.0%	3.0%	4.0%	8.0%	3.0%	2.0%
40	3.0%	3.0%	4.0%	8.0%	3.0%	1.0%
45	3.0%	3.0%	4.0%	8.0%	3.0%	0.5%
50	3.0%	3.0%	4.0%	8.0%	3.0%	0.5%
55+	3.0%	3.0%	4.0%	8.0%	3.0%	1.0%

Adopting the recommended changes to the withdrawal rates would result in a slight increase to the City's contribution when compared to the current assumptions.

Withdrawal Rates	City Contribution	Increase / (Decrease)	City Contrib. as % of Payroll	UAAL	Funded Ratio
Current	1,878,969		33.15%	20,813,560	66.7%
Mid-Year Decr	1,927,555	48,586	34.36%	21,139,361	66.4%
Proposed	1,886,564	(40,991)	33.63%	20,994,495	66.5%

Disability Rates

The disability rate assumption is the probability that a member will become disabled while an active participant in the plan. Currently, the valuation uses age-based tables.

Over the timeframe of the study, no disabilities were granted under the plan. Given the low frequency of occurrences there is not enough experience in the data to support age-based tables. We recommend simplifying the current assumption to 0.20% for all general employees and 0.60% for all public safety employees.

Adopting the recommended changes to the disability rates would result in a slight increase to the City's contribution when compared to the current assumptions.

Disability Rates	City Contribution	Increase / (Decrease)	City Contrib. as % of Payroll	UAAL	Funded Ratio
Current	1,878,969		33.15%	20,813,560	66.7%
Mid-Year Decr	1,927,555	48,586	34.36%	21,139,361	66.4%
Proposed	1,911,444	(16,111)	34.08%	21,032,790	66.5%

Administrative Expenses

While pension plans exist to pay benefits to members in retirement, an overlooked liability of the plan is the payment of administrative expenses from the trust. If the expenses are not considered in the development of the annual required contribution, the amount being contributed is insufficient. As a result, we recommend including an estimate of administrative expenses in the development of the annual contribution.

There are a variety of different approaches used by actuaries to build in administrative expenses into the contribution including a reduction to the investment return assumption, or the inclusion of an average of prior years' administrative expenses. We recommend including the 3-year average of expenses paid, rounded to the nearest 1,000 in the required contribution. The 3-year average administrative expenses for the City's plan is about $57,000 which would increase the City's contribution requirement.

Amortization Period

As part of this analysis, we reviewed the amortization period used to determine the annual contribution. Currently, a 25-year open period is used. The current period does not allow for timely payment of the unfunded liability. Based on the June 30, 2022 valuation, the unfunded accrued liability is projected to increase indefinitely because the amortization payment is not enough to pay the accumulating interest on the unfunded liabilities.

Tables 1, 2 and 3 in the appendix show the impact of changing the amortization period. Table 1 shows the impact on recommended contributions of changing to a 20-year, 15-year or 10-year amortization. Table 2 summarizes the impact of all the proposed changes. Table 3 shows the projected impact of each scenario on the initial unfunded liability. A 20-year amortization period increases the recommended contribution by about 3.5%. However, assuming all assumptions are realized, the payment amount that just covers the interest accumulating on the unfunded liabilities and the entire initial unfunded remains for the duration of the plan's existence. A 15-year period results in an increase in recommended contributions of about 9.5%. This option begins to pay down a portion of the unfunded immediately, but results in 50% of the initial unfunded remaining after 40 years. A 10-year amortization payment increases the recommended contribution nearly 22%. With a 10-year amortization, the initial unfunded liability steadily retires.

We recommend changing the amortization period to a 15-year open amortization of unfunded liabilities. This 15-year amortization will create a more stable and predictable contribution pattern that better aligns the funding of the plan with the payment of the remaining benefit obligations.

SUMMARY

As stated throughout the content of this report, we have recommended that the Board consider several changes to the actuarial assumptions used for purposes of completing the annual valuations. It is our belief that these changes reflect sound actuarial principles, are in compliance with the Actuarial Standards of Practice, are our best estimate of anticipated future experience, and will assist in achieving the objective of developing costs that are stable and predictable. Below, we have provided a summary of the estimated actuarial impact for the discussed changes.

Impact of Changes - Current Amortization Period
Cost impacts reflect the current amortization period (25-year open).

Pension Benefits

nge	Assumption	Increase / (Decrease) City Contrib.	Increase / (Decrease) City Contrib. as % of Payroll	Increase / (Decrease) UAAL	Funded Ratio (EAN)
	Current	1,878,969		20,813,560	66.7%
(1)	6.85% Interest	343,529	6.15%	4,781,149	62.0%
(2)	7.00% Interest	262,086	4.71%	3,625,415	63.1%
(3)	Payroll Growth	61,688	1.18%	0	66.7%
(4)	Mid-Year Decrements	48,586	1.21%	325,801	66.4%
(5)	Retirement Rates	(58,888)	0.17%	(245,401)	67.0%
(6)	Withdrawal Rates	(40,991)	0.49%	180,935	66.5%
(7)	Disability Rates	(16,111)	0.93%	219,230	66.5%
(8)	Administrative Expenses	61,275	1.08%	0	66.7%
(9)	Combination 7.50% [1]	53,605	1.30%	(543,258)	67.3%
(10)	Combination 6.85% [1]	404,644	7.55%	4,222,427	62.5%
(11)	Combination 7.00% [1]	321,463	6.07%	3,070,195	63.6%

Supplemental Annuity

Change	Assumption	Increase / (Decrease) City Contrib.	Increase / (Decrease) UAAL	Funded Ratio (EAN)
	Current	277,208	1,570,995	59.6%
(1)	Combination 7.50% [1]	(11,414)	1,549,263	59.9%
(2)	Combination 6.85% [1]	25,730	1,812,737	55.8%
(3)	Combination 7.00% [1]	16,853	1,749,189	56.7%

[1] Reflects the combination of all the proposed assumption changes with the investment return as shown.

APPENDIX – IMPACT OF AMORTIZATION PERIOD CHANGE

The tables the following pages illustrate the impact of changing the amortization period. The first two show the impact on the contribution requirements. Table 3 shows the impact of various amortization periods on retiring the current unfunded liabilities.

Table 1 - Proposed Amortization Period – Recommended Contribution
The table below shows the impact of three amortization period scenarios on the contribution requirements. Costs include all proposed assumption changes and reflect the current 7.50% investment return. The baseline scenario reflects the current 25-year amortization period.

Change	Assumption	Increase / (Decrease) City Contrib.	Increase / (Decrease) City Contrib. as % of Payroll	Increase / (Decrease) UAAL	Funded Ratio (EAN)
	Combination 7.50%	1,932,574		20,270,302	67.3%
(1)	20 Years	198,027	3.52%	0	67.3%
(2)	15 Years	538,152	9.57%	0	67.3%
(3)	10 Years	1,234,013	21.94%	0	67.3%

Table 2 - Proposed Amortization Period – Impact of All Proposed Changes
The table below shows the impact of all proposed changes (including a change to the proposed 15- year amortization period) at 7.50%, 6.85% and 7.00%.

Change	Assumption	Increase / (Decrease) City Contrib.	Increase / (Decrease) City Contrib. as % of Payroll	Increase / (Decrease) UAAL	Funded Ratio (EAN)
	Current	1,878,969		20,813,560	66.7%
(1)	All - 7.50%/15 Yr. Amort.	591,757	10.87%	(543,258)	67.3%
(1)	All - 6.85%/15 Yr. Amort.	1,198,378	21.66%	4,222,427	62.5%
(2)	All - 7.00%/15 Yr. Amort.	1,053,055	19.07%	3,070,195	63.6%

Table 3 – Proposed Amortization Period – Projected Unfunded Liabilities

The table below illustrates the impact of the amortization period on the projected funding progress.

	25-Year Amort.		20-Year Amort.		15-Year Amort.		10-Year Amort.	
Year	Balance	Payment	Balance	Payment	Balance	Payment	Balance	Payment
2022	20,270,302	1,292,174	20,270,302	1,476,162	20,270,302	1,792,177	20,270,302	2,438,709
2023	20,401,488	1,300,536	20,203,700	1,471,312	19,863,984	1,756,253	19,168,962	2,306,207
2024	20,533,523	1,308,953	20,137,317	1,466,478	19,465,811	1,721,049	18,127,462	2,180,905
2025	20,666,413	1,317,425	20,071,152	1,461,660	19,075,619	1,686,551	17,142,549	2,062,411
2026	20,800,162	1,325,951	20,005,204	1,456,857	18,693,248	1,652,744	16,211,148	1,950,354
2027	20,934,777	1,334,532	19,939,473	1,452,070	18,318,542	1,619,615	15,330,354	1,844,387
2028	21,070,263	1,343,169	19,873,958	1,447,299	17,951,347	1,587,150	14,497,415	1,744,176
2029	21,206,626	1,351,862	19,808,658	1,442,544	17,591,512	1,555,335	13,709,732	1,649,410
2030	21,343,871	1,360,611	19,743,573	1,437,804	17,238,890	1,524,158	12,964,846	1,559,794
2031	21,482,005	1,369,416	19,678,702	1,433,080	16,893,337	1,493,607	12,260,431	1,475,046
2032	21,621,033	1,378,279	19,614,044	1,428,371	16,554,710	1,463,667	11,594,289	1,394,903
2033	21,760,961	1,387,199	19,549,598	1,423,678	16,222,871	1,434,328	10,964,340	1,319,114
2034	21,901,794	1,396,177	19,485,364	1,419,000	15,897,684	1,405,577	10,368,618	1,247,443
2035	22,043,538	1,405,212	19,421,341	1,414,338	15,579,015	1,377,402	9,805,263	1,179,666
2036	22,186,200	1,414,307	19,357,528	1,409,691	15,266,734	1,349,792	9,272,517	1,115,572
2037	22,329,785	1,423,460	19,293,925	1,405,059	14,960,713	1,322,736	8,768,716	1,054,959
2038	22,474,299	1,432,672	19,230,531	1,400,442	14,660,825	1,296,221	8,292,289	997,641
2039	22,619,749	1,441,944	19,167,346	1,395,841	14,366,949	1,270,239	7,841,747	943,436
2040	22,766,140	1,451,276	19,104,368	1,391,255	14,078,963	1,244,777	7,415,684	892,177
2041	22,913,479	1,460,669	19,041,596	1,386,683	13,796,750	1,219,825	7,012,770	843,703
2042	23,061,771	1,470,122	18,979,031	1,382,127	13,520,194	1,195,374	6,631,747	797,862
2043	23,211,023	1,479,636	18,916,672	1,377,586	13,249,182	1,171,413	6,271,426	754,512
2044	23,361,241	1,489,212	18,854,517	1,373,059	12,983,602	1,147,932	5,930,683	713,517
2045	23,512,431	1,498,850	18,792,567	1,368,548	12,723,345	1,124,921	5,608,453	674,750
2046	23,664,600	1,508,550	18,730,820	1,364,051	12,468,306	1,102,372	5,303,731	638,089
2047	23,817,754	1,518,314	18,669,277	1,359,570	12,218,379	1,080,275	5,015,565	603,420
2048	23,971,898	1,528,140	18,607,935	1,355,102	11,973,462	1,058,621	4,743,056	570,635
2049	24,127,040	1,538,030	18,546,795	1,350,650	11,733,454	1,037,401	4,485,353	539,630
2050	24,283,186	1,547,984	18,485,856	1,346,212	11,498,257	1,016,606	4,241,652	510,311
2051	24,440,342	1,558,002	18,425,117	1,341,789	11,267,775	996,229	4,011,192	482,584
2052	24,598,516	1,568,085	18,364,578	1,337,380	11,041,912	976,259	3,793,254	456,364
2053	24,757,713	1,578,233	18,304,238	1,332,986	10,820,577	956,690	3,587,157	431,569
2054	24,917,941	1,588,447	18,244,096	1,328,606	10,603,679	937,513	3,392,257	408,121
2055	25,079,206	1,598,728	18,184,152	1,324,241	10,391,128	918,721	3,207,946	385,946
2056	25,241,514	1,609,074	18,124,404	1,319,890	10,182,838	900,305	3,033,650	364,977
2057	25,404,873	1,619,488	18,064,853	1,315,553	9,978,723	882,258	2,868,823	345,147
2058	25,569,289	1,629,969	18,005,498	1,311,231	9,778,700	864,574	2,712,952	326,394
2059	25,734,769	1,640,518	17,946,337	1,306,922	9,582,685	847,243	2,565,550	308,660
2060	25,901,320	1,651,135	17,887,371	1,302,628	9,390,600	830,260	2,426,157	291,890
2061	26,068,949	1,661,821	17,828,599	1,298,348	9,202,366	813,618	2,294,337	276,030

2A

Motion by Crook, supported by Zarb –after the board reviewed the Actuarial Experience Study(s) from Foster and Foster Actuaries and Consultants dated April 24, 2023 and May 16, 2023—to adopt the following recommendations with the understanding that these assumptions are to be reviewed annually prior to implementation and inclusion in the following years' valuation:

- Decrease the amortization period from 25 years to a 20 year closed amortization for a period of 5 years and after 5 years the plan will remain at a 15 year open amortization period
- Decrease the assumed rate of investment return from 7.5% to 7.4% with an intention of lowering it .1% a year for the next 5 years
- Update the payroll growth assumption from 3.5% to 3.00%,
- Adjust the age based retirement tables
- Adjust the age and service-based retirement rates
- Simplify the disability rate to 0.20% for general employees and 0.60% for public safety employees
- Add the cost of administrative expenses paid from the trust.

Motion CARRIED by the following vote:

YES:	Bryant, Crook, Conigliaro, Zarb
NO:	None
ABSENT:	Granger

City of Grosse Pointe Woods
822130
GPW Retirement System
GPW Supplemental Annuity
ADC Analysis

2B

		2017	2018	2019	2020	2021	2022	2022-23 ESTIMATE	2023-24 ESTIMATE	2024-2025 ESTIMATE
Plan Fiduciary Net Position		**37,614,854**	**37,828,401**	**37,194,936**	**35,546,210**	**45,943,628**	**38,115,937**	**40,000,000**		
Plan Fiduciary Increase/(Decrease)			213,547	(633,465)	(1,648,726)	10,397,418	(7,827,691)	1,884,063		
Percentage Increase/(Decrease)			0.57%	-1.67%	-4.43%	29.25%	-17.04%	4.94%		
Actuarial Determined Contributions-Pension		**1,076,000**	**1,231,000**	**1,215,000**	**1,406,000**	**1,623,000**	**2,044,000**	**1,993,291**	**1,878,969**	**2,199,369**
Actuarial Determined Contributions-SA		**290,000**	**298,000**	**311,792**	**335,830**	**318,174**	**349,494**	**329,201**	**277,208**	**271,292**
TOTAL ACTUARIAL DETERMINED CONTRIBUTION		**1,366,000**	**1,529,000**	**1,526,792**	**1,741,830**	**1,941,174**	**2,393,494**	**2,322,492**	**2,156,177**	**2,470,661**
			163,000	-2,208	215,038	199,344	452,320	-71,002	-166,315	314,484
			12%	-0.14%	14.08%	11.44%	23.30%	-2.97%	-7.16%	14.59%
Average Increase over 5 years 2018-2022	**12.12%**									
Governmental Fund Revenues		**18,991,373**	**20,007,777**	**21,597,822**	**21,211,077**	**22,113,120**	**23,292,071**	**25,552,849**	**25,644,219**	**26,726,405**
			1,016,404	1,590,045	-386,745	902,043	1,178,951	2,260,778	91,370	1,082,186
Percentage Increase/(Decrease) in Governmental Revenue			5.35%	7.95%	-1.79%	4.25%	5.33%	9.71%	0.36%	4.22%
Average Increase over 5 years 2018-2022	**4.22%**									
ALL SYSTEMS COMBINED ADC/GOVERNMENTAL FUND REVENUES			**7.6%**	**7.1%**	**8.2%**	**8.8%**	**10.3%**	**9.1%**	**8.4%**	**9.2%**