



Municipal Pensions Oversight Board

City of Morgantown West Virginia Policemen's Pension and Relief Fund

GASB 67 Actuarial Information for the
Fiscal Year Ending June 30, 2024

GASB 68 Actuarial Information for the
Fiscal Year Ending June 30, 2024
(Measurement Period Ending June 30, 2024)

Bolton

Submitted by:

James Ritchie, ASA, EA, FCA, MAAA
President of Bolton Retirement
443.573.3924
jritchie@boltonusa.com

Jordan McClane, FSA, EA, FCA, MAAA
Consulting Actuary
667.218.6935
jmclane@boltonusa.com



December 6, 2024

Mr. Jonathan Furgison
Finance Director
City of Morgantown
389 Spruce Street
Morgantown, WV 26505

Lieutenant Jason Ammons
Pension Board Secretary
City of Morgantown
Policemen's Pension and Relief Fund

Re: City of Morgantown Policemen's Pension and Relief Fund
GASB 67 and GASB 68 Actuarial Information for the Measurement Period Ending June 30, 2024

Dear Jonathan,

The following report contains the GASB 67 actuarial information to be included with the plan's financial statements for the plan year ending June 30, 2024 and the GASB 68 actuarial information to be included with the City's financial statements for the fiscal year ending June 30, 2024. The GASB 68 information has been provided as of the June 30, 2024 measurement date for FY 2024.

Methodology, Reliance and Certification

This report was prepared for the internal use of the City and its auditors in connection with our actuarial valuations of the pension plan as required by GASB 68. The purpose of this report is to provide the GASB 67 actuarial information for use in the plan's financial statements for the plan year ending June 30, 2024 and the GASB 68 information for use in the City's financial statements for the fiscal year ending June 30, 2024. It is neither intended nor necessarily suitable for other purposes. Bolton is not responsible for the consequences of any other use or the reliance upon this report by any other party.

These calculations are applicable for the valuation date only. This valuation does not provide any guarantee that the plan will be able to provide the promised benefits in the future.

The total pension liability is based on the July 1, 2023 actuarial valuation rolled forward to June 30, 2024. Our understanding is that there have been no substantial changes affecting the liabilities of the plan since July 1, 2023 that would cause our estimates of the June 30, 2024 liabilities to not reasonably reflect the condition of the plan. The methods, assumptions, and participant data used are detailed in the July 1, 2023 actuarial valuation report. These calculations are based on the Entry Age Normal cost method as required by GASB 67. The calculation of the actuarially determined contribution for the fiscal year ended June 30, 2024 is contained in the July 1, 2022 actuarial valuation report. The discount rate assumption may be different if a blended rate was used for GASB purposes.

The included calculations are based on a blended discount rate of 4.18%. The plan's expected gross rate of investment return of 4.25% has been blended with the 3.97% yield corresponding to the 20-year maturity on a municipal general obligation AA bond yield curve published on Fidelity's Fixed Income Market Data webpage as of June 30, 2024. The development of the blended discount rate is included within this report.

The long-term nominal expected rate of return on pension plan investments was determined using a methodology approved by the Municipal Pensions Oversight Board (MPOB) and is based on the funded status (current and projected), equity exposure, and funding policy.

The included calculations assume that the members and the City will continue to make all required contributions in accordance with the City's funding policy.

Methodology, Reliance and Certification (cont.)

This report is based on plan provisions, census data, and asset data submitted by the City. We have relied on this information for purposes of preparing this report. We have not audited the census data provided; however, based on our review, the data appears to be reasonable and consistent with previously provided information. Unless otherwise noted in our report, we believe the information provided is sufficiently complete and reliable for purposes of the results presented in this report. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The City is solely responsible for the validity and completeness of this information.

The City is responsible for selecting the plan's funding policy based on five methods allowed for under state law. The actuarial valuation methods are chosen by the actuary in accordance with actuarial standards of practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries and as required by GASB 67 & 68. The MPOB selects the asset valuation methods and assumptions; these selections are reviewed by a qualified actuary no less than every five years. The actuary shall provide a report to the Board with recommendations on any changes to the actuarial process. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in this report. The City and MPOB are solely responsible for communicating to Bolton Partners, Inc. any changes required thereto.

This is a deterministic valuation in that it is based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. We may consider that some factors are not material to the valuation of the plan and may not provide a specific assumption for those factors. We may have used other assumptions in the past. We will likely consider changes in assumptions at a future date.

Different assumptions or scenarios within the range of possibilities may also be reasonable and results based on those assumptions would be different. As a result of the uncertainty inherent in a forward-looking projection over a very long period of time, no one projection is uniquely "correct" and many alternative projections of the future could also be regarded as reasonable. Two different actuaries could, quite reasonably, arrive at different results based on the same data and different views of the future.

The City could reasonably ask how the valuation would change if we used a different assumption set or if plan experience exhibited variations from our assumptions. This report does not contain such an analysis. That type of analysis would be a separate assignment.

In addition, decisions regarding benefit improvements, benefit changes, the trust's investment policy, and similar issues should not be based on this valuation. These issues are complex and other factors should be considered when making such decisions. Other factors might include the anticipated vitality of the local economy and future growth expectations, as well as other economic and financial factors.



Methodology, Reliance and Certification (cont.)

The cost of this plan is determined by the benefits promised by the plan, the plan's participant population, the investment experience of the plan and many other factors. An actuarial valuation is a budgeting tool for the City or, in this case, a measure of accounting expense. It does not affect the cost of the plan. As the experience of the plan evolves, it is normal for the level of contributions and expense of the plan to change.

The report is conditioned on the assumption of an ongoing plan and is not meant to present the actuarial position of the plan in the case of plan termination. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions or applicable law.

The valuation was completed using both proprietary and third-party models (including software and tools). We have tested these models to ensure they are used for their intended purposes, within their known limitations, and without any known material inconsistencies unless otherwise stated.

The calculations in this report have been computed in accordance with our understanding of generally accepted actuarial principles and practices and fairly reflect the actuarial position of the Plan. The various actuarial assumptions and methods which have been used are, in our opinion, appropriate for the purposes of this report.

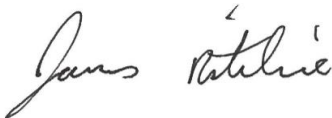
We make every effort to ensure that our calculations are accurately performed. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

Bolton does not practice law and, therefore, cannot and does not provide legal advice. Any statutory interpretation on which this report is based reflects Bolton's understanding as an actuarial firm. Bolton recommends that recipients of this report consult with legal counsel when making any decisions regarding compliance with ERISA, the Internal Revenue Code, or any other statute or regulation.

The City should notify Bolton promptly after receipt of this report if the City disagrees with anything contained in the report or is aware of any information that would affect the results of the report that has not been communicated to Bolton or incorporated herein. The report will be deemed final and acceptable to the City unless the City promptly provides such notice to Bolton.

The undersigned enrolled actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The July 1, 2023 actuarial valuation report contains information that is integral to the results contained herein and a copy may be provided upon request.

Sincerely,



James Ritchie, ASA, EA, FCA, MAAA



Jordan McClane, FSA, EA, FCA, MAAA



City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Net Pension Liability of the Employer

The components of the net pension liability of the Employer at June 30, 2024, were as follows:

Total pension liability	\$ 87,104,381
Plan fiduciary net position	(18,350,029)
Employer's net pension liability	<u>\$ 68,754,352</u>
Plan fiduciary net position as a percentage of the total pension liability	21.07%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2023 rolled forward to June 30, 2024 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50%
Salary increases	Rates vary by years of service
Single discount rate (BOY)	4.10%
Single discount rate (EOY)	4.18%
Investment rate of return (BOY)	4.25%, net of pension plan investment expense, including inflation
Investment rate of return (EOY)	4.25%, net of pension plan investment expense, including inflation
Long-term municipal bond rate (BOY)	3.86%
Long-term municipal bond rate (EOY)	3.97%
Mortality	SOA PubS-2010(B) with generational projection using Scale MP-2021
Year Fund is projected to be fully funded	2059
Year assets are expected to be depleted for a closed plan	2043

The above is a summary of key actuarial assumptions. Full descriptions of the actuarial assumptions are available in the July 1, 2023 actuarial valuation report.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

	1% Decrease 3.18%	Current Discount Rate 4.18%	1% Increase 5.18%
Employer's net pension liability	\$ 83,431,365	\$ 68,754,352	\$ 57,157,676

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Changes in the Net Pension Liability

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/23	\$ 78,739,847	\$ 16,967,721	\$ 61,772,126
Changes for the year:			
Service cost	2,156,151		2,156,151
Interest	3,172,991		3,172,991
Changes of benefit terms	-		-
Differences between expected and actual experience	7,064,205		7,064,205
Changes of assumptions	(1,329,157)		(1,329,157)
Contributions - employer (including Premium Tax Allocation)		2,138,796	(2,138,796)
Contributions - member		443,758	(443,758)
Net investment income		1,515,616	(1,515,616)
Benefit payments, including refunds of member contributions	(2,699,656)	(2,699,656)	-
Administrative expense		(16,206)	16,206
Other		-	-
Net Changes	<u>8,364,534</u>	<u>1,382,308</u>	<u>6,982,226</u>
Balances at 6/30/24	<u>\$ 87,104,381</u>	<u>\$ 18,350,029</u>	<u>\$ 68,754,352</u>
Return on Investments		9.0%	

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2024

Note	Description	Amount
A	Service cost	\$ 2,156,151
B	Interest on the total pension liability	3,172,991
A	Changes of benefit terms	-
C	Differences between expected and actual experience	1,748,547
C	Changes of assumptions	(3,168,409)
A	Employee contributions	(443,758)
D	Projected earnings on pension plan investments	(718,295)
C	Differences between expected and actual earnings on plan investments	48,894
A	Pension plan administrative expense	16,206
A	Other changes in fiduciary net position	-
Total Pension Expense		\$ 2,812,327

Notes:

A Provided in the Changes in Net Pension Liability exhibit.

B Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	Projected Earnings (a) x (b) x (c)
Beginning total pension liability	\$ 78,739,847	100%	4.10%	\$ 3,228,334
Service cost (end of year)	2,156,151	0%	4.10%	-
Benefit payments, including refunds of employee contributions	(2,699,656)	50%	4.10%	(55,343)
Total interest on the total pension liability				\$ 3,172,991

C Provided in the Schedules of Deferrals.

D Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Beginning plan fiduciary net position	\$ 16,967,721	100%	4.25%	\$ 721,128
Employer contributions	2,138,796	50%	4.25%	45,449
Employee contributions	443,758	50%	4.25%	9,430
Benefit payments, including refunds of employee contributions	(2,699,656)	50%	4.25%	(57,368)
Administrative expense and other	(16,206)	50%	4.25%	(344)
Total Projected Earnings				\$ 718,295

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2024, the Employer reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 5,887,470	\$ 611,544
Changes of assumptions	915,081	4,321,070
Net difference between projected and actual earnings on pension plan investments	-	25,877
Total	\$ 6,802,551	\$ 4,958,491

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	
2025	\$ (878,604)
2026	1,710,542
2027	1,171,587
2028	(159,465)
2029	-
Thereafter	-

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
Actuarial Information to Include in the Financial Statements
for the June 30, 2024 Measurement Date



Changes in the Employer's Net Pension Liability and Related Ratios
Last 10 Fiscal Years

Total pension liability	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Service cost	\$ 2,156,151	\$ 1,826,771	\$ 2,486,762	\$ 3,023,828	\$ 2,805,260	\$ 2,680,359	\$ 2,644,826	\$ 2,861,572	\$ 1,530,284	\$ 1,410,460
Interest	3,172,991	3,062,614	2,769,438	2,983,210	2,871,014	2,736,305	2,664,956	2,354,181	2,409,970	2,333,177
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	7,064,205	75,175	(2,446,179)	(464,631)	3,310,369	838,051	1,320,613	(95,360)	440,163	(935,554)
Changes of assumptions	(1,329,157)	(955,267)	(11,386,282)	(2,850,909)	5,490,501	281,487	(474,554)	(6,346,566)	16,140,037	927,148
Benefit payments, including refunds of member contributions	(2,699,656)	(2,907,734)	(2,851,777)	(2,733,260)	(2,643,614)	(2,452,251)	(2,258,026)	(2,119,629)	(2,098,886)	(2,007,907)
Net change in total pension liability	8,364,534	1,101,559	(11,428,038)	(41,762)	11,833,530	4,083,951	3,897,815	(3,345,802)	18,421,568	1,727,324
Total pension liability - beginning	78,739,847	77,638,288	89,066,326	89,108,088	77,274,558	73,190,607	69,292,792	72,638,594	54,217,026	52,489,702
Total pension liability - ending (a)	\$ 87,104,381	\$ 78,739,847	\$ 77,638,288	\$ 89,066,326	\$ 89,108,088	\$ 77,274,558	\$ 73,190,607	\$ 69,292,792	\$ 72,638,594	\$ 54,217,026
Plan fiduciary net position	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Contributions - employer (including Premium Tax Allocation)	\$ 2,138,796	\$ 1,961,835	\$ 1,945,569	\$ 1,922,014	\$ 1,957,930	\$ 2,000,979	\$ 1,904,788	\$ 1,703,185	\$ 1,445,898	\$ 1,299,492
Contributions - member	443,758	463,332	427,163	406,609	455,534	465,680	437,588	423,661	360,533	343,444
Net investment income	1,515,616	1,194,223	(2,967,547)	3,717,867	(6,359)	890,424	466,764	1,349,142	(313,457)	372,888
Benefit payments, including refunds of member contributions	(2,699,656)	(2,907,734)	(2,851,777)	(2,733,260)	(2,643,614)	(2,452,251)	(2,258,026)	(2,119,629)	(2,098,886)	(2,007,907)
Administrative expense	(16,206)	(2,220)	(2,252)	(1,811)	(1,740)	-	(1,620)	(1,560)	(1,994)	(1,344)
Other	-	-	-	-	-	(2,132)	-	198	267	-
Net change in plan fiduciary net position	\$ 1,382,308	\$ 709,436	\$ (3,448,844)	\$ 3,311,419	\$ (238,249)	\$ 902,700	\$ 549,494	\$ 1,354,997	\$ (607,639)	\$ 6,573
Plan fiduciary net position - beginning	16,967,721	16,258,285	19,707,129	16,395,710	16,633,959	15,731,259	15,181,765	13,826,768	14,434,407	14,472,339
Plan fiduciary net position - ending (b)	\$ 18,350,029	\$ 16,967,721	\$ 16,258,285	\$ 19,707,129	\$ 16,395,710	\$ 16,633,959	\$ 15,731,259	\$ 15,181,765	\$ 13,826,768	\$ 14,478,912
Employer's net pension liability - ending (a)-(b)	\$ 68,754,352	\$ 61,772,126	\$ 61,380,003	\$ 69,359,197	\$ 72,712,378	\$ 60,640,599	\$ 57,459,348	\$ 54,111,027	\$ 58,811,826	\$ 39,738,114
Plan fiduciary net position as a percentage of the total pension liability	21.07%	21.55%	20.94%	22.13%	18.40%	21.53%	21.49%	21.91%	19.04%	26.71%
Covered payroll	\$ 4,877,096	\$ 3,979,529	\$ 4,261,421	\$ 4,446,616	\$ 4,683,481	\$ 4,424,855	\$ 4,424,620	\$ 4,054,650	\$ 3,527,889	\$ 3,381,767
Employer's net pension liability as a percentage of covered payroll	1409.74%	1552.25%	1440.36%	1559.82%	1552.53%	1370.45%	1298.63%	1334.54%	1667.05%	1175.07%
Expected average remaining service years of all participants	4.00	4.00	4.00	4.00	6.00	6.00	5.88	5.65	5.43	5.20

Notes to Schedule:

Benefit changes: There were no changes for FY2024.

Changes of assumptions: Pursuant to the 2023 Experience Study Report, changes were made to cost-of-living increases, mortality improvement rates, retirement rates, termination rates, and disability rates. Additionally, the discount rate changed from 4.10% to 4.18%.

*Market value of assets as of July 1, 2015, excludes \$44,505, included in the market value of assets as of June 30, 2015, used for the actuarial valuation report for the fiscal year end June 30, 2015.

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Schedule of Employer Contributions
 Last 10 Fiscal Years

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Actuarially determined contribution	\$ 4,990,420	\$ 4,913,333	\$ 4,903,381	\$ 5,101,824	\$ 4,709,413	\$ 4,499,599	\$ 3,983,176	\$ 3,675,688	\$ 3,285,978	\$ 2,478,419
Contributions in relation to the actuarially determined contribution										
Employer provided	1,401,389	1,314,699	1,233,680	1,158,547	1,219,659	1,295,000	1,212,990	1,073,218	848,356	720,778
State provided	737,407	647,136	711,889	763,467	738,271	705,979	691,798	629,967	597,542	578,714
Contribution deficiency (excess)	<u>\$ 2,851,624</u>	<u>\$ 2,951,498</u>	<u>\$ 2,957,812</u>	<u>\$ 3,179,810</u>	<u>\$ 2,751,483</u>	<u>\$ 2,498,620</u>	<u>\$ 2,078,388</u>	<u>\$ 1,972,503</u>	<u>\$ 1,840,080</u>	<u>\$ 1,178,927</u>
Covered payroll	\$ 4,877,096	\$ 3,979,529	\$ 4,261,421	\$ 4,446,616	\$ 4,683,481	\$ 4,424,855	\$ 4,424,620	\$ 4,054,650	\$ 3,527,889	\$ 3,381,767
Contributions as a percentage of covered employee payroll	43.85%	49.30%	45.66%	43.22%	41.81%	45.22%	43.05%	42.01%	40.98%	38.43%

Notes to Schedule

Valuation date:

Actuarially determined contribution (ADC) amounts are calculated as of the beginning of the fiscal year (July 1) for the year immediately following the fiscal year. The assumptions shown below are those used in the 7/1/2022 actuarial valuation to calculate the FY2024 ADC. Assumptions used to determine all contributions in the past would not have been the same.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar
Remaining amortization period	15 to 26.5 years
Asset valuation method	4-year smoothed market
Inflation	2.50%
Salary increases	Rates vary by years of service
Investment rate of return	4.25%, net of pension plan investment expense, including inflation
Retirement age	Rates vary by age
Mortality	SOA PubS-2010(B) with generational projection using Scale MP-2019

City of Morgantown, West Virginia Policemen’s Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Schedule of Differences between Projected and Actual Earnings on Pension Plan Investments

In conformity with paragraph 33b of Statement 68, the effects of differences between projected and actual earnings on pension plan investments are recognized in pension expense using a systematic and rational method over a closed five-year period, beginning in the current reporting period. The following table illustrates the application of this requirement.

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Plan Investments				
			2024	2025	2026	2027	2028
2020	\$ 749,670	5	149,934				
2021	(2,989,205)	5	(597,841)	(597,841)			
2022	3,794,872	5	758,974	758,974	758,976		
2023	(513,547)	5	(102,709)	(102,709)	(102,709)	(102,711)	
2024	(797,321)	5	\$ (159,464)	(159,464)	(159,464)	(159,464)	(159,465)
Net increase (decrease) in pension expense			\$ 48,894	\$ (101,040)	\$ 496,803	\$ (262,175)	\$ (159,465)

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Differences between Projected and Actual Earnings on Pension Plan Investments

Year	Investment Earnings Less than Projected (a)	Investment Earnings Greater than Projected (b)	Amounts Recognized in Pension Expense Through June 30, 2024 (c)	Balances at June 30, 2024	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2020	\$ 749,670	\$ -	\$ 749,670	\$ -	\$ -
2021	-	2,989,205	2,391,364	-	597,841
2022	3,794,872	-	2,276,922	1,517,950	-
2023	-	513,547	205,418	-	308,129
2024	-	797,321	159,464	-	637,857
				\$ 1,517,950	\$ 1,543,827

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Schedule of Differences between Expected and Actual Experience

In conformity with paragraph 33a of Statement 68, the effects of differences between expected and actual experience are recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

Year	Differences between Expected and Actual Experience	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Experience						
			2024	2025	2026	2027	2028	2029	Thereafter
2016	440,163	5.430906							
2017	(95,360)	5.645252							
2018	1,320,613	5.879103							
2019	838,051	6.000000	139,676						
2020	3,310,369	6.000000	551,728	551,729					
2021	(464,631)	4.000000	(116,157)						
2022	(2,446,179)	4.000000	(611,545)	(611,544)					
2023	75,175	4.000000	18,794	18,794	18,793				
2024	7,064,205	4.000000	\$ 1,766,051	1,766,051	1,766,051	1,766,052			
Net increase (decrease) in pension expense			\$ 1,748,547	\$ 1,725,030	\$ 1,784,844	\$ 1,766,052	\$ -	\$ -	\$ -

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Differences between Expected and Actual Experience

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense Through June 30, 2024 (c)	Balances at June 30, 2024	
			Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)	
2016	440,163	-	440,163	-	-
2017	-	95,360	95,360	-	-
2018	1,320,613	-	1,320,613	-	-
2019	838,051	-	838,051	-	-
2020	3,310,369	-	2,758,640	551,729	-
2021	-	464,631	464,631	-	-
2022	-	2,446,179	1,834,635	-	611,544
2023	75,175	-	37,588	37,587	-
2024	7,064,205	-	1,766,051	5,298,154	-
				\$ 5,887,470	\$ 611,544

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Schedule of Changes of Assumptions

In conformity with paragraph 33a of Statement 68, the effects of changes of assumptions should be recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

Year	Changes of Assumptions	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Effects of Changes of Assumptions						
			2024	2025	2026	2027	2028	2029	Thereafter
2016	16,140,037	5.430906							
2017	(6,346,566)	5.645252							
2018	(474,554)	5.879103							
2019	281,487	6.000000	46,912						
2020	5,490,501	6.000000	915,084	915,081					
2021	(2,850,909)	4.000000	(712,728)						
2022	(11,386,282)	4.000000	(2,846,571)	(2,846,569)					
2023	(955,267)	4.000000	(238,817)	(238,817)	(238,816)				
2024	(1,329,157)	4.000000	\$ (332,289)	(332,289)	(332,289)	(332,290)			
Net increase (decrease) in pension expense			\$ (3,168,409)	\$ (2,502,594)	\$ (571,105)	\$ (332,290)	\$ -	\$ -	\$ -

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Changes of Assumptions

Year	Increases in the Total Pension Liability (a)	Decreases in the Total Pension Liability (b)	Amounts Recognized in Pension Expense Through June 30, 2024 (c)	Balances at June 30, 2024	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	16,140,037	-	16,140,037	-	-
2017	-	6,346,566	6,346,566	-	-
2018	-	474,554	474,554	-	-
2019	281,487	-	281,487	-	-
2020	5,490,501	-	4,575,420	915,081	-
2021	-	2,850,909	2,850,909	-	-
2022	-	11,386,282	8,539,713	-	2,846,569
2023	-	955,267	477,634	-	477,633
2024	-	1,329,157	332,289	-	996,868
				\$ 915,081	\$ 4,321,070

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Actuarial Accrued Liability (BOY)			Closed Group Asset Projection						
	Current Members	Future Members	Total Members	Fiduciary Net Position (BOY)	Funded Ratio (BOY)	Projected EEC Contributions (MOY)	Projected ER Contrib + Premium Tax (MOY)	Projected BP (MOY)	Projected Admin Expenses (MOY)	Projected Investment Earnings
2024	\$ 83,401,930	\$ -	\$ 83,401,930	\$ 16,967,721	20.34%	\$ 443,758	\$ 2,138,796	\$ 2,699,656	\$ 10,218	\$ 1,515,616
2025	\$ 86,203,408	\$ -	\$ 86,203,408	\$ 18,356,017	21.29%	\$ 442,386	\$ 2,236,046	\$ 3,383,697	\$ 2,349	\$ 765,250
2026	\$ 88,330,039	\$ 126,549	\$ 88,456,588	\$ 18,413,653	20.85%	\$ 427,335	\$ 2,258,498	\$ 3,502,623	\$ 2,333	\$ 765,355
2027	\$ 90,353,636	\$ 361,703	\$ 90,715,339	\$ 18,359,885	20.32%	\$ 407,664	\$ 2,311,626	\$ 3,639,649	\$ 2,334	\$ 760,892
2028	\$ 92,226,333	\$ 721,786	\$ 92,948,119	\$ 18,198,084	19.73%	\$ 388,243	\$ 2,454,075	\$ 3,775,310	\$ 2,353	\$ 753,749
2029	\$ 93,947,707	\$ 1,217,800	\$ 95,165,507	\$ 18,016,488	19.18%	\$ 375,675	\$ 2,505,817	\$ 3,873,815	\$ 2,331	\$ 744,784
2030	\$ 95,582,283	\$ 1,847,907	\$ 97,430,190	\$ 17,766,619	18.59%	\$ 355,729	\$ 2,581,983	\$ 4,074,669	\$ 2,348	\$ 731,123
2031	\$ 96,999,194	\$ 2,601,181	\$ 99,600,375	\$ 17,358,437	17.90%	\$ 331,845	\$ 2,630,210	\$ 4,232,234	\$ 2,364	\$ 710,973
2032	\$ 98,218,172	\$ 3,526,076	\$ 101,744,248	\$ 16,796,867	17.10%	\$ 319,324	\$ 2,716,502	\$ 4,318,735	\$ 2,358	\$ 686,839
2033	\$ 99,343,030	\$ 4,602,820	\$ 103,945,850	\$ 16,198,439	16.31%	\$ 306,049	\$ 2,812,799	\$ 4,413,985	\$ 2,373	\$ 661,148
2034	\$ 100,357,604	\$ 5,831,426	\$ 106,189,030	\$ 15,562,078	15.51%	\$ 286,619	\$ 2,914,467	\$ 4,582,146	\$ 2,364	\$ 632,296
2035	\$ 101,160,877	\$ 7,230,024	\$ 108,390,901	\$ 14,810,950	14.64%	\$ 260,067	\$ 3,008,650	\$ 4,781,497	\$ 2,400	\$ 597,603
2036	\$ 101,683,465	\$ 8,822,752	\$ 110,506,217	\$ 13,893,372	13.66%	\$ 232,481	\$ 3,128,510	\$ 4,996,746	\$ 2,412	\$ 556,020
2037	\$ 101,894,391	\$ 10,635,018	\$ 112,529,409	\$ 12,811,226	12.57%	\$ 199,981	\$ 3,259,580	\$ 5,255,039	\$ 2,399	\$ 506,670
2038	\$ 101,717,225	\$ 12,669,531	\$ 114,386,756	\$ 11,520,019	11.33%	\$ 173,660	\$ 3,400,079	\$ 5,414,333	\$ 2,434	\$ 450,844
2039	\$ 101,258,442	\$ 14,967,298	\$ 116,225,740	\$ 10,127,835	10.00%	\$ 160,450	\$ 3,609,106	\$ 5,473,443	\$ 2,418	\$ 394,551
2040	\$ 100,655,754	\$ 17,495,271	\$ 118,151,025	\$ 8,816,081	8.76%	\$ 153,681	\$ 3,780,938	\$ 5,482,832	\$ 2,426	\$ 342,075
2041	\$ 99,986,130	\$ 20,260,773	\$ 120,246,903	\$ 7,607,517	7.61%	\$ 145,602	\$ 3,979,795	\$ 5,517,481	\$ 2,433	\$ 293,994
2042	\$ 99,219,015	\$ 23,262,319	\$ 122,481,334	\$ 6,506,994	6.56%	\$ 131,518	\$ 4,227,265	\$ 5,588,800	\$ 2,438	\$ 250,630
2043	\$ 98,287,069	\$ 26,524,121	\$ 124,811,190	\$ 5,525,169	5.62%	\$ 115,254	\$ 4,464,301	\$ 5,658,070	\$ 2,442	\$ 212,088
2044	\$ 97,170,882	\$ 30,068,894	\$ 127,239,776	\$ 4,656,300	4.79%	\$ 99,901	\$ 4,700,250	\$ 5,735,674	\$ 2,445	\$ 178,168
2045	\$ 95,860,664	\$ 33,915,904	\$ 129,776,568	\$ 3,896,500	4.06%	\$ 80,569	\$ 5,004,302	\$ 5,842,060	\$ 2,446	\$ 149,627
2046	\$ 94,303,065	\$ 38,041,282	\$ 132,344,347	\$ 3,286,492	3.49%	\$ 63,071	\$ 5,288,724	\$ 5,908,578	\$ 2,446	\$ 127,916
2047	\$ 92,534,247	\$ 42,450,586	\$ 134,984,833	\$ 2,855,179	3.09%	\$ 54,368	\$ 5,638,771	\$ 5,909,500	\$ 2,444	\$ 116,744
2048	\$ 90,651,656	\$ 47,122,922	\$ 137,774,578	\$ 2,753,118	3.04%	\$ 40,989	\$ 6,037,938	\$ 5,961,904	\$ 2,441	\$ 119,417
2049	\$ 88,580,552	\$ 52,051,702	\$ 140,632,254	\$ 2,987,116	3.37%	\$ 25,273	\$ 6,424,221	\$ 6,007,207	\$ 2,436	\$ 136,202
2050	\$ 86,311,529	\$ 57,231,271	\$ 143,542,800	\$ 3,563,169	4.13%	\$ 17,512	\$ 6,850,114	\$ 5,979,633	\$ 2,429	\$ 170,057
2051	\$ 83,942,464	\$ 62,642,462	\$ 146,584,926	\$ 4,618,790	5.50%	\$ 11,974	\$ 7,324,508	\$ 5,940,349	\$ 2,421	\$ 225,607
2052	\$ 81,490,506	\$ 68,269,167	\$ 149,759,673	\$ 6,238,109	7.66%	\$ 6,364	\$ 7,988,146	\$ 5,892,982	\$ 2,411	\$ 309,262
2053	\$ 78,961,167	\$ 74,113,583	\$ 153,074,750	\$ 8,646,488	10.95%	\$ 3,336	\$ 8,580,809	\$ 5,817,302	\$ 2,399	\$ 425,609
2054	\$ 76,390,217	\$ 80,152,925	\$ 156,543,142	\$ 11,836,541	15.49%	\$ 1,904	\$ 15,057,617	\$ 5,725,534	\$ 2,384	\$ 699,286
2055	\$ 73,798,174	\$ 86,381,626	\$ 160,179,800	\$ 21,867,430	29.63%	\$ 1,049	\$ 15,856,145	\$ 5,625,298	\$ 2,367	\$ 1,144,481
2056	\$ 71,194,992	\$ 92,784,217	\$ 163,979,209	\$ 33,241,440	46.69%	\$ 583	\$ 16,707,571	\$ 5,518,011	\$ 2,348	\$ 1,648,028
2057	\$ 68,588,935	\$ 99,349,656	\$ 167,938,591	\$ 46,077,262	67.18%	\$ 305	\$ 17,611,783	\$ 5,404,959	\$ 2,326	\$ 2,214,937
2058	\$ 65,986,496	\$ 106,083,892	\$ 172,070,388	\$ 60,497,002	91.68%	\$ 128	\$ 5,607,565	\$ 5,286,722	\$ 2,302	\$ 2,577,824
2059	\$ 63,393,502	\$ 112,983,387	\$ 176,376,889	\$ 63,393,495	100.00%	\$ 54	\$ 2,414	\$ 5,163,170	\$ 2,275	\$ 2,585,652
2060	\$ 60,816,177	\$ 120,041,814	\$ 180,857,991	\$ 60,816,170	100.00%	\$ 28	\$ 2,318	\$ 5,034,792	\$ 2,246	\$ 2,478,813
2061	\$ 58,260,299	\$ 127,270,450	\$ 185,530,749	\$ 58,260,291	100.00%	\$ 6	\$ 2,229	\$ 4,901,873	\$ 2,214	\$ 2,372,982
2062	\$ 55,731,430	\$ 134,686,483	\$ 190,417,913	\$ 55,731,421	100.00%	\$ -	\$ 2,180	\$ 4,764,574	\$ 2,179	\$ 2,268,392
2063	\$ 53,235,248	\$ 142,290,178	\$ 195,525,426	\$ 53,235,240	100.00%	\$ -	\$ 2,140	\$ 4,623,272	\$ 2,140	\$ 2,165,275
2064	\$ 50,777,252	\$ 150,088,420	\$ 200,865,672	\$ 50,777,243	100.00%	\$ -	\$ 2,098	\$ 4,478,197	\$ 2,098	\$ 2,063,861

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2024 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Calculation of Single Equivalent Discount Rate (DR)				
	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Portion of Benefit Payments	Present Value of "Unfunded" Portion of Benefit Payments	Present Value of Benefit Payments Using a Single DR
2024	\$ 2,699,656	\$ -	\$ 2,644,054	\$ -	\$ 2,644,924
2025	\$ 3,383,697	\$ -	\$ 3,178,904	\$ -	\$ 3,182,041
2026	\$ 3,502,623	\$ -	\$ 3,156,481	\$ -	\$ 3,161,675
2027	\$ 3,639,649	\$ -	\$ 3,146,250	\$ -	\$ 3,153,500
2028	\$ 3,775,310	\$ -	\$ 3,130,476	\$ -	\$ 3,139,753
2029	\$ 3,873,815	\$ -	\$ 3,081,205	\$ -	\$ 3,092,369
2030	\$ 4,074,669	\$ -	\$ 3,108,837	\$ -	\$ 3,122,154
2031	\$ 4,232,234	\$ -	\$ 3,097,414	\$ -	\$ 3,112,728
2032	\$ 4,318,735	\$ -	\$ 3,031,866	\$ -	\$ 3,048,861
2033	\$ 4,413,985	\$ -	\$ 2,972,407	\$ -	\$ 2,991,035
2034	\$ 4,582,146	\$ -	\$ 2,959,854	\$ -	\$ 2,980,362
2035	\$ 4,781,497	\$ -	\$ 2,962,710	\$ -	\$ 2,985,201
2036	\$ 4,996,746	\$ -	\$ 2,969,863	\$ -	\$ 2,994,377
2037	\$ 5,255,039	\$ -	\$ 2,996,050	\$ -	\$ 3,022,767
2038	\$ 5,414,333	\$ -	\$ 2,961,025	\$ -	\$ 2,989,395
2039	\$ 5,473,443	\$ -	\$ 2,871,320	\$ -	\$ 2,900,738
2040	\$ 5,482,832	\$ -	\$ 2,758,988	\$ -	\$ 2,789,089
2041	\$ 5,517,481	\$ -	\$ 2,663,236	\$ -	\$ 2,694,063
2042	\$ 5,588,800	\$ -	\$ 2,587,685	\$ -	\$ 2,619,359
2043	\$ -	\$ 5,658,070	\$ -	\$ 2,648,265	\$ 2,545,390
2044	\$ -	\$ 5,735,674	\$ -	\$ 2,582,079	\$ 2,476,738
2045	\$ -	\$ 5,842,060	\$ -	\$ 2,529,549	\$ 2,421,425
2046	\$ -	\$ 5,908,578	\$ -	\$ 2,460,662	\$ 2,350,702
2047	\$ -	\$ 5,909,500	\$ -	\$ 2,367,073	\$ 2,256,705
2048	\$ -	\$ 5,961,904	\$ -	\$ 2,296,878	\$ 2,185,338
2049	\$ -	\$ 6,007,207	\$ -	\$ 2,225,961	\$ 2,113,566
2050	\$ -	\$ 5,979,633	\$ -	\$ 2,131,137	\$ 2,019,423
2051	\$ -	\$ 5,940,349	\$ -	\$ 2,036,295	\$ 1,925,636
2052	\$ 5,892,982	\$ -	\$ 1,799,564	\$ -	\$ 1,833,610
2053	\$ 5,817,302	\$ -	\$ 1,704,032	\$ -	\$ 1,737,413
2054	\$ 5,725,534	\$ -	\$ 1,608,778	\$ -	\$ 1,641,372
2055	\$ 5,625,298	\$ -	\$ 1,516,176	\$ -	\$ 1,547,911
2056	\$ 5,518,011	\$ -	\$ 1,426,627	\$ -	\$ 1,457,446
2057	\$ 5,404,959	\$ -	\$ 1,340,430	\$ -	\$ 1,370,288
2058	\$ 5,286,722	\$ -	\$ 1,257,657	\$ -	\$ 1,286,517
2059	\$ 5,163,170	\$ -	\$ 1,178,192	\$ -	\$ 1,206,021
2060	\$ 5,034,792	\$ -	\$ 1,102,060	\$ -	\$ 1,128,833
2061	\$ 4,901,873	\$ -	\$ 1,029,223	\$ -	\$ 1,054,921
2062	\$ 4,764,574	\$ -	\$ 959,612	\$ -	\$ 984,218
2063	\$ 4,623,272	\$ -	\$ 893,192	\$ -	\$ 916,698
2064	\$ 4,478,197	\$ -	\$ 829,894	\$ -	\$ 852,294