



**Municipal Pensions
Oversight Board**

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

GASB 68 Actuarial Information for the
Measurement Period Ending
June 30, 2021

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
Actuary
667.218.6935
jmcclane@boltonusa.com

November 4, 2021

Mr. Kevin Tennant
Finance Director
City of Morgantown
389 Spruce Street
Morgantown, WV 26505

Captain Matthew Solomon
Pension Board Secretary
City of Morgantown
Policemen's Pension and Relief Fund

Re: City of Morgantown Policemen's Pension and Relief Fund
GASB 68 Actuarial Information for the Measurement Period Ending June 30, 2021

Dear Kevin,

The following report contains the GASB 67 and GASB 68 actuarial information for the City of Morgantown Policemen's Pension and Relief Fund to be included in the City's financial statements for FY 2021. The GASB 67 information has been provided as of June 30, 2021 (the GASB 68 measurement date for FY 2021).

Methodology, Reliance and Certification

This report is prepared for the City. The report contains the actuarial information to be included with the City's financial statements for the year ending June 30, 2021 (the City's fiscal year end date) as required by GASB 68. This information has been prepared for use in the financial statements of the City. This information is not intended for, nor should it be used for, any additional purposes.

The total pension liability is based on the July 1, 2020 actuarial valuation rolled forward to June 30, 2021. The methods, assumptions, and participant data used are detailed in the July 1, 2020 actuarial valuation report with the exception of the actuarial cost method. These calculations are based on the Entry Age Normal cost method as required by GASB 67. The calculation of the Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2021 is contained in the July 1, 2019 actuarial valuation report. The discount rate assumption may have changed if a blended rate was used for GASB purposes.

The included calculations are based on a blended discount rate of 3.16%. The plan's expected gross rate of investment return of 4.25% has been blended with the 1.92% 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, 2021. 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.)

These calculations and comparisons with assets are applicable for the valuation date only. The future is uncertain, and the plan may become better funded or more poorly funded in the future. This valuation does not provide any guarantee that the plan will be able to provide the promised benefits in the future.

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. Other assumptions may be equally valid. The future is uncertain and the plan's actual experience will differ from the assumptions; the differences may be significant or material because the results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions. 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.

The City is responsible for selecting the plan's funding policy based on four 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.

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.

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.

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.

Because modeling all aspects of a situation is not possible or practical, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events in an efficient and cost-effective manner. We may also exclude factors or data that are immaterial in our judgment. Use of such simplifying techniques does not, in our judgment, affect the reasonableness of valuation results for the plan.

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.



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, but have not performed an audit. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The plan sponsor is solely responsible for the validity and completeness of this information.

The City is solely responsible for selecting the plan's investment policies, asset allocations and individual investments. Bolton Partners, Inc.'s actuaries have not provided any investment advice to the City.

The information in this report was prepared for the internal use of the City, the plan and their auditors in connection with our actuarial valuations of the pension plan as required by GASB 68. This report may not be used for any other purpose; Bolton Partners, Inc. is not responsible for the consequences of any unauthorized use or the reliance on this information by any other party.

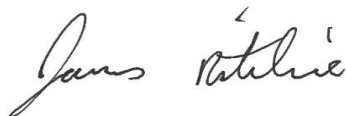
The calculation of actuarial liabilities for valuation purposes is based on a current estimate of future benefit payments. The calculation includes a computation of the "present value" of those estimated future benefit payments using an assumed discount rate; the higher the discount rate assumption, the lower the estimated liability will be. For purposes of estimating the liabilities (future and accrued) in this report, an assumption based on the expected long-term rate of return on plan investments is used. If the plan is expected to become insolvent, the return assumption is blended with a long-term municipal bond rate. Using a lower discount rate assumption, such as a rate solely based on long-term bond yields, could substantially increase the estimated present value of future and accrued liabilities.

This report provides certain financial calculations for use by the auditor. These values 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.

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 undersigned enrolled actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The July 1, 2020 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, 2021 Measurement Date



Net Pension Liability of the Employer

The components of the net pension liability of the Employer at June 30, 2021, were as follows:

Total pension liability	\$ 89,066,326
Plan fiduciary net position	(19,707,129)
Employer's net pension liability	<u>\$ 69,359,197</u>
Plan fiduciary net position as a percentage of the total pension liability	22.13%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2020 rolled forward to June 30, 2021 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50 percent
Salary increases	Rates vary by years of service
Single discount rate (BOY)	3.40%
Single discount rate (EOY)	3.16%
Investment rate of return (BOY)	4.50%, 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)	2.45%
Long-term municipal bond rate (EOY)	1.92%
Mortality	SOA PubS-2010(B) with generational projection using Scale MP-2019
Year Fund is projected to be fully funded	2060
Year assets are expected to be depleted for a closed plan	2035

The above is a summary of key actuarial assumptions. Full descriptions of the actuarial assumptions are available in the July 1, 2020 actuarial valuation report.

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

	1% Decrease 2.16%	Current Discount Rate 3.16%	1% Increase 4.16%
Employer's net pension liability	\$ 86,248,701	\$ 69,359,197	\$ 56,267,892

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 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 6/30/20	\$ 89,108,088	\$ 16,395,710	\$ 72,712,378
Changes for the year:			
Service cost	3,023,828		3,023,828
Interest	2,983,210		2,983,210
Changes of benefit terms	-		-
Differences between expected and actual experience	(464,631)		(464,631)
Changes of assumptions	(2,850,909)		(2,850,909)
Contributions - employer (including Premium Tax Allocation)		1,922,014	(1,922,014)
Contributions - member		406,609	(406,609)
Net investment income		3,717,867	(3,717,867)
Benefit payments, including refunds of member contributions	(2,733,260)	(2,733,260)	-
Administrative expense		(1,811)	1,811
Other		-	-
Net Changes	<u>(41,762)</u>	<u>3,311,419</u>	<u>(3,353,181)</u>
Balances at 6/30/21	<u>\$ 89,066,326</u>	<u>\$ 19,707,129</u>	<u>\$ 69,359,197</u>
Return on Investments		23.0%	

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 Measurement Date



Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2021

Note	Description	Amount
A	Service cost	\$ 3,023,828
B	Interest on the total pension liability	2,983,210
A	Changes of benefit terms	-
C	Differences between expected and actual experience	817,904
C	Changes of assumptions	324,924
A	Employee contributions	(406,609)
D	Projected earnings on pension plan investments	(728,662)
C	Differences between expected and actual earnings on plan investments	(608,479)
A	Pension plan administrative expense	1,811
A	Other changes in fiduciary net position	-
Total Pension Expense		\$ 5,407,927

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	\$ 89,108,088	100%	3.40%	\$ 3,029,675
Service cost (End of Year)	3,023,828	0%	3.40%	-
Benefit payments, including refunds of employee contributions	(2,733,260)	50%	3.40%	(46,465)
Total interest on the total pension liability				\$ 2,983,210

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	\$ 16,395,710	100%	4.50%	\$ 737,807
Employer contributions	1,922,014	50%	4.50%	43,245
Employee contributions	406,609	50%	4.50%	9,149
Benefit payments, including refunds of employee contributions	(2,733,260)	50%	4.50%	(61,498)
Administrative expense and other	(1,811)	50%	4.50%	(41)
Total Projected Earnings				\$ 728,662

City of Morgantown, West Virginia Policemen’s Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 Measurement Date



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

At June 30, 2021, 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	\$ 3,048,040	\$ 359,373
Changes of assumptions	3,801,075	3,015,271
Net difference between projected and actual earnings on pension plan investments	-	1,993,222
Total	\$ 6,849,115	\$ 5,367,866

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

Year ended June 30:	
2022	\$ (231,003)
2023	466,675
2024	376,608
2025	868,969
2026	-
Thereafter	-

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 Measurement Date



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

Total pension liability	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Service cost	\$ 3,023,828	\$ 2,805,260	\$ 2,680,359	\$ 2,644,826	\$ 2,861,572	\$ 1,530,284	\$ 1,410,460	\$ 1,376,895	\$ -	\$ -
Interest	2,983,210	2,871,014	2,736,305	2,664,956	2,354,181	2,409,970	2,333,177	2,364,924	-	-
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(464,631)	3,310,369	838,051	1,320,613	(95,360)	440,163	(935,554)	-	-	-
Changes of assumptions	(2,850,909)	5,490,501	281,487	(474,554)	(6,346,566)	16,140,037	927,148	1,904,795	-	-
Benefit payments, including refunds of member contributions	(2,733,260)	(2,643,614)	(2,452,251)	(2,258,026)	(2,119,629)	(2,098,886)	(2,007,907)	(1,918,832)	-	-
Net change in total pension liability	(41,762)	11,833,530	4,083,951	3,897,815	(3,345,802)	18,421,568	1,727,324	3,727,782	-	-
Total pension liability - beginning	89,108,088	77,274,558	73,190,607	69,292,792	72,638,594	54,217,026	52,489,702	48,761,920	-	-
Total pension liability - ending (a)	\$ 89,066,326	\$ 89,108,088	\$ 77,274,558	\$ 73,190,607	\$ 69,292,792	\$ 72,638,594	\$ 54,217,026	\$ 52,489,702	\$ -	\$ -
Plan fiduciary net position	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Contributions - employer (including Premium Tax Allocation)	\$ 1,922,014	\$ 1,957,930	\$ 2,000,979	\$ 1,904,788	\$ 1,703,185	\$ 1,445,898	\$ 1,299,492	\$ 1,236,729	\$ -	\$ -
Contributions - member	406,609	455,534	465,680	437,588	423,661	360,533	343,444	260,782	-	-
Net investment income	3,717,867	(6,359)	890,424	466,764	1,349,142	(313,457)	372,888	1,430,259	-	-
Benefit payments, including refunds of member contributions	(2,733,260)	(2,643,614)	(2,452,251)	(2,258,026)	(2,119,629)	(2,098,886)	(2,007,907)	(1,918,832)	-	-
Administrative expense	(1,811)	(1,740)	-	(1,620)	(1,560)	(1,994)	(1,344)	(1,275)	-	-
Other	-	-	(2,132)	-	198	267	-	-	-	-
Net change in plan fiduciary net position	\$ 3,311,419	\$ (238,249)	\$ 902,700	\$ 549,494	\$ 1,354,997	\$ (607,639)	\$ 6,573	\$ 1,007,663	\$ -	\$ -
Plan fiduciary net position - beginning	16,395,710	16,633,959	15,731,259	15,181,765	13,826,768	14,434,407	14,472,339	13,464,676	-	-
Plan fiduciary net position - ending (b)	\$ 19,707,129	\$ 16,395,710	\$ 16,633,959	\$ 15,731,259	\$ 15,181,765	\$ 13,826,768	\$ 14,478,912	\$ 14,472,339	\$ -	\$ -
Employer's net pension liability - ending (a)-(b)	\$ 69,359,197	\$ 72,712,378	\$ 60,640,599	\$ 57,459,348	\$ 54,111,027	\$ 58,811,826	\$ 39,738,114	\$ 38,017,363	\$ -	\$ -
Plan fiduciary net position as a percentage of the total pension liability	22.13%	18.40%	21.53%	21.49%	21.91%	19.04%	26.71%	27.57%	0.00%	0.00%
Covered payroll	\$ 4,446,616	\$ 4,683,481	\$ 4,424,855	\$ 4,424,620	\$ 4,054,650	\$ 3,527,889	\$ 3,381,767	\$ 3,514,416	\$ -	\$ -
Employer's net pension liability as a percentage of covered payroll	1559.82%	1552.53%	1370.45%	1298.63%	1334.54%	1667.05%	1175.07%	1081.75%	0.00%	0.00%
Expected average remaining service years of all participants	4.00	6.00	6.00	5.88	5.65	5.43	5.20	-	-	-

Notes to Schedule:

Benefit changes: There were no changes for FY2021.

Changes of assumptions: The discount rate changed from 3.40% to 3.16%. Changes were made to salary scale assumptions, pay spiking assumptions, inflation, cost-of-living increases, mortality rates, retirement rates, termination rates, disability rates, marital status, and non-spouse beneficiary loads.

*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, 2021 Measurement Date



Schedule of Employer Contributions
 Last 10 Fiscal Years

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Actuarially determined contribution	\$ 5,101,824	\$ 4,709,413	\$ 4,499,599	\$ 3,983,176	\$ 3,675,688	\$ 3,285,978	\$ 2,478,419	\$ 2,480,580	\$ 2,339,128	\$ -
Contributions in relation to the actuarially determined contribution										
Employer provided	1,158,547	1,219,659	1,295,000	1,212,990	1,073,218	848,356	720,778	673,624	629,555	-
State provided	763,467	738,271	705,979	691,798	629,967	597,542	578,714	563,105	821,786	-
Contribution deficiency (excess)	<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>	<u>\$ 1,243,851</u>	<u>\$ 887,787</u>	<u>\$ -</u>
Covered payroll	\$ 4,446,616	\$ 4,683,481	\$ 4,424,855	\$ 4,424,620	\$ 4,054,650	\$ 3,527,889	\$ 3,381,767	\$ 3,514,416	\$ 3,281,961	\$ -
Contributions as a percentage of covered employee payroll	43.22%	41.81%	45.22%	43.05%	42.01%	40.98%	38.43%	35.19%	44.22%	N/A

Notes to Schedule

Valuation date:

Actuarially determined contribution amounts are calculated as of the beginning of the fiscal year (July 1) for the year immediately following the fiscal year. Actuarial valuations are performed every year.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar
Remaining amortization period	30.5 years
Asset valuation method	Market Value
Inflation	2.75 percent
Salary increases	Rates vary by years of service
Investment rate of return	4.50%, net of pension plan investment expense, including inflation
Retirement age	Rates vary by age
Mortality	RP-2014 Blue Collar Mortality Table with generational projection using Scale MP-2014

Actuarial Information to Include in the Financial Statements
for the June 30, 2021 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.

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Plan Investments											
Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025
2017	\$ (726,806)	5	\$ (145,361)	(145,361)	(145,361)	(145,361)	(145,362)				
2018	106,189	5		\$ 21,238	21,238	21,238	21,238	21,237			
2019	(182,241)	5			\$ (36,448)	(36,448)	(36,448)	(36,448)	(36,449)		
2020	749,670	5				\$ 149,934	149,934	149,934	149,934	149,934	
2021	(2,989,205)	5					\$ (597,841)	(597,841)	(597,841)	(597,841)	(597,841)
Net increase (decrease) in pension expense							\$ (608,479)	\$ (463,118)	\$ (484,356)	\$ (447,907)	\$ (597,841)

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, 2021 (c)	Balances at June 30, 2021	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2017	\$ -	\$ 726,806	\$ 726,806	\$ -	\$ -
2018	106,189	-	84,952	21,237	-
2019	-	182,241	109,344	-	72,897
2020	749,670	-	299,868	449,802	-
2021	-	2,989,205	597,841	-	2,391,364
				\$ 471,039	\$ 2,464,261

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 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.

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience																			
Year	Differences between Expected and Actual Experience	Recognition Period (Years)	Prior	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Thereafter
Prior	-	-																	
2012	-	-																	
2013	-	-																	
2014	-	-																	
2015	(935,554)	5,198,539					\$ (179,965)	(179,965)	(179,965)	(179,965)	(179,965)	(35,729)							
2016	440,163	5,430,906						\$ 81,048	81,048	81,048	81,048	81,048	34,923						
2017	(95,360)	5,645,252							\$ (16,892)	(16,892)	(16,892)	(16,892)	(16,892)	(10,900)					
2018	1,320,613	5,879,103								\$ 224,628	224,628	224,628	224,628	224,628	197,473				
2019	838,051	6,000,000									\$ 139,675	139,675	139,675	139,675	139,675	139,675	139,675	139,675	
2020	3,310,369	6,000,000										\$ 551,728	551,728	551,728	551,728	551,728	551,728	551,728	
2021	(464,631)	4,000,000											\$ (116,158)	(116,158)	(116,158)	(116,157)	(116,157)	(116,157)	
Net increase (decrease) in pension expense													\$ 817,904	\$ 788,973	\$ 772,718	\$ 575,247	\$ 551,729	\$ -	\$ -

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, 2021 (c)	Balances at June 30, 2021	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	\$ -	\$ -	\$ -	\$ -	\$ -
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	935,554	935,554	-	-
2016	440,163	-	440,163	-	-
2017	-	95,360	84,460	-	10,900
2018	1,320,613	-	898,512	422,101	-
2019	838,051	-	419,025	419,026	-
2020	3,310,369	-	1,103,456	2,206,913	-
2021	-	464,631	116,158	-	348,473
				\$ 3,048,040	\$ 359,373

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 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.

Increase (Decrease) in Pension Expense Arising from the Effects of Changes of Assumptions																			
Year	Changes of Assumptions	Recognition Period (Years)	Prior	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Thereafter
Prior	\$ -	-																	
2012	-	-																	
2013	-	-																	
2014	-	-																	
2015	927,148	5,198,539					\$ 178,348	178,348	178,348	178,348	178,348	35,408							
2016	16,140,037	5,430,906						\$ 2,971,887	2,971,887	2,971,887	2,971,887	2,971,887	1,280,602						
2017	(6,346,566)	5,645,252							\$ (1,124,231)	(1,124,231)	(1,124,231)	(1,124,231)	(1,124,231)	(725,411)					
2018	(474,554)	5,879,103							\$ (80,719)	(80,719)	(80,719)	(80,719)	(80,719)	(80,719)	(70,959)				
2019	281,487	6,000,000									\$ 46,915	46,915	46,915	46,915	46,915	46,915	46,915	46,912	
2020	5,490,501	6,000,000										\$ 915,084	915,084	915,084	915,084	915,084	915,084	915,081	
2021	(2,850,909)	4,000,000											\$ (712,727)	(712,727)	(712,727)	(712,728)			
Net increase (decrease) in pension expense													\$ 324,924	\$ (556,858)	\$ 178,313	\$ 249,268	\$ 915,081	\$ -	\$ -

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, 2021 (c)	Balances at June 30, 2021	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	\$ -	\$ -	\$ -	\$ -	\$ -
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	927,148	-	927,148	-	-
2016	16,140,037	-	16,140,037	-	-
2017	-	6,346,566	5,621,155	-	725,411
2018	-	474,554	322,876	-	151,678
2019	281,487	-	140,745	140,742	-
2020	5,490,501	-	1,830,168	3,660,333	-
2021	-	2,850,909	712,727	-	2,138,182
				\$ 3,801,075	\$ 3,015,271

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Gross Normal Cost (BOY)			Employee Contributions (BOY)			Employer Normal Cost (BOY)			Expenses (MOY)			Employer Contributions (MOY)			Premium Tax Allocation (MOY)		
	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total
2021	\$ 1,851,721	\$ -	\$ 1,851,721	\$ 413,884	\$ -	\$ 413,884	\$ 1,437,837	\$ -	\$ 1,437,837	\$ 1,984	\$ -	\$ 1,984	\$ 1,158,545	\$ -	\$ 1,158,545	\$ 763,467	\$ -	\$ 763,467
2022	\$ 1,764,885	\$ 134,590	\$ 1,899,475	\$ 391,157	\$ 31,774	\$ 422,931	\$ 1,373,728	\$ 102,816	\$ 1,476,544	\$ 1,959	\$ 75	\$ 2,034	\$ 1,128,627	\$ 105,053	\$ 1,233,680	\$ 711,889	\$ -	\$ 711,889
2023	\$ 1,654,254	\$ 280,105	\$ 1,934,359	\$ 364,179	\$ 65,494	\$ 429,673	\$ 1,290,075	\$ 214,611	\$ 1,504,686	\$ 1,947	\$ 138	\$ 2,085	\$ 1,095,437	\$ 219,262	\$ 1,314,699	\$ 717,268	\$ -	\$ 717,268
2024	\$ 1,513,630	\$ 446,824	\$ 1,960,454	\$ 331,267	\$ 102,732	\$ 433,999	\$ 1,182,363	\$ 344,092	\$ 1,526,455	\$ 1,949	\$ 219	\$ 2,168	\$ 1,049,689	\$ 351,547	\$ 1,401,236	\$ 748,132	\$ -	\$ 748,132
2025	\$ 1,393,551	\$ 631,568	\$ 2,025,119	\$ 302,578	\$ 143,068	\$ 445,646	\$ 1,090,973	\$ 488,500	\$ 1,579,473	\$ 1,934	\$ 320	\$ 2,254	\$ 994,672	\$ 499,093	\$ 1,493,765	\$ 765,956	\$ -	\$ 765,956
2026	\$ 1,286,118	\$ 787,832	\$ 2,073,950	\$ 277,905	\$ 177,427	\$ 455,332	\$ 1,008,213	\$ 610,405	\$ 1,618,618	\$ 1,966	\$ 377	\$ 2,343	\$ 969,017	\$ 623,618	\$ 1,592,635	\$ 784,226	\$ -	\$ 784,226
2027	\$ 1,172,237	\$ 955,268	\$ 2,127,505	\$ 253,151	\$ 213,567	\$ 466,718	\$ 919,086	\$ 741,701	\$ 1,660,787	\$ 1,965	\$ 470	\$ 2,435	\$ 940,607	\$ 757,768	\$ 1,698,375	\$ 804,520	\$ -	\$ 804,520
2028	\$ 1,080,383	\$ 1,114,729	\$ 2,195,112	\$ 232,645	\$ 247,789	\$ 480,434	\$ 847,738	\$ 866,940	\$ 1,714,678	\$ 1,980	\$ 533	\$ 2,513	\$ 925,694	\$ 885,704	\$ 1,811,398	\$ 829,038	\$ -	\$ 829,038
2029	\$ 998,605	\$ 1,262,652	\$ 2,261,257	\$ 214,121	\$ 279,414	\$ 493,535	\$ 784,484	\$ 983,238	\$ 1,767,722	\$ 1,994	\$ 599	\$ 2,593	\$ 927,632	\$ 1,004,513	\$ 1,932,145	\$ 852,160	\$ -	\$ 852,160
2030	\$ 904,394	\$ 1,408,756	\$ 2,313,150	\$ 192,450	\$ 309,570	\$ 502,020	\$ 711,944	\$ 1,099,186	\$ 1,811,130	\$ 2,008	\$ 668	\$ 2,676	\$ 938,281	\$ 1,122,969	\$ 2,061,250	\$ 878,389	\$ -	\$ 878,389
2031	\$ 819,106	\$ 1,578,142	\$ 2,397,248	\$ 172,656	\$ 343,951	\$ 516,607	\$ 646,450	\$ 1,234,191	\$ 1,880,641	\$ 2,021	\$ 759	\$ 2,780	\$ 938,406	\$ 1,260,904	\$ 2,199,310	\$ 899,409	\$ -	\$ 899,409
2032	\$ 750,560	\$ 1,726,221	\$ 2,476,781	\$ 157,617	\$ 374,443	\$ 532,060	\$ 592,943	\$ 1,351,778	\$ 1,944,721	\$ 2,034	\$ 834	\$ 2,868	\$ 965,771	\$ 1,381,038	\$ 2,346,809	\$ 920,954	\$ -	\$ 920,954
2033	\$ 684,606	\$ 1,876,512	\$ 2,561,118	\$ 143,270	\$ 405,219	\$ 548,489	\$ 541,336	\$ 1,471,293	\$ 2,012,629	\$ 2,046	\$ 913	\$ 2,959	\$ 1,001,435	\$ 1,503,146	\$ 2,504,581	\$ 945,517	\$ -	\$ 945,517
2034	\$ 624,647	\$ 2,027,263	\$ 2,651,910	\$ 129,423	\$ 435,549	\$ 564,972	\$ 495,224	\$ 1,591,714	\$ 2,086,938	\$ 2,057	\$ 976	\$ 3,033	\$ 1,047,119	\$ 1,626,162	\$ 2,673,281	\$ 974,810	\$ -	\$ 974,810
2035	\$ 548,445	\$ 2,178,512	\$ 2,726,957	\$ 112,469	\$ 464,800	\$ 577,269	\$ 435,976	\$ 1,713,712	\$ 2,149,688	\$ 2,067	\$ 1,062	\$ 3,129	\$ 1,102,878	\$ 1,750,811	\$ 2,853,689	\$ 1,002,195	\$ -	\$ 1,002,195
2036	\$ 471,833	\$ 2,349,750	\$ 2,821,583	\$ 95,774	\$ 497,503	\$ 593,277	\$ 376,059	\$ 1,852,247	\$ 2,228,306	\$ 2,077	\$ 1,151	\$ 3,228	\$ 1,154,291	\$ 1,892,349	\$ 3,046,640	\$ 1,058,378	\$ -	\$ 1,058,378
2037	\$ 389,282	\$ 2,507,897	\$ 2,897,179	\$ 78,288	\$ 526,632	\$ 604,920	\$ 310,994	\$ 1,981,265	\$ 2,292,259	\$ 2,086	\$ 1,244	\$ 3,330	\$ 1,228,857	\$ 2,024,173	\$ 3,253,030	\$ 1,095,377	\$ -	\$ 1,095,377
2038	\$ 314,796	\$ 2,700,083	\$ 3,014,879	\$ 63,150	\$ 562,728	\$ 625,878	\$ 251,646	\$ 2,137,355	\$ 2,389,001	\$ 2,116	\$ 1,319	\$ 3,435	\$ 1,290,270	\$ 2,183,620	\$ 3,473,890	\$ 1,121,700	\$ -	\$ 1,121,700
2039	\$ 262,368	\$ 2,864,511	\$ 3,126,879	\$ 53,337	\$ 594,382	\$ 647,719	\$ 209,031	\$ 2,270,129	\$ 2,479,160	\$ 2,101	\$ 1,420	\$ 3,521	\$ 1,390,959	\$ 2,319,287	\$ 3,710,246	\$ 1,176,134	\$ -	\$ 1,176,134
2040	\$ 231,182	\$ 3,037,866	\$ 3,269,048	\$ 47,021	\$ 628,149	\$ 675,170	\$ 184,161	\$ 2,409,717	\$ 2,593,878	\$ 2,130	\$ 1,479	\$ 3,609	\$ 1,501,245	\$ 2,461,870	\$ 3,963,115	\$ 1,204,423	\$ -	\$ 1,204,423
2041	\$ 197,785	\$ 3,202,759	\$ 3,400,544	\$ 40,158	\$ 659,457	\$ 699,615	\$ 157,627	\$ 2,543,302	\$ 2,700,929	\$ 2,160	\$ 1,516	\$ 3,676	\$ 1,635,520	\$ 2,598,301	\$ 4,233,821	\$ 1,233,419	\$ -	\$ 1,233,419
2042	\$ 163,465	\$ 3,365,013	\$ 3,528,478	\$ 33,084	\$ 690,115	\$ 723,199	\$ 130,381	\$ 2,674,898	\$ 2,805,279	\$ 2,141	\$ 1,627	\$ 3,768	\$ 1,790,846	\$ 2,732,775	\$ 4,523,621	\$ 1,263,140	\$ -	\$ 1,263,140
2043	\$ 134,863	\$ 3,518,878	\$ 3,653,741	\$ 27,240	\$ 720,066	\$ 747,306	\$ 107,623	\$ 2,798,812	\$ 2,906,435	\$ 2,145	\$ 1,717	\$ 3,862	\$ 1,974,469	\$ 2,859,385	\$ 4,833,854	\$ 1,329,306	\$ -	\$ 1,329,306
2044	\$ 110,252	\$ 3,652,782	\$ 3,763,034	\$ 22,078	\$ 746,933	\$ 769,011	\$ 88,174	\$ 2,905,849	\$ 2,994,023	\$ 2,147	\$ 1,812	\$ 3,959	\$ 2,197,265	\$ 2,968,768	\$ 5,166,033	\$ 1,361,393	\$ -	\$ 1,361,393
2045	\$ 75,950	\$ 3,783,367	\$ 3,859,317	\$ 14,957	\$ 772,147	\$ 787,104	\$ 60,993	\$ 3,011,220	\$ 3,072,213	\$ 2,148	\$ 1,910	\$ 4,058	\$ 2,445,242	\$ 3,076,453	\$ 5,521,695	\$ 1,408,083	\$ -	\$ 1,408,083
2046	\$ 44,445	\$ 3,939,692	\$ 3,984,137	\$ 8,628	\$ 802,832	\$ 811,460	\$ 35,817	\$ 3,136,860	\$ 3,172,677	\$ 2,148	\$ 2,038	\$ 4,186	\$ 2,697,620	\$ 3,204,863	\$ 5,902,483	\$ 1,501,215	\$ -	\$ 1,501,215
2047	\$ 29,727	\$ 4,083,145	\$ 4,112,872	\$ 5,688	\$ 832,270	\$ 837,958	\$ 24,039	\$ 3,250,875	\$ 3,274,914	\$ 2,147	\$ 2,171	\$ 4,318	\$ 2,988,901	\$ 3,321,408	\$ 6,310,309	\$ 1,559,671	\$ -	\$ 1,559,671
2048	\$ 17,757	\$ 4,234,876	\$ 4,252,633	\$ 3,309	\$ 863,288	\$ 866,597	\$ 14,448	\$ 3,371,588	\$ 3,386,036	\$ 2,172	\$ 2,254	\$ 4,426	\$ 3,302,235	\$ 3,444,743	\$ 6,746,978	\$ 1,651,555	\$ -	\$ 1,651,555
2049	\$ 10,042	\$ 4,386,464	\$ 4,396,506	\$ 1,799	\$ 894,614	\$ 896,413	\$ 8,243	\$ 3,491,850	\$ 3,500,093	\$ 2,140	\$ 2,426	\$ 4,566	\$ 3,646,797	\$ 3,567,706	\$ 7,214,503	\$ 1,698,883	\$ -	\$ 1,698,883
2050	\$ 5,809	\$ 4,542,205	\$ 4,548,014	\$ 1,010	\$ 926,803	\$ 927,813	\$ 4,799	\$ 3,615,402	\$ 3,620,201	\$ 2,134	\$ 2,546	\$ 4,680	\$ 4,021,218	\$ 3,693,976	\$ 7,715,194	\$ 2,301,481	\$ -	\$ 2,301,481
2051	\$ 3,179	\$ 4,697,893	\$ 4,701,072	\$ 538	\$ 958,907	\$ 959,445	\$ 2,641	\$ 3,738,986	\$ 3,741,627	\$ 2,127	\$ 2,670	\$ 4,797	\$ 4,430,994	\$ 3,820,283	\$ 8,251,277	\$ 2,373,285	\$ -	\$ 2,373,285
2052	\$ 1,764	\$ 4,858,929	\$ 4,860,693	\$ 291	\$ 992,152	\$ 992,443	\$ 1,473	\$ 3,866,777	\$ 3,868,250	\$ 2,118	\$ 2,830	\$ 4,948	\$ 4,874,376	\$ 3,950,921	\$ 8,825,297	\$ 2,482,494	\$ -	\$ 2,482,494
2053	\$ 970	\$ 5,023,115	\$ 5,024,085	\$ 156	\$ 1,025,985	\$ 1,026,141	\$ 814	\$ 3,997,130	\$ 3,997,944	\$ 2,107	\$ 2,965	\$ 5,072	\$ 5,355,744	\$ 4,084,150	\$ 9,439,894	\$ 2,561,491	\$ -	\$ 2,561,491
2054	\$ 504	\$ 5,202,155	\$ 5,202,659	\$ 78	\$ 1,062,570	\$ 1,062,648	\$ 426	\$ 4,139,585	\$ 4,140,011	\$ 2,094	\$ 3,137	\$ 5,231	\$ 5,868,014	\$ 4,229,773	\$ 10,097,814	\$ 5,804,433	\$ -	\$ 5,804,433
2055	\$ 129	\$ 5,381,052	\$ 5,381,181	\$ 21	\$ 1,099,108	\$ 1,099,129	\$ 108	\$ 4,281,944	\$ 4,282,052	\$ 2,079	\$ 3,283	\$ 5,362	\$ 6,426,885	\$ 4,375,272	\$ 10,802,157	\$ 6,619,209	\$ -	\$ 6,619,209
2056	\$ 80	\$ 5,565,837	\$ 5,565,917	\$ 12	\$ 1,136,935	\$ 1,136,947	\$ 68	\$ 4,428,902	\$ 4,428,970	\$ 2,062	\$ 3,468	\$ 5,530	\$ 7,030,651	\$ 4,525,505	\$ 11,556,156	\$ 6,785,630	\$ -	\$ 6,785,630
2057	\$ 27	\$ 5,757,074	\$ 5,757,101	\$ 4	\$ 1,176,228	\$ 1,176,232	\$ 23	\$ 4,580,846	\$ 4,580,869	\$ 2,043	\$ 3,625	\$ 5,668	\$ 7,682,393	\$ 4,680,801	\$ 12,363,194	\$ 8,176,851	\$ -	\$ 8,176,851
2058	\$ -	\$ 5,948,254	\$ 5,948,254	\$ -	\$ 1,215,725	\$ 1,215,725	\$ -	\$ 4,732,529	\$ 4,732,529	\$ 2,022	\$ 3,788	\$ 5,810	\$ 8,391,213	\$ 4,835,837	\$ 13,227,050	\$ 8,786,228	\$ -	\$ 8,786,228
2059	\$ -	\$ 6,155,617	\$ 6,155,617	\$ -	\$ 1,258,305	\$ 1,258,305	\$ -	\$ 4,897,312	\$ 4,897,312	\$ 1,999	\$ 3,993	\$ 5,992	\$ 9,147,395	\$ 5,004,290	\$ 14,151,685	\$ 9,984,728	\$ -	\$ 9,984,728
2060	\$ -	\$ 6,368,256	\$ 6,368,256	\$ -	\$ 1,301,818	\$ 1,301,818	\$ -	\$ 5,066,438	\$ 5,066,438	\$ 1,973	\$ 4,169	\$ 6,142	\$ 5,627,650	\$ 5,177,149	\$ 10,804,799	\$ -	\$ -	\$ -
2061	\$ -	\$ 6,604,654	\$ 6,604,654	\$ -	\$ 1,349,608	\$ 1,349,608	\$ -	\$ 5,255,046	\$ 5,255,046	\$ 1,945	\$ 4,389	\$ 6,334	\$ 1,944	\$ 5,369,943	\$ 5,371,887	\$ -	\$ -	\$ -

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 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	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
2021	\$ 72,716,441	\$ -	\$ 72,716,441	\$ 16,395,710	22.55%	\$ 422,588	\$ 1,922,012	\$ 2,924,802	\$ 1,984	\$ 684,575
2022	\$ 74,751,002	\$ -	\$ 74,751,002	\$ 16,498,099	22.07%	\$ 399,383	\$ 1,840,516	\$ 2,906,364	\$ 1,959	\$ 687,113
2023	\$ 76,800,331	\$ 138,592	\$ 76,938,923	\$ 16,516,788	21.51%	\$ 371,837	\$ 1,812,705	\$ 2,991,530	\$ 1,947	\$ 684,952
2024	\$ 78,734,466	\$ 428,789	\$ 79,163,255	\$ 16,392,805	20.82%	\$ 338,233	\$ 1,797,821	\$ 3,152,204	\$ 1,949	\$ 675,285
2025	\$ 80,440,149	\$ 891,891	\$ 81,332,040	\$ 16,049,991	19.95%	\$ 308,941	\$ 1,760,628	\$ 3,282,692	\$ 1,934	\$ 656,573
2026	\$ 81,959,909	\$ 1,548,714	\$ 83,508,623	\$ 15,491,507	18.90%	\$ 283,749	\$ 1,753,243	\$ 3,391,151	\$ 1,966	\$ 629,871
2027	\$ 83,321,520	\$ 2,371,394	\$ 85,692,914	\$ 14,765,253	17.72%	\$ 258,474	\$ 1,745,127	\$ 3,501,581	\$ 1,965	\$ 595,981
2028	\$ 84,509,526	\$ 3,372,198	\$ 87,881,724	\$ 13,861,289	16.40%	\$ 237,537	\$ 1,754,732	\$ 3,600,860	\$ 1,980	\$ 555,236
2029	\$ 85,550,898	\$ 4,546,488	\$ 90,097,386	\$ 12,805,954	14.97%	\$ 218,624	\$ 1,779,792	\$ 3,680,017	\$ 1,994	\$ 508,849
2030	\$ 86,470,453	\$ 5,886,448	\$ 92,356,901	\$ 11,631,208	13.45%	\$ 196,497	\$ 1,816,670	\$ 3,817,273	\$ 2,008	\$ 456,346
2031	\$ 87,190,732	\$ 7,377,858	\$ 94,568,590	\$ 10,281,440	11.79%	\$ 176,287	\$ 1,837,815	\$ 3,910,617	\$ 2,021	\$ 397,037
2032	\$ 87,757,403	\$ 9,051,893	\$ 96,809,296	\$ 8,779,942	10.00%	\$ 160,932	\$ 1,886,725	\$ 3,975,529	\$ 2,034	\$ 332,564
2033	\$ 88,210,421	\$ 10,897,713	\$ 99,108,134	\$ 7,182,599	8.14%	\$ 146,283	\$ 1,946,952	\$ 4,035,316	\$ 2,046	\$ 264,378
2034	\$ 88,552,891	\$ 12,919,030	\$ 101,471,921	\$ 5,502,850	6.21%	\$ 132,145	\$ 2,021,929	\$ 4,110,039	\$ 2,057	\$ 192,696
2035	\$ 88,771,115	\$ 15,113,714	\$ 103,884,829	\$ 3,737,525	4.21%	\$ 114,834	\$ 2,105,073	\$ 4,195,492	\$ 2,067	\$ 117,257
2036	\$ 88,831,923	\$ 17,470,141	\$ 106,302,064	\$ 1,877,129	2.11%	\$ 97,788	\$ 2,212,669	\$ 4,289,151	\$ 2,077	\$ 38,125
2037	\$ 88,719,819	\$ 20,006,815	\$ 108,726,634	\$ -	0.00%	\$ 79,934	\$ 2,324,234	\$ 4,391,614	\$ 2,086	\$ -
2038	\$ 88,412,273	\$ 22,698,925	\$ 111,111,198	\$ -	0.00%	\$ 64,478	\$ 2,411,970	\$ 4,457,132	\$ 2,116	\$ -
2039	\$ 87,947,109	\$ 25,601,403	\$ 113,548,512	\$ -	0.00%	\$ 54,459	\$ 2,567,093	\$ 4,476,462	\$ 2,101	\$ -
2040	\$ 87,387,783	\$ 28,716,665	\$ 116,104,448	\$ -	0.00%	\$ 48,010	\$ 2,705,668	\$ 4,466,579	\$ 2,130	\$ -
2041	\$ 86,782,265	\$ 32,078,079	\$ 118,860,344	\$ -	0.00%	\$ 41,002	\$ 2,868,939	\$ 4,473,971	\$ 2,160	\$ -
2042	\$ 86,108,648	\$ 35,670,211	\$ 121,778,859	\$ -	0.00%	\$ 33,780	\$ 3,053,986	\$ 4,473,584	\$ 2,141	\$ -
2043	\$ 85,371,019	\$ 39,481,496	\$ 124,852,515	\$ -	0.00%	\$ 27,813	\$ 3,303,775	\$ 4,460,006	\$ 2,145	\$ -
2044	\$ 84,586,087	\$ 43,489,149	\$ 128,075,236	\$ -	0.00%	\$ 22,542	\$ 3,558,658	\$ 4,443,198	\$ 2,147	\$ -
2045	\$ 83,759,300	\$ 47,638,001	\$ 131,397,301	\$ -	0.00%	\$ 15,272	\$ 3,853,325	\$ 4,451,550	\$ 2,148	\$ -
2046	\$ 82,853,087	\$ 51,879,094	\$ 134,732,181	\$ -	0.00%	\$ 8,809	\$ 4,198,835	\$ 4,432,491	\$ 2,148	\$ -
2047	\$ 81,894,976	\$ 56,233,776	\$ 138,128,752	\$ -	0.00%	\$ 5,808	\$ 4,548,572	\$ 4,386,101	\$ 2,147	\$ 3,494
2048	\$ 80,928,167	\$ 60,699,022	\$ 141,627,189	\$ 169,626	0.21%	\$ 3,379	\$ 4,953,790	\$ 4,333,237	\$ 2,172	\$ 20,284
2049	\$ 79,961,766	\$ 65,280,963	\$ 145,242,729	\$ 811,670	1.02%	\$ 1,837	\$ 5,345,680	\$ 4,268,364	\$ 2,140	\$ 57,144
2050	\$ 79,012,487	\$ 69,977,429	\$ 148,989,916	\$ 1,945,827	2.46%	\$ 1,031	\$ 6,322,690	\$ 4,195,218	\$ 2,134	\$ 127,413
2051	\$ 78,093,135	\$ 74,790,488	\$ 152,883,623	\$ 4,199,618	5.38%	\$ 549	\$ 6,804,279	\$ 4,117,009	\$ 2,127	\$ 234,961
2052	\$ 77,211,822	\$ 79,707,236	\$ 156,919,058	\$ 7,120,272	9.22%	\$ 297	\$ 7,356,870	\$ 4,034,427	\$ 2,118	\$ 372,441
2053	\$ 76,375,897	\$ 84,720,089	\$ 161,095,986	\$ 10,813,335	14.16%	\$ 159	\$ 7,917,235	\$ 3,948,246	\$ 2,107	\$ 542,989
2054	\$ 75,591,611	\$ 89,824,118	\$ 165,415,729	\$ 15,323,364	20.27%	\$ 80	\$ 11,672,474	\$ 3,858,921	\$ 2,094	\$ 815,511
2055	\$ 74,864,710	\$ 95,039,536	\$ 169,904,246	\$ 23,950,414	31.99%	\$ 21	\$ 13,046,094	\$ 3,766,690	\$ 2,079	\$ 1,212,985
2056	\$ 74,200,695	\$ 100,356,440	\$ 174,557,135	\$ 34,440,746	46.42%	\$ 12	\$ 13,816,281	\$ 3,671,233	\$ 2,062	\$ 1,677,028
2057	\$ 73,605,873	\$ 105,773,620	\$ 179,379,493	\$ 46,260,772	62.85%	\$ 4	\$ 15,859,244	\$ 3,572,832	\$ 2,043	\$ 2,224,410
2058	\$ 73,086,186	\$ 111,292,079	\$ 184,378,265	\$ 60,769,555	83.15%	\$ -	\$ 17,177,441	\$ 3,471,461	\$ 2,022	\$ 2,870,885
2059	\$ 72,647,887	\$ 116,901,013	\$ 189,548,900	\$ 77,344,398	106.46%	\$ -	\$ 19,132,123	\$ 3,367,145	\$ 1,999	\$ 3,618,615
2060	\$ 72,297,470	\$ 122,611,879	\$ 194,909,349	\$ 96,725,992	133.79%	\$ -	\$ 5,627,650	\$ 3,260,055	\$ 1,973	\$ 4,160,601
2061	\$ 72,041,502	\$ 128,427,945	\$ 200,469,447	\$ 103,252,215	143.32%	\$ -	\$ 1,944	\$ 3,150,234	\$ 1,945	\$ 4,321,973

City of Morgantown, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2021 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Calculation of Single Equivalent Rate						
Fiscal Year	"Funded" Portion of BP	"Unfunded" Portion of BP	PV of "Funded" BP	PV of "Unfunded" BP	PV of BP Using a Single DR	
2021	\$ 2,924,802	\$ -	\$ 2,864,563	\$ -	\$ 2,879,598	
2022	\$ 2,906,364	\$ -	\$ 2,730,461	\$ -	\$ 2,773,679	
2023	\$ 2,991,530	\$ -	\$ 2,695,896	\$ -	\$ 2,767,389	
2024	\$ 3,152,204	\$ -	\$ 2,724,884	\$ -	\$ 2,826,584	
2025	\$ 3,282,692	\$ -	\$ 2,721,998	\$ -	\$ 2,853,307	
2026	\$ 3,391,151	\$ -	\$ 2,697,297	\$ -	\$ 2,857,171	
2027	\$ 3,501,581	\$ -	\$ 2,671,590	\$ -	\$ 2,859,724	
2028	\$ 3,600,860	\$ -	\$ 2,635,335	\$ -	\$ 2,850,604	
2029	\$ 3,680,017	\$ -	\$ 2,583,469	\$ -	\$ 2,823,912	
2030	\$ 3,817,273	\$ -	\$ 2,570,577	\$ -	\$ 2,839,392	
2031	\$ 3,910,617	\$ -	\$ 2,526,077	\$ -	\$ 2,819,604	
2032	\$ 3,975,529	\$ -	\$ 2,463,316	\$ -	\$ 2,778,488	
2033	\$ 4,035,316	\$ -	\$ 2,398,428	\$ -	\$ 2,733,770	
2034	\$ 4,110,039	\$ -	\$ 2,343,252	\$ -	\$ 2,698,989	
2035	\$ -	\$ 4,195,492	\$ -	\$ 3,184,354	\$ 2,670,600	
2036	\$ -	\$ 4,289,151	\$ -	\$ 3,194,114	\$ 2,646,476	
2037	\$ -	\$ 4,391,614	\$ -	\$ 3,208,809	\$ 2,626,586	
2038	\$ -	\$ 4,457,132	\$ -	\$ 3,195,330	\$ 2,584,007	
2039	\$ -	\$ 4,476,462	\$ -	\$ 3,148,732	\$ 2,515,613	
2040	\$ -	\$ 4,466,579	\$ -	\$ 3,082,595	\$ 2,433,070	
2041	\$ -	\$ 4,473,971	\$ -	\$ 3,029,529	\$ 2,362,346	
2042	\$ -	\$ 4,473,584	\$ -	\$ 2,972,201	\$ 2,289,690	
2043	\$ -	\$ 4,460,006	\$ -	\$ 2,907,359	\$ 2,212,725	
2044	\$ -	\$ 4,443,198	\$ -	\$ 2,841,839	\$ 2,136,773	
2045	\$ -	\$ 4,451,550	\$ -	\$ 2,793,544	\$ 2,075,127	
2046	\$ -	\$ 4,432,491	\$ -	\$ 2,729,184	\$ 2,002,867	
2047	\$ -	\$ 4,386,101	\$ -	\$ 2,649,745	\$ 1,921,116	
2048	\$ -	\$ 4,333,237	\$ -	\$ 2,568,494	\$ 1,839,747	
2049	\$ -	\$ 4,268,364	\$ -	\$ 2,482,379	\$ 1,756,620	
2050	\$ -	\$ 4,195,218	\$ -	\$ 2,393,877	\$ 1,673,562	
2051	\$ 4,117,009	\$ -	\$ 1,156,810	\$ -	\$ 1,591,988	
2052	\$ 4,034,427	\$ -	\$ 1,087,391	\$ -	\$ 1,512,205	
2053	\$ 3,948,246	\$ -	\$ 1,020,780	\$ -	\$ 1,434,510	
2054	\$ 3,858,921	\$ -	\$ 957,013	\$ -	\$ 1,359,052	
2055	\$ 3,766,690	\$ -	\$ 896,057	\$ -	\$ 1,285,881	
2056	\$ 3,671,233	\$ -	\$ 837,745	\$ -	\$ 1,214,853	
2057	\$ 3,572,832	\$ -	\$ 782,053	\$ -	\$ 1,146,028	
2058	\$ 3,471,461	\$ -	\$ 728,886	\$ -	\$ 1,079,358	
2059	\$ 3,367,145	\$ -	\$ 678,162	\$ -	\$ 1,014,812	
2060	\$ 3,260,055	\$ -	\$ 629,826	\$ -	\$ 952,401	
2061	\$ 3,150,234	\$ -	\$ 583,798	\$ -	\$ 892,089	