

GASB68 Actuarial Information for the Measurement Period Ending 06/30/2019



Submitted by:

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October 31, 2019

Ms. Priscilla Hamilton Finance Director City of Fairmont 500 Quincy Street Fairmont, WV 26554 Mr. Jason Barker
Pension Board Secretary
City of Fairmont, West Virginia
Firemen's Pension and Relief Fund

Re: City of Fairmont, West Virginia Firemen's Pension and Relief Fund - GASB68 Actuarial Information for the Measurement Period Ending June 30, 2019

Dear Priscilla,

The following report contains the GASB 67 and GASB 68 actuarial information for the City of Fairmont Firemen's Pension and Relief Fund to be included in the City's financial statements for FY2019. The GASB67 information has been provided as of the June 30, 2019 (the GASB 68 measurement date for FY2019).

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, 2019 (the City's fiscal year end date) as required by GASB68. 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, 2018 actuarial valuation rolled forward to June 30, 2019. The methods, assumptions, and participant data used are detailed in the July 1, 2018 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 GASB67. The calculation of the Actuarially Determined Contribution for the fiscal year ended June 30, 2019 is contained in the July 1, 2018 actuarial valuation report.

The Plan currently uses the Conservation funding policy as described in WV Code §8-22-20. Under this funding policy, the City makes contributions to two separate accounts: the Benefit Payment Account and the Accumulation Account. The Benefit Payment Account is used to pay benefits on a pay-as-you-go basis while the Accumulation Account cannot be used to pay benefits and expenses until assets equal or exceed actuarial liabilities.

The included calculations are based on a blended discount rate of 3.40%. A long-term expected rate of investment return of 4.0% has been blended with the 3.13% 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, 2019. We assumed benefits are discounted at the municipal bond rate when paid from the Benefit Payment Account, or at the long-term rate of return when paid from the Accumulation Account. The development of the blended discount rate is included within this report.

Methodology, Reliance and Certification (cont.)

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.

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 those assumptions; these differences may be significant or material because these 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 slections are reviewed by a qualified actuary no less than every five years. The actuary shall provide a report to the oversight 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. This 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. These calculations are complex. Despite our best efforts, we may make a mistake. 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.

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.



Ms. Priscilla Hamilton October 31, 2019 Page 3

Methodology, Reliance and Certification (cont.)

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 GASB68. 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, 2018 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

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Jordan McClane, FSA, EA, MAAA

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Actuarial Information to Include in the Financial Statements for the June 30, 2019 Measurement Date



Net Pension Liability of the Employer

The components of the net pension liability of the Employer at June 30, 2019, were as follows:

Total pension liability	\$ 51,506,577
Plan fiduciary net position	(3,683,999)
Employer's net pension liability	\$ 47,822,578
Plan fiduciary net position as a percentage of the total pension liability	7.15%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2018 rolled forward to June 30, 2019 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation 2.75 percent

Salary increases Rates vary by years of service

Single discount rate (BOY) 3.8562% Single discount rate (EOY) 3.4000%

Investment rate of return 4.00 percent, net of pension plan investment expense, including inflation

Long-term municpal bond rate (BOY) 3.62% Long-term municpal bond rate (EOY) 3.13%

Mortality RP-2014 Blue Collar Mortality Table with generational projection using Scale MP-2014

Year Fund is projected to be fully funded 2053 Year assets are expected to be depleted N/A

for a closed plan

The above is a summary of key actuarial assumptions. Full descriptions of the actuarial assumptions are available in the July 1, 2018 actuarial valuation report.

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

	1% De	crease	Current count Rate	1	% Increase
	2.4	0%	3.40%		4.40%
Employer's net pension liability	\$ 56,	916,352	\$ 47,822,578	\$	40,686,817

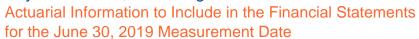
City of Fairmont, West Virginia Firemen's Pension and Relief Fund Actuarial Information to Include in the Financial Statements

for the June 30, 2019 Measurement Date



Changes in the Net Pension Liability

	I Total Pension Liability (a)	ncrease (Decrease Plan Fiduciary Net Position (b)) Net Pension Liability (a) - (b)
Balances at 6/30/18	\$ 44,809,246	\$ 3,126,658	\$ 41,682,588
Changes for the year:			
Service cost	1,407,671		1,407,671
Interest	1,698,499		1,698,499
Changes of benefit terms	-		-
Differences between expected and actual experience	1,610,281		1,610,281
Changes of assumptions	3,507,534		3,507,534
Contributions - employer (including Premium Tax Allocation)		1,725,736	(1,725,736)
Contributions - member		174,216	(174,216)
Net investment income		185,580	(185,580)
Benefit payments, including refunds of member contributions	(1,526,654)	(1,526,654)	-
Administrative expense		(862)	862
Other		(675)	675
Net Changes	6,697,331	557,341	6,139,990
Balances at 6/30/19	\$ 51,506,577	\$ 3,683,999	\$ 47,822,578
Return on Investments		5.6%	





Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2019

Note	Description	Amount
Α	Service Cost	\$ 1,407,671
В	Interest on the total pension liability	1,698,499
Α	Changes of benefit terms	-
С	Differences between expected and actual experience	(72,924)
С	Changes of assumptions	2,199,268
Α	Employee contributions	(174,216)
D	Projected earnings on pension plan investments	(132,501)
С	Differences between expected and actual earnings on	(21,720)
	plan investments	
Α	Pension plan administrative expense	862
Α	Other changes in fiduciary net position	675
	Total Pension Expense	\$ 4,905,614

Notes:

A Provided in the Changes in Net Pension Liability exhibit.

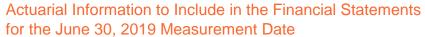
B Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Beginning total pension liability	\$ 44,809,246	100%	3.86%	\$ 1,727,934
Service Cost (End of Year)	1,407,671	0%	3.86%	-
Benefit payments, including refunds of employee contributions	(1,526,654)	50%	3.86%	(29,435)
Total interest on the total pension liability				\$ 1,698,499

C Provided in the Schedules of Deferrals.

D Based on the following calculation:

	F	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	E	rojected arnings x (b) x (c)
Beginning plan fiduciary net position	\$	3,126,658	100%	4.00%	\$	125,066
Employer contributions		1,725,736	50%	4.00%		34,515
Employee contributions		174,216	50%	4.00%		3,484
Benefit payments, including refunds of employee contributions		(1,526,654)	50%	4.00%		(30,533)
Administrative expense and other		(1,537)	50%	4.00%		(31)
Total Projected Earnings					\$	132,501





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

At June 30, 2019, the Employer reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	red Outflows Resources	erred Inflows Resources
Differences between expected and actual experience	\$ 1,073,521	\$ 490,250
Changes of assumptions	2,338,356	660,343
Net difference between projected and actual earnings	-	
on pension plan investments		101,983
Total	\$ 3,411,877	\$ 1,252,576

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:	
2020	\$ 637,397
2021	1,554,832
2022	(22,313)
2023	(10,615)
2024	-
Thereafter	-

Actuarial Information to Include in the Financial Statements for the June 30, 2019 Measurement Date

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



Total pension liability	2019	2018	2017	2016	2015	2014	2013	2012		2011	2010
Service cost	\$ 1,407,671	\$ 1,244,719	\$ 1,383,404	\$ 868,066	\$ 812,884	\$ 767,965	\$ -	\$ -	\$	-	\$ -
Interest	1,698,499	1,660,005	1,540,023	1,648,491	1,625,068	1,693,559	-	-		-	-
Changes of benefit terms	-	-	-	-	-	-	-	-		-	-
Differences between expected and actual experience	1,610,281	(517,413)	(1,654,431)	4,042	(1,337,486)	-	-	-		-	-
Changes of assumptions	3,507,534	(329,939)	(3,163,235)	9,497,572	593,316	1,099,407	-	-		-	-
Benefit payments, including refunds of member contributions	(1,526,654)	 (1,524,211)	(1,529,229)	(1,547,140)	(1,595,187)	(1,563,490)	-	-		-	-
Net change in total pension liability	6,697,331	533,161	(3,423,468)	10,471,031	98,595	1,997,441	-	-		-	-
Total pension liability - beginning	44,809,246	44,279,085	47,699,553	37,228,522	37,129,927	35,132,486	-	-		-	-
Total pension liability - ending (a)	\$ 51,506,577	\$ 44,809,246	\$ 44,276,085	\$ 47,699,553	\$ 37,228,522	\$ 37,129,927	\$	\$	\$		\$
Plan fiduciary net position	2019	2018	2017	2016	2015	2014	2013	2012		2011	2010
Contributions - employer (including Premium Tax Allocation)	\$ 1,725,736	\$ 1,722,618	\$ 1,422,301	\$ 1,342,753	\$ 1,324,270	\$ 1,209,650	\$ -	\$ -	\$	-	\$ -
Contributions - member	174,216	180,003	165,937	165,382	164,249	162,770	-	-		-	-
Net investment income	185,580	155,499	165,421	21,071	51,321	258,994	-	-		-	-
Benefit payments, including refunds of member contributions	(1,526,654)	(1,524,211)	(1,529,229)	(1,547,140)	(1,595,187)	(1,563,490)	-	-		-	-
Administrative expense	(862)	(2,350)	(1,777)	(1,433)	(1,189)	(1,752)	-	-		-	-
Other	(675)	 463,165	 218,861	 25,958	752	54,076	-	-		-	 -
Net change in plan fiduciary net position	\$ 557,341	\$ 994,724	\$ 441,514	\$ 6,591	\$ (55,784)	\$ 120,248	\$ -	\$ -	\$	-	\$ -
Plan fiduciary net position - beginning	3,126,658	2,131,934	1,690,420	1,683,829	1,739,613	1,619,365	-	-		-	-
Plan fiduciary net position - ending (b)	\$ 3,683,999	\$ 3,126,658	\$ 2,131,934	\$ 1,690,420	\$ 1,683,829	\$ 1,739,613	\$ -	\$ -	\$	-	\$ •
Employer's net pension liability - ending (a)-(b)	\$ 47,822,578	\$ 41,682,588	\$ 42,144,151	\$ 46,009,133	\$ 35,544,693	\$ 35,390,314	\$ -	\$ -	\$	-	\$ -
Plan fiduciary net position as a percentage of the total pension liability	7.15%	6.98%	4.82%	3.54%	4.25%	4.69%	0.00%	0.00%		0.00%	0.00%
									_		
Covered payroll	\$ 1,958,395	\$ 1,864,926	\$ 1,831,847	\$ 1,925,962	\$ 1,841,996	\$ 1,825,201	\$ -	\$ -	\$		\$ -
Employer's net pension liability as a percentage of covered payroll	2441.93%	2235.08%	2133.64%	2388.89%	1929.68%	1938.98%	0.00%	0.00%		0.00%	0.00%
Expected average remaining service years of all participants	3.00	3.45	3.59	3.80	3.73	-	-	-			-

Notes to Schedule:

Benefit changes: There were no changes for FY2019.

Changes of assumptions: The discount rate changed from 3.8562% to 3.4000%.

Actuarial Information to Include in the Financial Statements for the June 30, 2019 Measurement Date

Schedule of Employer Contributions

Last 10 Fiscal Years



	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially determined contribution	\$ 3,229,422	\$ 2,833,286	\$ 2,721,289	\$ 2,677,659	\$ 1,974,513	\$ 19,252,499	\$ 1,875,854	\$ -	\$ -	\$ -
Contributions in relation to the actuarially determined contribution										
Employer provided	1,282,498	1,288,135	988,285	924,310	907,479	805,791	753,076	-	-	-
State provided	443,238	434,483	434,016	418,443	416,791	403,859	432,491			
Contribution deficiency (excess)	\$ 1,503,686	\$ 1,110,668	\$ 1,298,988	\$ 1,334,906	\$ 650,243	\$ 18,042,849	\$ 690,287	\$ -	\$ -	\$ -
Covered payroll	\$ 1,958,395	\$ 1,864,926	\$ 1,831,847	\$ 1,925,962	\$ 1,841,996	\$ 1,825,201	\$ 1,781,502	\$ -	\$ -	\$ -
Contributions as a percentage of covered employee payroll	88.12%	92.00%	78.00%	70.00%	72.00%	66.00%	67.00%	0.00%	0.00%	0.00%

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 32.5 years
Asset valuation method Market Value
Inflation 2.75 percent

Salary increases Rates vary by years of service

Investment rate of return 4.00 percent, 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, 2019 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 Projecte and Actual Earning on Pension Plan Investments		Recognition Period (Years)	2015	2016	2017	2018	2019	2020	2021	2022	2023
2015	\$	32,712	5	\$ 6,542	6,542	6,542	6,542	6,544				
2016		62,618	5		\$ 12,524	12,524	12,524	12,524	12,522			
2017		(92,386)	5			\$ (18,477)	(18,477)	(18,477)	(18,477)	(18,478)		
2018		(58,477)	5				\$ (11,695)	(11,695)	(11,695)	(11,695)	(11,697)	
2019		(53,079)	5					\$ (10,616)	(10,616)	(10,616)	(10,616)	(10,615)
let increa	se (de	rease) in pension	expense					\$ (21,720)	\$ (28,266)	\$ (40,789)	\$ (22,313)	\$ (10,615)

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

				Balan June 3				
Year	tment Earnings than Projected (a)	Investment Earnings Greater Than Projected (b)		Amounts Recognized in Pension Expense Through June 30, 2019 (c)	Oi R	Deferred utflows of esources (a) - (c)	ı	Deferred nflows of lesources (b) - (c)
2015	\$ 32,712	\$ -	\$	32,712	\$	-	\$	-
2016	62,618	-		50,096		12,522		-
2017	-	92,386		55,431		-		36,955
2018	-	58,477		23,390		-		35,087
2019	-	53,079		10,616		-		42,463
					\$	12,522	\$	114,505

Actuarial Information to Include in the Financial Statements for the June 30, 2019 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)	Prior	2014	Increase 2015	e (Decrease) in 2016	Pension Expens 2017	e Arising from th	ne Recognition of 2019	Differences be	tween Expected	and Actual Ex	perience	2024	Thereafter
Prior	\$ -		\$ -	-	-	-	-	-	-	-	-	-		-	
2015	(1,337,486)	3.726428			\$ (358,919)	(358,919)	(358,919)	(260,729)							
2016	4,042	3.803432				\$ 1,063	1,063	1,063	853						
2017	(1,654,431)	3.592531					\$ (460,520)	(460,520)	(460,520)	(272,871)					
2018	(517,413)	3.449032						\$ (150,017)	(150,017)	(150,017)	(67,362)				
2019	1,610,281	3							\$ 536,760	536,760	536,761				
Net increa	se (decrease) in p	ension expense							\$ (72,924)	\$ 113,872	\$ 469,399	\$ -	\$	- \$	- \$ -

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

Year	Experier Losse (a)			Experience Gains (b)		nounts Recognized in sion Expense Through June 30, 2019 (c)	Outfl Resc		oces at 50, 2019 Deferred Inflows of Resources (b) - (c)			
Prior	\$	-	\$	- (~)	\$	-	\$	-	\$	-		
2015	•	-	•	1,337,486	•	1,337,486	·	-	·	-		
2016	4,	042		-		4,042		-		-		
2017		-		1,654,431		1,381,560		-		272,871		
2018		-		517,413		300,034		-		217,379		
2019	1,610,	281		-		536,760	1,0	73,521		-		
							\$ 1,0	73,521	\$	490,250		

Actuarial Information to Include in the Financial Statements for the June 30, 2019 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	2014	2015	2024	Thereafter								
Prior	\$ -		\$ -	-	-	-	-	-	-	-	-		-		-
2015	593,316	3.726428			\$ 159,218	159,218	159,218	115,662							
2016	9,497,572	3.803432				\$ 2,497,106	2,497,106	2,497,106	2,006,254						
2017	(3,163,235)	3.592531					\$ (880,503)	(880,503)	(880,503)	(521,726)					
2018	(329,939)	3.449032						\$ (95,661)	(95,661)	(95,661)	(42,956)				
2019	3,507,534	3						,	\$ 1,169,178	1,169,178	1,169,178				
Net increa	se (decrease) in pe	ension expense							\$ 2,199,268	\$ 551,791	\$ 1,126,222	\$	- \$	- \$ -	\$ -

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

					Balan June 3			
Year	Increases in the Total Pension Liability (a)	Decreases in the Total Pension Liability (b)	Amounts Recognized in Pension Expense Throug June 30, 2019 (c)		Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)		
Prior	\$ -	\$ -	\$	- 9	-	\$	-	
2015	593,316	-	593,3°	6	-		-	
2016	9,497,572	-	9,497,57	72	-			
2017	-	3,163,235	2,641,50	9	-		521,726	
2018	-	329,939	191,32	22	-		138,617	
2019	3,507,534	-	1,169,17	78	2,338,356		-	
				\$	2,338,356	\$	660,343	

City of Fairmont, West Virginia Firemen's Pension and Relief Fund Actuarial Information to Include in the Financial Statements

for the June 30, 2019 Measurement Date

Projection of Pension Plan's Fiduciary Net Position (Dollar amounts in thousands)



						Benefit Payment Account								Accumulation Account															
Fiscal Year	Active	Pay Status	Assets (BOY	()	Net Benefit Pmts and Expenses		Employer ontributions	Employee Contributions	Pr	71.93% of remium Tax Allocation		stment	(T Acc	Transfer To)/From cumulation Account	As	ssets (BOY)	Net Benet Pmts and Expense	d	Employer Contributions		.50% of Pay Employee ontributions	Pre	28.07% of emium Tax		vestment Income	Accrued Liability		nfunded .iability	Funded Ratio
2019	38	52	\$ -	\$	-	\$	-	\$ -	\$	-	\$	-	\$	-	\$	-	\$ -	-	\$ -	\$	-	\$	-	\$	-	\$ 46,914,266	\$	43,225,937	8%
2020	35	54	\$ 201,61	6 \$	1,729,755	\$	1,257,826	\$ 135,438	\$	336,491	\$	8,065	\$	(209,681)	\$	3,486,713	\$ -	-	\$ -	\$	28,602	\$	131,298	\$	142,635	\$ 48,199,316	\$	44,200,387	8%
2021	32	55	\$ -	\$	1,842,144	\$	1,370,150	\$ 127,490	\$	344,504	\$	-	\$	-	\$	3,998,929	\$ -	-	\$ -	\$	26,896	\$	134,424	\$	163,152	\$ 49,347,353	\$	45,023,952	9%
2022	29	57	\$ -	\$	1,921,040	\$	1,444,429	\$ 122,624	\$	353,987	\$	-	\$	-	\$	4,323,401	\$ -	-	\$ -	\$	25,851	\$	138,124	\$	176,183	\$ 50,416,527	\$	45,752,968	9%
2023	27	58	\$ -	\$	1,982,735	\$	1,498,932	\$ 120,073	\$	363,730	\$	-	\$	-	\$	4,663,559	\$ -	-	\$ -	\$	25,302	\$	141,926	\$	189,854	\$ 51,441,680	\$	46,421,039	10%
2024	25	58	\$ -	\$	2,055,037	\$	1,565,290	\$ 116,005	\$	373,742	\$	-	\$	-	\$	5,020,641	\$ -	-	\$ -	\$	24,416	\$	145,832	\$	204,197	\$ 52,393,770	\$	46,998,684	10%
2025	22	59	\$ -	\$	2,163,804	\$	1,668,337	\$ 107,404	\$	388,063	\$	-	\$	-	\$	5,395,086	\$ -	-	\$ -	\$	22,564	\$	151,420	\$	219,249	\$ 53,189,685	\$	47,401,366	11%
2026	20	61	\$ -	\$	2,286,718	\$	1,789,907	\$ 98,079	\$	398,732	\$	-	\$	-	\$	5,788,319	\$ -	-	\$ -	\$	20,557	\$	155,583	\$	235,021	\$ 53,803,816	\$	47,604,336	12%
2027	17	63	\$ -	\$	2,403,077	\$	1,904,572	\$ 88,811	\$	409,694	\$	-	\$	-	\$	6,199,480	\$ -	-	\$ -	\$	18,564	\$	159,861	\$	251,513	\$ 54,236,948	\$	47,607,530	12%
2028	14	64	\$ -	\$	2,545,027	\$	2,047,537	\$ 76,532	\$	420,958	\$	-	\$	-	\$	6,629,418	\$ -	-	\$ -	\$	15,923	\$	164,256	\$	268,745	\$ 54,427,648	\$	47,349,306	13%
2029	11	66	\$ -	\$	2,648,235	\$	2,146,109	\$ 68,055	\$	434,071	\$	-	\$	-	\$	7,078,342	\$ -	-	\$ -	\$	14,097	\$	169,372	\$	286,767	\$ 54,444,914	\$	46,896,336	14%
2030	10	66	\$ -	\$	2,751,320	\$	2,245,196	\$ 60,122	\$	446,002	\$	-	\$	-	\$	7,548,578	\$ -	-	\$ -	\$	12,382	\$	174,028	\$	305,635	\$ 54,288,401	\$	46,247,778	15%
2031	8	67	\$ -	\$	2,834,383	\$	2,323,404	\$ 52,718	\$	458,261	\$	-	\$	-	\$	8,040,623	\$ -	-	\$ -	\$	10,788	\$	178,812	\$	325,380	\$ 53,976,550	\$	45,420,947	16%
2032	7	67	\$ -	\$	2,897,833	\$	2,379,359	\$ 47,617	\$	470,857	\$	-	\$	-	\$	8,555,603	\$ -	-	\$ -	\$	9,679	\$	183,727	\$	346,054	\$ 53,542,769	\$	44,447,706	17%
2033	6	66	\$ -	\$	2,935,092	\$	2,407,206	\$ 44,085	\$	483,801	\$	-	\$	-	\$	9,095,063	\$ -	-	\$ -	\$	8,911	\$	188,777	\$	367,718	\$ 53,023,533	\$	43,363,064	18%
2034	5	66	\$ -	\$	2,953,977	\$	2,399,169	\$ 42,041	\$	512,767	\$	-	\$	-	\$	9,660,469	\$ -	-	\$ -	\$	8,458	\$	200,080	\$	390,549	\$ 52,446,210	\$	42,186,654	20%
2035	5	65	\$ -	\$	3,007,749	\$	2,443,476	\$ 37,439	\$	526,834	\$	-	\$	-	\$	10,259,556	\$ -	-	\$ -	\$	7,470	\$	205,569	\$	414,601	\$ 51,754,580	\$	40,867,384	21%
2036	4	65	\$ -	\$	3,046,317	\$	2,473,015	\$ 32,014	\$	541,288	\$	-	\$	-	\$	10,887,196	\$ -		\$ -	\$	6,338	\$	211,208	\$	439,796	\$ 50,955,420	\$	39,410,882	23%
2037	3	64	\$ -	\$	3,073,954	\$	2,489,663	\$ 28,152	\$	556,139	\$	-	\$	-	\$	11,544,538	\$ -		\$ -	\$	5,524	\$	217,003	\$	466,188	\$ 50,066,860	\$	37,833,607	24%
2038	2	63	\$ -	\$	3,099,697	\$	2,504,966	\$ 23,332	\$	571,399	\$	-	\$	-	\$	12,233,253	\$ -		\$ -	\$	4,534	\$	222,957	\$	493,835	\$ 49,080,343	\$	36,125,764	26%
2039	2	62	\$ -	\$	3,107,169	\$	2,493,840	\$ 19,469	\$	593,860	\$	-	\$	-	\$	12,954,579	\$ -		\$ -	\$	3,762	\$	231,722	\$	522,847	\$ 48,018,106	\$	34,305,196	29%
2040	1	61	\$ -	\$	3,097,320	\$	2,470,066	\$ 17,105	\$	610,149	\$	-	\$	-	\$	13,712,910	\$ -		\$ -	\$	3,281	\$	238,077	\$	553,296	\$ 46,905,506	\$	32,397,942	31%
2041	1	60	\$ -	\$	3,089,004	\$	2,447,710	\$ 14,408	\$	626,886	\$	-	\$	-	\$	14,507,564	\$ -		\$ -	\$	2,751	\$	244,608	\$	585,201	\$ 45,737,249	\$	30,397,125	34%
2042	1	59	\$ -	\$	3,072,872	\$	2,417,299	\$ 11,490	\$	644,083	\$	-	\$	-	\$	15,340,124	\$ -		\$ -	\$	2,187	\$	251,318	\$	618,625	\$ 44,517,819	\$	28,305,565	36%
2043	1	57	\$ -	\$	3,059,490	\$	2,373,201	\$ 8,708	\$	677,581	\$	-	\$	-	\$	16,212,254	\$ -		\$ -	\$	1,653	\$	264,389	\$	653,759	\$ 43,244,977	\$	26,112,922	40%
2044	0	56	\$ -	\$	3,036,360	\$	2,334,643	\$ 5,559	\$	696,158	\$	-	\$	-	\$	17,132,055	\$ -		\$ -	\$	1,057	\$	271,638	\$	690,683	\$ 41,924,750	\$	23,829,317	43%
2045	0	54	\$ -	\$	2,997,910	\$	2,278,887	\$ 3,776	\$	715,247	\$	-	\$	-	\$	18,095,433	\$ -		\$ -	\$	712	\$	279,086	\$	729,358	\$ 40,579,368	\$	21,474,779	47%
2046	0	52	\$ -	\$	2,949,451	\$	2,211,882	\$ 2,709	\$	734,860	\$	-	\$	-	\$	19,104,589	\$ -		\$ -	\$	511	\$	286,739	\$	769,872	\$ 39,222,735	\$	19,061,024	51%
2047	0	51	\$ -	\$	2,897,093	\$	2,088,094	\$ 1,833	\$	807,166	\$	-	\$		\$	20,161,711	\$ -		\$ -	\$	343	\$	314,952	\$	812,713	\$ 37,859,691	\$	16,569,972	56%
2048	0	49	\$ -	\$	2,840,408	\$	2,009,964	\$ 1,160	\$	829,284	\$	-	\$	-	\$	21,289,719	\$ -		\$ -	\$	217	\$	323,583	\$	858,001	\$ 36,495,444	\$	14,023,924	62%
2049	0	47	\$ -	\$	2,779,608	\$	1,926,791	\$ 806	\$	852,011	\$	-	\$	-	\$	22,471,520	\$ -		\$ -	\$	151	\$	332,451	\$	905,448	\$ 35,136,320	\$	11,426,750	67%
2050	0	46	\$ -	s	2,717,409	\$	1,841,503	\$ 543	\$	875,363	s		\$	_	s	23,709,570	\$ -		\$ -	\$	102	\$	341,563	s	955,149	\$ 33,784,737	\$	8,778,353	74%
2051	0	44	s -	s		\$	1,355,484	\$ 244		1,299,063	s		\$	_	s	25,006,384	\$ -		s -	\$	46		506,889	\$	1,010,295	\$ 32,440,846		5,917,232	82%
2052	0	43	\$ -	s		\$	1,255,422			1,334,910	s	_	\$		s	26,523,614	\$ -		\$ -	\$	31		520.876		1,071,261	\$		2,992,582	90%
2053	0	41	\$ -	s		\$		\$ -	\$,,.	s		\$	22	s	28,115,782			\$ -	\$	-	\$	535,248	s	1,135,231	\$ 29.786.239		-	100%
2054	0	40	\$ -	s		\$, , .	\$ -	\$.,,.	s		\$		s		\$ 2,462,7		*		-	\$	-		1,142,883	\$ 28,476,773		_	100%
2055	0	38	\$ -	s		\$		\$ -	\$		s		\$	_	s	28,476,773					-	\$	_	\$	1,091,765	\$		_	100%
2056	0	37	s -	s		\$		s -	\$		s		\$		s		\$ 2,335,9				_	\$		s	1,041,132	\$ 25,895,124			100%
2057	0	35	s -	s		\$		s -	\$		s		\$		-	25,895,124						\$		s	990,980	\$			100%
2058	0	34	s -	s		\$		s -	\$		s		\$		s	24,622,667						s	_	s	941,310	\$			100%
2056	0	33	s -	S		\$		\$ -	\$		s S		э \$		S		\$ 2,149,2		\$ 9,023			\$		S	892.133	\$	-		100%
2059	0	33	a -	3	-	Ф	-	a -	\$	-	à	-	Ф	-	3	23,302,550		200	э 9,796	\$	-	Ф	-	э	092,133	\$ 22,110,274	Ф	-	100%

Actuarial Information to Include in the Financial Statements for the June 30, 2019 Measurement Date



Projection of Pension Plan's Fiduciary Net Position (Dollar amounts in thousands)

Fiscal Year	Projected BP	"Funded" Portion of BP	" U	nfunded" Portion of BP	PV	of "Funded" Portion of BP	PV of "Unfunded" Portion of BP	PV	of BP Using a Single DR
2019	\$ 1,526,654	\$ -	\$	1,526,654	\$	-	\$ 1,503,308	\$	1,501,324
2020	\$ 1,720,584	\$ -	\$	1,720,584	\$	-	\$ 1,642,852	\$	1,636,354
2021	\$ 1,832,933	\$ -	\$	1,832,933	\$	-	\$ 1,697,009	\$	1,685,836
2022	\$ 1,911,684	\$ -	\$	1,911,684	\$	-	\$ 1,716,203	\$	1,700,405
2023	\$ 1,973,233	\$ -	\$	1,973,233	\$	-	\$ 1,717,694	\$	1,697,392
2024	\$ 2,045,503	\$ -	\$	2,045,503	\$	-	\$ 1,726,563	\$	1,701,655
2025	\$ 2,154,244	\$ -	\$	2,154,244	\$	-	\$ 1,763,162	\$	1,733,141
2026	\$ 2,276,895	\$ -	\$	2,276,895	\$	-	\$ 1,806,988	\$	1,771,534
2027	\$ 2,393,108	\$ -	\$	2,393,108	\$	-	\$ 1,841,576	\$	1,800,679
2028	\$ 2,535,040	\$ -	\$	2,535,040	\$	-	\$ 1,891,591	\$	1,844,702
2029	\$ 2,638,105	\$ -	\$	2,638,105	\$	-	\$ 1,908,751	\$	1,856,526
2030	\$ 2,741,047	\$ -	\$	2,741,047	\$	-	\$ 1,923,042	\$	1,865,491
2031	\$ 2,823,966	\$ -	\$	2,823,966	\$	-	\$ 1,921,086	\$	1,858,675
2032	\$ 2,887,272	\$ -	\$	2,887,272	\$	-	\$ 1,904,539	\$	1,837,805
2033	\$ 2,924,534	\$ -	\$	2,924,534	\$	-	\$ 1,870,570	\$	1,800,262
2034	\$ 2,943,279	\$ -	\$	2,943,279	\$	-	\$ 1,825,424	\$	1,752,178
2035	\$ 2,996,912	\$ -	\$	2,996,912	\$	-	\$ 1,802,276	\$	1,725,394
2036	\$ 3,035,341	\$ -	\$	3,035,341	\$	-	\$ 1,769,985	\$	1,690,010
2037	\$ 3,063,003	\$ -	\$	3,063,003	\$	-	\$ 1,731,907	\$	1,649,289
2038	\$ 3,088,781	\$ -	\$	3,088,781	\$	-	\$ 1,693,477	\$	1,608,436
2039	\$ 3,096,125	\$ -	\$	3,096,125	\$	-	\$ 1,645,984	\$	1,559,203
2040	\$ 3,086,327	\$ -	\$	3,086,327	\$	-	\$ 1,590,978	\$	1,503,120
2041	\$ 3,077,891	\$ -	\$	3,077,891	\$	-	\$ 1,538,475	\$	1,449,682
2042	\$ 3,061,641	\$ -	\$	3,061,641	\$	-	\$ 1,483,906	\$	1,394,573
2043	\$ 3,048,335	\$ -	\$	3,048,335	\$	-	\$ 1,432,616	\$	1,342,818
2044	\$ 3,025,293	\$ -	\$	3,025,293	\$	-	\$ 1,378,636	\$	1,288,811
2045	\$ 2,986,945	\$ -	\$	2,986,945	\$	-	\$ 1,319,849	\$	1,230,599
2046	\$ 2,938,602	\$ -	\$	2,938,602	\$	-	\$ 1,259,078	\$	1,170,841
2047	\$ 2,886,160	\$ -	\$	2,886,160	\$	-	\$ 1,199,078	\$	1,112,103
2048	\$ 2,829,615	\$ -	\$	2,829,615	\$	-	\$ 1,139,907	\$	1,054,434
2049	\$ 2,768,971	\$ -	\$	2,768,971	\$	-	\$ 1,081,622	\$	997,879
2050	\$ 2,706,712	\$ -	\$	2,706,712	\$	-	\$ 1,025,213	\$	943,342
2051	\$ 2,644,278	\$ -	\$	2,644,278	\$	-	\$ 971,167	\$	891,255
2052	\$ 2,579,938	\$ -	\$	2,579,938	\$	-	\$ 918,779	\$	840,952
2053	\$ 2,516,621	\$ -	\$	2,516,621	\$	-	\$ 869,030	\$	793,318
2054	\$ 2,452,349	\$ 2,452,349	\$	-	\$	609,395	\$ -	\$	747,618
2055	\$ 2,388,729	\$ 2,388,729	\$	-	\$	570,755	\$ -	\$	704,258
2056	\$ 2,325,817	\$ 2,325,817	\$	-	\$	534,349	\$ -	\$	663,144
2057	\$ 2,263,437	\$ 2,263,437	\$	-	\$	500,017	\$ -	\$	624,120
2058	\$ 2,201,427	\$ 2,201,427	\$	-	\$	467,614	\$ -	\$	587,045
2059	\$ 2,139,409	\$ 2,139,409	\$	-	\$	436,962	\$ -	\$	551,733