



**Municipal Pensions
Oversight Board**

**City of Princeton, West Virginia
Firemen's Pension and Relief Fund**

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

Bolton

Submitted by:

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December 3, 2019

Mr. Brian Blankenship
Finance Director
City of Princeton
100 Courthouse Road
Princeton, WV 24740

Lieutenant Thomas Mould
Pension Board Secretary
City of Princeton, West Virginia
Firemen's Pension and Relief Fund

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

Dear Brian,

The following report contains the GASB 67 and GASB 68 actuarial information for the City of Princeton 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 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, 2017 actuarial valuation report.

The included calculations are based on a blended discount rate of 3.66%. The plan's expected gross rate of investment return of 4.5% 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. The development of the blended discount rate is included within this report.

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.

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.) The long-term nominal expected rate of return is based on the fund's current funding ratio, liquidity ratio, equity exposure and expected funded status in 15 years.

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 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 selections 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.



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 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.

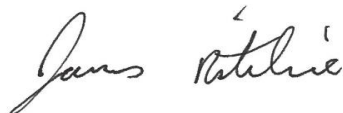
The calculation of actuarial liabilities for valuation purposes is based on a current estimate of future benefit payments. The calculation includes a computation of the "present value" of those estimated future benefit payments using an assumed discount rate; the higher the discount rate assumption, 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



Jordan McClane, FSA, EA, MAAA



City of Princeton, West Virginia Firemen's Pension and Relief Fund
 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	\$ 13,632,548
Plan fiduciary net position	(2,993,335)
Employer's net pension liability	<u>\$ 10,639,213</u>
Plan fiduciary net position as a percentage of the total pension liability	21.96%

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)	3.6725%
Single discount rate (EOY)	3.6600%
Investment rate of return	4.50 percent, net of pension plan investment expense, including inflation
Long-term municipal bond rate (BOY)	3.62%
Long-term municipal 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	2070
Year assets are expected to be depleted for a closed plan	2032

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% Decrease 2.66%	Current Discount Rate 3.66%	1% Increase 4.66%
Employer's net pension liability	\$ 13,301,928	\$ 10,639,213	\$ 8,591,922

City of Princeton, 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

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/18	\$ 13,173,956	\$ 2,948,777	\$ 10,225,179
Changes for the year:			
Service cost	393,333		393,333
Interest	476,828		476,828
Changes of benefit terms	-		-
Differences between expected and actual experience	(60,333)		(60,333)
Changes of assumptions	29,231		29,231
Contributions - employer (including Premium Tax Allocation)		252,010	(252,010)
Contributions - member		50,843	(50,843)
Net investment income*		122,706	(122,706)
Benefit payments, including refunds of member contributions	(380,467)	(380,467)	-
Administrative expense		(354)	354
Other		(180)	180
Net Changes	<u>458,592</u>	<u>44,558</u>	<u>414,034</u>
Balances at 6/30/19	<u>\$ 13,632,548</u>	<u>\$ 2,993,335</u>	<u>\$ 10,639,213</u>
Return on Investments		4.2%	

* The Plan Fiduciary Net Position as of July 1, 2018 provided to Bolton by the City does not match the Plan Fiduciary Net Position as of June 30, 2018 as provided in the prior GASB report. The difference of (\$39,707.94) has been included as investment income for the measurement period ending June 30, 2019.

City of Princeton, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2019 Measurement Date



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

Note	Description	Amount
A	Service Cost	\$ 393,333
B	Interest on the total pension liability	476,828
A	Changes of benefit terms	-
C	Differences between expected and actual experience	(12,926)
C	Changes of assumptions	402,913
A	Employee contributions	(50,843)
D	Projected earnings on pension plan investments	(130,936)
C	Differences between expected and actual earnings on plan investments	27,246
A	Pension plan administrative expense	354
A	Other changes in fiduciary net position	180
Total Pension Expense		\$ 1,106,149

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	\$ 13,173,956	100%	3.67%	\$ 483,814
Service Cost (End of Year)	393,333	0%	3.67%	-
Benefit payments, including refunds of employee contributions	(380,467)	50%	3.67%	(6,986)
Total interest on the total pension liability				\$ 476,828

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	\$ 2,948,777	100%	4.50%	\$ 132,695
Employer contributions	252,010	50%	4.50%	5,670
Employee contributions	50,843	50%	4.50%	1,144
Benefit payments, including refunds of employee contributions	(380,467)	50%	4.50%	(8,561)
Administrative expense and other	(534)	50%	4.50%	(12)
Total Projected Earnings				\$ 130,936

City of Princeton, West Virginia Firemen's Pension and Relief Fund
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 for the June 30, 2019 Measurement Date



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:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 28,319	\$ 109,210
Changes of assumptions	527,716	482,573
Net difference between projected and actual earnings on pension plan investments	-	14,278
Total	\$ 556,035	\$ 606,061

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	\$ 169,013
2021	(214,765)
2022	(5,920)
2023	1,646
2024	-
Thereafter	-

City of Princeton, West Virginia Firemen's Pension and Relief Fund
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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	\$ 393,333	\$ 368,822	\$ 460,837	\$ 276,283	\$ 227,150	\$ 220,861	\$ -	\$ -	\$ -	\$ -
Interest	476,828	466,662	415,592	431,550	419,617	417,657	-	-	-	-
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(60,333)	(15,053)	(167,705)	175,515	38,939	-	-	-	-	-
Changes of assumptions	29,231	41,136	(1,429,349)	3,010,507	433,405	411,315	-	-	-	-
Benefit payments, including refunds of member contributions	(380,467)	(325,034)	(347,120)	(350,586)	(356,745)	(346,980)	-	-	-	-
Net change in total pension liability	458,592	536,533	(1,067,745)	3,543,269	762,366	702,853	-	-	-	-
Total pension liability - beginning	13,173,956	12,637,423	13,705,168	10,161,899	9,399,533	8,696,680	-	-	-	-
Total pension liability - ending (a)	\$ 13,632,548	\$ 13,173,956	\$ 12,637,423	\$ 13,705,168	\$ 10,161,899	\$ 9,399,533	\$ -	\$ -	\$ -	\$ -
Plan fiduciary net position	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Contributions - employer (including Premium Tax Allocation)	\$ 252,010	\$ 242,352	\$ 230,930	\$ 340,770	\$ 209,712	\$ 225,990	\$ -	\$ -	\$ -	\$ -
Contributions - member	50,843	48,368	47,856	44,131	39,287	38,269	-	-	-	-
Net investment income*	122,706	104,565	260,913	(40,190)	45,043	275,980	-	-	-	-
Benefit payments, including refunds of member contributions	(380,467)	(325,034)	(347,120)	(350,586)	(356,745)	(346,980)	-	-	-	-
Administrative expense	(354)	(629)	(429)	(259)	(253)	(377)	-	-	-	-
Other	(180)	-	-	2,930	-	55	-	-	-	-
Net change in plan fiduciary net position	\$ 44,558	\$ 69,622	\$ 192,150	\$ (3,204)	\$ (62,956)	\$ 192,937	\$ -	\$ -	\$ -	\$ -
Plan fiduciary net position - beginning	2,948,777	2,879,155	2,687,005	2,690,209	2,873,236	2,682,034	-	-	-	-
Plan fiduciary net position - ending (b)	\$ 2,993,335	\$ 2,948,777	\$ 2,879,155	\$ 2,687,005	\$ 2,810,280	\$ 2,874,971	\$ -	\$ -	\$ -	\$ -
Employer's net pension liability - ending (a)-(b)	<u>\$ 10,639,213</u>	<u>\$ 10,225,179</u>	<u>\$ 9,758,268</u>	<u>\$ 11,018,163</u>	<u>\$ 7,351,619</u>	<u>\$ 6,524,562</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Plan fiduciary net position as a percentage of the total pension liability	21.96%	22.38%	22.78%	19.61%	27.66%	30.59%	0.00%	0.00%	0.00%	0.00%
Covered payroll	\$ 617,676	\$ 565,135	\$ 591,104	\$ 573,191	\$ 496,870	\$ 517,350	\$ -	\$ -	\$ -	\$ -
Employer's net pension liability as a percentage of covered payroll	1722.46%	1809.34%	1650.86%	1922.25%	1479.59%	1261.15%	0.00%	0.00%	0.00%	0.00%
Expected average remaining service years of all participants	4.00	3.90	4.53	4.77	4.76	-	-	-	-	-

Notes to Schedule:

Benefit changes: There were no changes for FY2019.

Changes of assumptions: The discount rate changed from 3.6725% to 3.6600%.

* The Plan Fiduciary Net Position as of July 1, 2018 provided to Bolton by the City does not match the Plan Fiduciary Net Position as of June 30, 2018 as provided in the prior GASB report. The difference of (\$39,707.94) has been included as investment income for the measurement period ending June 30, 2019.

City of Princeton, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
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Schedule of Employer Contributions
 Last 10 Fiscal Years

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially determined contribution	\$ 795,311	\$ 705,873	\$ 624,931	\$ 586,190	\$ 417,992	\$ 412,384	\$ 396,419	\$ -	\$ -	\$ -
Contributions in relation to the actuarially determined contribution										
Employer provided	115,300	107,700	100,645	94,060	87,905	82,154	126,780	-	-	-
State provided	136,710	134,652	130,285	124,903	121,807	143,836	126,113	-	-	-
Contribution deficiency (excess)	<u>\$ 543,301</u>	<u>\$ 463,521</u>	<u>\$ 394,001</u>	<u>\$ 367,227</u>	<u>\$ 208,280</u>	<u>\$ 186,394</u>	<u>\$ 143,526</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	\$ 617,676	\$ 565,135	\$ 591,104	\$ 573,191	\$ 496,870	\$ 517,350	\$ 512,726	\$ -	\$ -	\$ -
Contributions as a percentage of covered employee payroll	40.80%	42.88%	39.07%	38.20%	42.21%	43.68%	49.32%	N/A	N/A	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	32.5 years
Asset valuation method	Market Value
Inflation	2.75 percent
Salary increases	Rates vary by years of service
Investment rate of return	4.50 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

City of Princeton, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
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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)	2015	2016	2017	2018	2019	2020	2021	2022	2023
2015	\$ 92,874	5	\$ 18,575	18,575	18,575	18,575	18,574				
2016	175,625	5		\$ 35,125	35,125	35,125	35,125	35,125			
2017	(141,545)	5			\$ (28,309)	(28,309)	(28,309)	(28,309)	(28,309)		
2018	1,051	5				\$ 210	210	210	210	211	
2019	8,230	5					\$ 1,646	1,646	1,646	1,646	1,646
Net increase (decrease) in pension expense							\$ 27,246	\$ 8,672	\$ (26,453)	\$ 1,857	\$ 1,646

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, 2019 (c)	Balances at June 30, 2019	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015	\$ 92,874	\$ -	\$ 92,874	\$ -	\$ -
2016	175,625	-	140,500	35,125	-
2017	-	141,545	84,927	-	56,618
2018	1,051	-	420	631	-
2019	8,230	-	1,646	6,584	-
				\$ 42,340	\$ 56,618

City of Princeton, West Virginia Firemen's Pension and Relief Fund
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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	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Thereafter	
Prior	\$ -	-	\$ -	-	-	-	-	-	-	-	-	-	-	-	-	
2015	38,939	4.763475	-	-	8,174	8,174	8,174	8,174	6,243	-	-	-	-	-	-	
2016	175,515	4.769554	-	-	-	36,799	36,799	36,799	36,799	28,319	-	-	-	-	-	
2017	(167,705)	4.529104	-	-	-	-	(37,028)	(37,028)	(37,028)	(37,028)	(19,593)	-	-	-	-	
2018	(15,053)	3.903196	-	-	-	-	-	(3,857)	(3,857)	(3,857)	(3,482)	-	-	-	-	
2019	(60,333)	4	-	-	-	-	-	-	(15,083)	(15,083)	(15,083)	(15,084)	-	-	-	
Net increase (decrease) in pension expense									\$ (12,926)	\$ (27,649)	\$ (38,158)	\$ (15,084)	\$ -	\$ -	\$ -	

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, 2019 (c)	Balances at June 30, 2019	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	\$ -	\$ -	\$ -	\$ -	\$ -
2015	38,939	-	38,939	-	-
2016	175,515	-	147,196	28,319	-
2017	-	167,705	111,084	-	56,621
2018	-	15,053	7,714	-	7,339
2019	-	60,333	15,083	-	45,250
				\$ 28,319	\$ 109,210

City of Princeton, West Virginia Firemen's Pension and Relief Fund
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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	2016	2017	2018	2019	2020	2021	2022	2023	2024	Thereafter
Prior	\$ -		\$ -	-	-	-	-	-	-	-	-	-	-	-	-
2015	433,405	4.763475			\$ 90,985	90,985	90,985	90,985	69,465						
2016	3,010,507	4.769554				\$ 631,193	631,193	631,193	631,193	485,735					
2017	(1,429,349)	4.529104					\$ (315,592)	(315,592)	(315,592)	(315,592)	(166,981)				
2018	41,136	3.903196						\$ 10,539	10,539	10,539	9,519				
2019	29,231	4							\$ 7,308	7,308	7,308	7,307			
Net increase (decrease) in pension expense									\$ 402,913	\$ 187,990	\$ (150,154)	\$ 7,307	\$ -	\$ -	\$ -

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, 2019 (c)	Balances at June 30, 2019	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	\$ -	\$ -	\$ -	\$ -	\$ -
2015	433,405	-	433,405	-	-
2016	3,010,507	-	2,524,772	485,735	-
2017	-	1,429,349	946,776	-	482,573
2018	41,136	-	21,078	20,058	-
2019	29,231	-	7,308	21,923	-
				\$ 527,716	\$ 482,573

City of Princeton, 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

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
2019	\$ 300,073	\$ -	\$ 300,073	\$ 47,562	\$ -	\$ 47,562	\$ 252,511	\$ -	\$ 252,511	\$ 2,644	\$ -	\$ 2,644	\$ 115,225	\$ -	\$ 115,225	\$ 136,710	\$ -	\$ 136,710
2020	\$ 297,790	\$ 32,490	\$ 330,280	\$ 47,999	\$ 6,060	\$ 54,059	\$ 249,791	\$ 26,430	\$ 276,221	\$ 2,791	\$ -	\$ 2,791	\$ 96,273	\$ 27,018	\$ 123,291	\$ 145,654	\$ -	\$ 145,654
2021	\$ 289,649	\$ 58,720	\$ 348,369	\$ 47,015	\$ 10,958	\$ 57,973	\$ 242,634	\$ 47,762	\$ 290,396	\$ 2,868	\$ -	\$ 2,868	\$ 83,096	\$ 48,825	\$ 131,921	\$ 149,116	\$ -	\$ 149,116
2022	\$ 279,787	\$ 90,753	\$ 370,540	\$ 45,690	\$ 16,946	\$ 62,636	\$ 234,097	\$ 73,807	\$ 307,904	\$ 2,849	\$ 190	\$ 3,039	\$ 65,516	\$ 75,639	\$ 141,155	\$ 153,156	\$ -	\$ 153,156
2023	\$ 277,424	\$ 116,537	\$ 393,961	\$ 45,383	\$ 21,772	\$ 67,155	\$ 232,041	\$ 94,765	\$ 326,806	\$ 2,927	\$ 196	\$ 3,123	\$ 53,966	\$ 97,070	\$ 151,036	\$ 157,308	\$ -	\$ 157,308
2024	\$ 278,046	\$ 139,410	\$ 417,456	\$ 45,500	\$ 26,056	\$ 71,556	\$ 232,546	\$ 113,354	\$ 345,900	\$ 2,904	\$ 305	\$ 3,209	\$ 45,428	\$ 116,181	\$ 161,609	\$ 161,573	\$ -	\$ 161,573
2025	\$ 268,032	\$ 160,525	\$ 428,557	\$ 44,143	\$ 30,016	\$ 74,159	\$ 223,889	\$ 130,509	\$ 354,398	\$ 2,984	\$ 313	\$ 3,297	\$ 39,196	\$ 133,726	\$ 172,922	\$ 167,704	\$ -	\$ 167,704
2026	\$ 251,695	\$ 196,764	\$ 448,459	\$ 41,913	\$ 36,821	\$ 78,734	\$ 209,782	\$ 159,943	\$ 369,725	\$ 3,066	\$ 424	\$ 3,490	\$ 21,101	\$ 163,926	\$ 185,027	\$ 172,250	\$ -	\$ 172,250
2027	\$ 244,227	\$ 228,322	\$ 472,549	\$ 41,000	\$ 42,751	\$ 83,751	\$ 203,227	\$ 185,571	\$ 388,798	\$ 3,038	\$ 548	\$ 3,586	\$ 7,731	\$ 190,248	\$ 197,979	\$ 176,921	\$ -	\$ 176,921
2028	\$ 240,457	\$ 257,786	\$ 498,243	\$ 40,611	\$ 48,290	\$ 88,901	\$ 199,846	\$ 209,496	\$ 409,342	\$ 3,122	\$ 563	\$ 3,685	\$ -	\$ 211,838	\$ 211,838	\$ 178,838	\$ 2,883	\$ 181,721
2029	\$ 238,117	\$ 286,221	\$ 524,338	\$ 40,419	\$ 53,638	\$ 94,057	\$ 197,698	\$ 232,583	\$ 430,281	\$ 3,089	\$ 697	\$ 3,786	\$ -	\$ 226,667	\$ 226,667	\$ 175,528	\$ 11,789	\$ 187,317
2030	\$ 231,644	\$ 314,233	\$ 545,877	\$ 39,762	\$ 58,910	\$ 98,672	\$ 191,882	\$ 255,323	\$ 447,205	\$ 3,174	\$ 716	\$ 3,890	\$ -	\$ 242,534	\$ 242,534	\$ 173,214	\$ 19,187	\$ 192,401
2031	\$ 219,812	\$ 349,952	\$ 569,764	\$ 38,457	\$ 65,637	\$ 104,094	\$ 181,355	\$ 284,315	\$ 465,670	\$ 3,261	\$ 736	\$ 3,997	\$ -	\$ 259,511	\$ 259,511	\$ 165,758	\$ 31,867	\$ 197,625
2032	\$ 204,410	\$ 384,995	\$ 589,405	\$ 36,618	\$ 72,240	\$ 108,858	\$ 167,792	\$ 312,755	\$ 480,547	\$ 3,222	\$ 885	\$ 4,107	\$ -	\$ 277,677	\$ 277,677	\$ 160,069	\$ 42,923	\$ 202,992
2033	\$ 180,701	\$ 429,333	\$ 610,034	\$ 33,690	\$ 80,602	\$ 114,292	\$ 147,011	\$ 348,731	\$ 495,742	\$ 3,311	\$ 909	\$ 4,220	\$ -	\$ 297,114	\$ 297,114	\$ 148,221	\$ 60,286	\$ 208,507
2034	\$ 180,418	\$ 472,394	\$ 652,812	\$ 33,827	\$ 88,725	\$ 122,552	\$ 146,591	\$ 383,669	\$ 530,260	\$ 3,266	\$ 1,070	\$ 4,336	\$ -	\$ 317,912	\$ 317,912	\$ 145,570	\$ 75,365	\$ 220,935
2035	\$ 173,869	\$ 508,267	\$ 682,136	\$ 33,018	\$ 95,489	\$ 128,507	\$ 140,851	\$ 412,778	\$ 553,629	\$ 3,356	\$ 1,099	\$ 4,455	\$ -	\$ 340,166	\$ 340,166	\$ 144,033	\$ 82,896	\$ 226,929
2036	\$ 166,266	\$ 552,640	\$ 718,906	\$ 32,039	\$ 103,865	\$ 135,904	\$ 134,227	\$ 448,775	\$ 593,002	\$ 3,448	\$ 1,130	\$ 4,578	\$ -	\$ 363,978	\$ 363,978	\$ 137,174	\$ 95,913	\$ 233,087
2037	\$ 165,015	\$ 592,781	\$ 757,796	\$ 32,056	\$ 111,441	\$ 143,497	\$ 132,959	\$ 481,340	\$ 614,299	\$ 3,248	\$ 1,456	\$ 4,704	\$ -	\$ 389,456	\$ 389,456	\$ 135,364	\$ 104,051	\$ 239,415
2038	\$ 156,967	\$ 632,350	\$ 789,317	\$ 30,711	\$ 118,910	\$ 149,621	\$ 126,256	\$ 513,440	\$ 639,696	\$ 3,337	\$ 1,496	\$ 4,833	\$ -	\$ 416,718	\$ 416,718	\$ 136,274	\$ 109,643	\$ 245,917
2039	\$ 138,052	\$ 681,438	\$ 819,490	\$ 27,343	\$ 128,184	\$ 155,527	\$ 110,709	\$ 553,254	\$ 663,963	\$ 3,429	\$ 1,537	\$ 4,966	\$ -	\$ 445,888	\$ 445,888	\$ 134,305	\$ 121,214	\$ 255,519
2040	\$ 119,689	\$ 734,793	\$ 854,482	\$ 24,148	\$ 138,269	\$ 162,417	\$ 95,541	\$ 596,524	\$ 692,065	\$ 3,523	\$ 1,580	\$ 5,103	\$ -	\$ 477,100	\$ 477,100	\$ 128,182	\$ 134,278	\$ 262,460
2041	\$ 106,145	\$ 784,176	\$ 890,321	\$ 21,818	\$ 147,624	\$ 169,442	\$ 84,327	\$ 636,552	\$ 720,879	\$ 3,455	\$ 1,788	\$ 5,243	\$ -	\$ 510,497	\$ 510,497	\$ 127,584	\$ 142,008	\$ 269,592
2042	\$ 95,467	\$ 827,050	\$ 922,517	\$ 20,019	\$ 155,789	\$ 175,808	\$ 75,448	\$ 671,261	\$ 746,709	\$ 3,550	\$ 1,837	\$ 5,387	\$ -	\$ 546,232	\$ 546,232	\$ 135,116	\$ 141,803	\$ 276,919
2043	\$ 89,316	\$ 863,412	\$ 952,728	\$ 19,000	\$ 162,752	\$ 181,752	\$ 70,316	\$ 700,660	\$ 770,976	\$ 3,474	\$ 2,061	\$ 5,535	\$ -	\$ 584,468	\$ 584,468	\$ 157,413	\$ 133,844	\$ 291,257
2044	\$ 78,559	\$ 898,717	\$ 977,276	\$ 17,007	\$ 169,531	\$ 186,538	\$ 61,552	\$ 729,186	\$ 790,738	\$ 3,570	\$ 2,117	\$ 5,687	\$ -	\$ 625,381	\$ 625,381	\$ 177,025	\$ 122,148	\$ 299,173
2045	\$ 60,222	\$ 941,868	\$ 1,002,090	\$ 13,585	\$ 177,804	\$ 191,389	\$ 46,637	\$ 764,064	\$ 810,701	\$ 3,668	\$ 2,175	\$ 5,843	\$ -	\$ 669,158	\$ 669,158	\$ 193,223	\$ 114,083	\$ 307,306
2046	\$ 56,293	\$ 986,044	\$ 1,042,337	\$ 12,834	\$ 186,266	\$ 199,100	\$ 43,459	\$ 799,778	\$ 843,237	\$ 3,580	\$ 2,424	\$ 6,004	\$ -	\$ 715,999	\$ 715,999	\$ 211,663	\$ 104,000	\$ 315,663
2047	\$ 48,889	\$ 1,027,491	\$ 1,076,380	\$ 11,263	\$ 194,216	\$ 205,479	\$ 37,626	\$ 833,275	\$ 870,901	\$ 3,678	\$ 2,673	\$ 6,351	\$ -	\$ 766,119	\$ 766,119	\$ 258,285	\$ 88,371	\$ 346,656
2048	\$ 34,585	\$ 1,072,629	\$ 1,107,214	\$ 8,034	\$ 202,877	\$ 210,911	\$ 26,551	\$ 869,752	\$ 896,303	\$ 3,580	\$ 2,946	\$ 6,526	\$ -	\$ 819,747	\$ 819,747	\$ 283,776	\$ 72,305	\$ 356,081
2049	\$ 23,303	\$ 1,119,908	\$ 1,143,211	\$ 5,387	\$ 211,946	\$ 217,333	\$ 17,916	\$ 907,962	\$ 925,878	\$ 3,678	\$ 3,027	\$ 6,705	\$ -	\$ 877,129	\$ 877,129	\$ 311,701	\$ 54,064	\$ 365,765
2050	\$ 16,827	\$ 1,166,809	\$ 1,183,636	\$ 3,892	\$ 220,933	\$ 224,825	\$ 12,935	\$ 945,876	\$ 958,811	\$ 3,569	\$ 3,320	\$ 6,889	\$ -	\$ 938,528	\$ 938,528	\$ 343,999	\$ 31,716	\$ 375,715
2051	\$ 12,050	\$ 1,215,238	\$ 1,227,288	\$ 2,791	\$ 230,205	\$ 232,996	\$ 9,259	\$ 985,033	\$ 994,292	\$ 3,667	\$ 3,411	\$ 7,078	\$ -	\$ 1,004,225	\$ 1,004,225	\$ 551,218	\$ 6,138	\$ 557,356
2052	\$ 8,645	\$ 1,264,736	\$ 1,273,381	\$ 2,005	\$ 239,677	\$ 241,682	\$ 6,640	\$ 1,025,059	\$ 1,031,699	\$ 3,768	\$ 3,505	\$ 7,273	\$ 23,147	\$ 1,051,374	\$ 1,074,521	\$ 572,630	\$ -	\$ 572,630
2053	\$ 6,168	\$ 1,315,033	\$ 1,321,201	\$ 1,433	\$ 249,299	\$ 250,732	\$ 4,735	\$ 1,065,734	\$ 1,070,469	\$ 3,644	\$ 4,043	\$ 7,687	\$ 56,245	\$ 1,093,492	\$ 1,149,737	\$ 588,324	\$ -	\$ 588,324
2054	\$ 3,572	\$ 1,366,118	\$ 1,369,690	\$ 851	\$ 259,069	\$ 259,920	\$ 2,721	\$ 1,107,049	\$ 1,109,770	\$ 3,744	\$ 4,154	\$ 7,898	\$ 94,381	\$ 1,135,838	\$ 1,230,219	\$ 604,449	\$ -	\$ 604,449
2055	\$ 2,399	\$ 1,418,372	\$ 1,420,771	\$ 571	\$ 269,060	\$ 269,631	\$ 1,828	\$ 1,149,312	\$ 1,151,140	\$ 3,607	\$ 4,508	\$ 8,115	\$ 136,939	\$ 1,179,395	\$ 1,316,334	\$ 621,018	\$ -	\$ 621,018
2056	\$ 1,610	\$ 1,472,445	\$ 1,474,055	\$ 383	\$ 279,386	\$ 279,769	\$ 1,227	\$ 1,193,059	\$ 1,194,286	\$ 3,706	\$ 4,632	\$ 8,338	\$ 184,238	\$ 1,224,239	\$ 1,408,477	\$ 1,513,247	\$ -	\$ 1,513,247
2057	\$ 641	\$ 1,530,314	\$ 1,530,955	\$ 157	\$ 290,421	\$ 290,578	\$ 484	\$ 1,239,893	\$ 1,240,377	\$ 3,808	\$ 4,759	\$ 8,567	\$ 234,827	\$ 1,272,243	\$ 1,507,070	\$ 1,555,571	\$ -	\$ 1,555,571
2058	\$ -	\$ 1,591,617	\$ 1,591,617	\$ -	\$ 302,104	\$ 302,104	\$ -	\$ 1,289,513	\$ 1,289,513	\$ 3,652	\$ 5,151	\$ 8,803	\$ 289,206	\$ 1,323,359	\$ 1,612,565	\$ 1,599,059	\$ -	\$ 1,599,059
2059	\$ -	\$ 1,655,800	\$ 1,655,800	\$ -	\$ 314,325	\$ 314,325	\$ -	\$ 1,341,475	\$ 1,341,475	\$ 3,752	\$ 5,293	\$ 9,045	\$ 348,826	\$ 1,376,619	\$ 1,725,445	\$ 1,643,743	\$ -	\$ 1,643,743

City of Princeton, 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

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
2019	\$ 11,439,828	\$ -	\$ 11,439,828	\$ 2,948,777	25.78%	\$ 48,620	\$ 251,935	\$ 371,694	\$ 2,644	\$ 131,053
2020	\$ 11,893,163	\$ -	\$ 11,893,163	\$ 3,006,047	25.28%	\$ 49,067	\$ 241,927	\$ 393,706	\$ 2,791	\$ 132,924
2021	\$ 12,337,079	\$ 33,776	\$ 12,370,855	\$ 3,033,468	24.59%	\$ 48,061	\$ 232,212	\$ 417,745	\$ 2,868	\$ 133,383
2022	\$ 12,767,890	\$ 96,065	\$ 12,863,955	\$ 3,026,511	23.70%	\$ 46,707	\$ 218,672	\$ 440,029	\$ 2,849	\$ 132,243
2023	\$ 13,185,002	\$ 193,978	\$ 13,378,980	\$ 2,981,255	22.61%	\$ 46,393	\$ 211,274	\$ 483,485	\$ 2,927	\$ 129,066
2024	\$ 13,573,991	\$ 322,337	\$ 13,896,328	\$ 2,881,576	21.23%	\$ 46,512	\$ 207,001	\$ 521,547	\$ 2,904	\$ 123,642
2025	\$ 13,942,226	\$ 479,215	\$ 14,421,441	\$ 2,734,280	19.61%	\$ 45,125	\$ 206,900	\$ 553,518	\$ 2,984	\$ 116,267
2026	\$ 14,283,884	\$ 663,868	\$ 14,947,752	\$ 2,546,069	17.82%	\$ 42,846	\$ 193,351	\$ 585,992	\$ 3,066	\$ 106,721
2027	\$ 14,590,648	\$ 893,069	\$ 15,483,717	\$ 2,299,929	15.76%	\$ 41,912	\$ 184,652	\$ 636,964	\$ 3,038	\$ 94,297
2028	\$ 14,851,306	\$ 1,163,806	\$ 16,015,112	\$ 1,980,788	13.34%	\$ 41,515	\$ 178,838	\$ 651,693	\$ 3,122	\$ 79,468
2029	\$ 15,104,698	\$ 1,475,803	\$ 16,580,501	\$ 1,625,794	10.76%	\$ 41,318	\$ 175,528	\$ 664,523	\$ 3,089	\$ 63,130
2030	\$ 15,353,931	\$ 1,829,879	\$ 17,183,810	\$ 1,238,159	8.06%	\$ 40,647	\$ 173,214	\$ 680,142	\$ 3,174	\$ 45,271
2031	\$ 15,591,649	\$ 2,227,321	\$ 17,818,970	\$ 813,975	5.22%	\$ 39,313	\$ 165,758	\$ 699,864	\$ 3,261	\$ 25,546
2032	\$ 15,807,539	\$ 2,677,757	\$ 18,485,296	\$ 341,467	2.16%	\$ 37,433	\$ 160,069	\$ 730,214	\$ 3,222	\$ 3,440
2033	\$ 15,986,024	\$ 3,182,420	\$ 19,168,444	\$ -	0.00%	\$ 34,440	\$ 148,221	\$ 763,983	\$ 3,311	\$ -
2034	\$ 16,113,244	\$ 3,753,113	\$ 19,866,357	\$ -	0.00%	\$ 34,580	\$ 145,570	\$ 768,367	\$ 3,266	\$ -
2035	\$ 16,241,412	\$ 4,391,146	\$ 20,632,558	\$ -	0.00%	\$ 33,753	\$ 144,033	\$ 789,732	\$ 3,356	\$ -
2036	\$ 16,346,663	\$ 5,091,712	\$ 21,438,375	\$ -	0.00%	\$ 32,752	\$ 137,174	\$ 808,106	\$ 3,448	\$ -
2037	\$ 16,429,922	\$ 5,866,057	\$ 22,295,979	\$ -	0.00%	\$ 32,769	\$ 135,364	\$ 816,466	\$ 3,248	\$ -
2038	\$ 16,507,075	\$ 6,712,449	\$ 23,219,524	\$ -	0.00%	\$ 31,394	\$ 136,274	\$ 836,872	\$ 3,337	\$ -
2039	\$ 16,558,429	\$ 7,633,080	\$ 24,191,509	\$ -	0.00%	\$ 27,951	\$ 134,305	\$ 861,650	\$ 3,429	\$ -
2040	\$ 16,566,999	\$ 8,640,817	\$ 25,207,816	\$ -	0.00%	\$ 24,685	\$ 128,182	\$ 884,942	\$ 3,523	\$ -
2041	\$ 16,532,955	\$ 9,746,271	\$ 26,279,226	\$ -	0.00%	\$ 22,304	\$ 127,584	\$ 901,575	\$ 3,455	\$ -
2042	\$ 16,466,222	\$ 10,944,216	\$ 27,410,438	\$ -	0.00%	\$ 20,464	\$ 135,116	\$ 914,005	\$ 3,550	\$ -
2043	\$ 16,372,621	\$ 12,219,299	\$ 28,591,920	\$ -	0.00%	\$ 19,423	\$ 157,413	\$ 919,937	\$ 3,474	\$ -
2044	\$ 16,262,316	\$ 13,550,142	\$ 29,812,458	\$ -	0.00%	\$ 17,385	\$ 177,025	\$ 936,404	\$ 3,570	\$ -
2045	\$ 16,118,973	\$ 14,927,058	\$ 31,046,031	\$ -	0.00%	\$ 13,887	\$ 193,223	\$ 957,740	\$ 3,668	\$ -
2046	\$ 15,928,207	\$ 16,355,011	\$ 32,283,218	\$ -	0.00%	\$ 13,120	\$ 211,663	\$ 959,235	\$ 3,580	\$ -
2047	\$ 15,723,222	\$ 17,837,164	\$ 33,560,386	\$ -	0.00%	\$ 11,514	\$ 258,285	\$ 971,526	\$ 3,678	\$ -
2048	\$ 15,488,711	\$ 19,370,973	\$ 34,859,684	\$ -	0.00%	\$ 8,213	\$ 283,776	\$ 996,245	\$ 3,580	\$ -
2049	\$ 15,203,430	\$ 20,956,724	\$ 36,160,154	\$ -	0.00%	\$ 5,507	\$ 311,701	\$ 1,009,285	\$ 3,678	\$ -
2050	\$ 14,880,192	\$ 22,592,075	\$ 37,472,267	\$ -	0.00%	\$ 3,979	\$ 343,999	\$ 1,013,184	\$ 3,569	\$ -
2051	\$ 14,531,655	\$ 24,276,803	\$ 38,808,458	\$ -	0.00%	\$ 2,853	\$ 551,218	\$ 1,013,213	\$ 3,667	\$ -
2052	\$ 14,162,412	\$ 26,015,943	\$ 40,178,355	\$ -	0.00%	\$ 2,050	\$ 595,777	\$ 1,010,089	\$ 3,768	\$ -
2053	\$ 13,776,189	\$ 27,812,667	\$ 41,588,856	\$ -	0.00%	\$ 1,465	\$ 644,569	\$ 1,004,646	\$ 3,644	\$ -
2054	\$ 13,375,561	\$ 29,669,359	\$ 43,044,920	\$ -	0.00%	\$ 870	\$ 698,830	\$ 998,362	\$ 3,744	\$ -
2055	\$ 12,960,616	\$ 31,585,758	\$ 44,546,374	\$ -	0.00%	\$ 584	\$ 757,957	\$ 989,027	\$ 3,607	\$ -
2056	\$ 12,535,315	\$ 33,560,401	\$ 46,095,716	\$ -	0.00%	\$ 392	\$ 1,697,485	\$ 978,179	\$ 3,706	\$ 15,933
2057	\$ 12,101,141	\$ 35,595,055	\$ 47,696,196	\$ 731,925	6.05%	\$ 160	\$ 1,790,398	\$ 966,707	\$ 3,808	\$ 51,185
2058	\$ 11,658,144	\$ 37,695,569	\$ 49,353,713	\$ 1,603,153	13.75%	\$ -	\$ 1,888,265	\$ 953,666	\$ 3,652	\$ 92,858
2059	\$ 11,207,873	\$ 39,868,968	\$ 51,076,841	\$ 2,626,958	23.44%	\$ -	\$ 1,992,569	\$ 938,353	\$ 3,752	\$ 141,588

City of Princeton, 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

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	
2019	\$ 371,694	\$ -	\$ 363,603	\$ -	\$ 371,694	
2020	\$ 393,706	\$ -	\$ 368,551	\$ -	\$ 393,706	
2021	\$ 417,745	\$ -	\$ 374,214	\$ -	\$ 417,745	
2022	\$ 440,029	\$ -	\$ 377,202	\$ -	\$ 440,029	
2023	\$ 483,485	\$ -	\$ 396,606	\$ -	\$ 483,485	
2024	\$ 521,547	\$ -	\$ 409,406	\$ -	\$ 521,547	
2025	\$ 553,518	\$ -	\$ 415,792	\$ -	\$ 553,518	
2026	\$ 585,992	\$ -	\$ 421,230	\$ -	\$ 585,992	
2027	\$ 636,964	\$ -	\$ 438,154	\$ -	\$ 636,964	
2028	\$ 651,693	\$ -	\$ 428,981	\$ -	\$ 651,693	
2029	\$ 664,523	\$ -	\$ 418,590	\$ -	\$ 664,523	
2030	\$ 680,142	\$ -	\$ 409,980	\$ -	\$ 680,142	
2031	\$ 699,864	\$ -	\$ 403,701	\$ -	\$ 699,864	
2032	\$ -	\$ 730,214	\$ -	\$ 481,673	\$ 730,214	
2033	\$ -	\$ 763,983	\$ -	\$ 488,653	\$ 763,983	
2034	\$ -	\$ 768,367	\$ -	\$ 476,542	\$ 768,367	
2035	\$ -	\$ 789,732	\$ -	\$ 474,927	\$ 789,732	
2036	\$ -	\$ 808,106	\$ -	\$ 471,227	\$ 808,106	
2037	\$ -	\$ 816,466	\$ -	\$ 461,653	\$ 816,466	
2038	\$ -	\$ 836,872	\$ -	\$ 458,829	\$ 836,872	
2039	\$ -	\$ 861,650	\$ -	\$ 458,077	\$ 861,650	
2040	\$ -	\$ 884,942	\$ -	\$ 456,181	\$ 884,942	
2041	\$ -	\$ 901,575	\$ -	\$ 450,650	\$ 901,575	
2042	\$ -	\$ 914,005	\$ -	\$ 442,997	\$ 914,005	
2043	\$ -	\$ 919,937	\$ -	\$ 432,340	\$ 919,937	
2044	\$ -	\$ 936,404	\$ -	\$ 426,722	\$ 936,404	
2045	\$ -	\$ 957,740	\$ -	\$ 423,199	\$ 957,740	
2046	\$ -	\$ 959,235	\$ -	\$ 410,995	\$ 959,235	
2047	\$ -	\$ 971,526	\$ -	\$ 403,628	\$ 971,526	
2048	\$ -	\$ 996,245	\$ -	\$ 401,336	\$ 996,245	
2049	\$ -	\$ 1,009,285	\$ -	\$ 394,249	\$ 1,009,285	
2050	\$ -	\$ 1,013,184	\$ -	\$ 383,760	\$ 1,013,184	
2051	\$ -	\$ 1,013,213	\$ -	\$ 372,124	\$ 1,013,213	
2052	\$ -	\$ 1,010,089	\$ -	\$ 359,717	\$ 1,010,089	
2053	\$ -	\$ 1,004,646	\$ -	\$ 346,920	\$ 1,004,646	
2054	\$ -	\$ 998,362	\$ -	\$ 334,287	\$ 998,362	
2055	\$ -	\$ 989,027	\$ -	\$ 321,111	\$ 989,027	
2056	\$ -	\$ 978,179	\$ -	\$ 307,950	\$ 978,179	
2057	\$ -	\$ 966,707	\$ -	\$ 295,102	\$ 966,707	
2058	\$ 953,666	\$ -	\$ 167,611	\$ -	\$ 953,666	
2059	\$ 938,353	\$ -	\$ 157,818	\$ -	\$ 938,353	