



**Municipal Pensions
Oversight Board**

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

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

Bolton

Submitted by:

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October 21, 2019

John Young
City Treasurer
City of Nitro
P.O. Box 733
Nitro, WV 25143

Captain Dave Richardson, III
Pension Board Secretary
City of Nitro, West Virginia
Policemen's Pension and Relief Fund

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

Dear John

The following report contains the GASB 67 and GASB 68 actuarial information for the City of Nitro Policemen'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 included calculations are based on a blended discount rate of 4.22%. The plan's expected gross rate of investment return of 5.0% 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. 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.

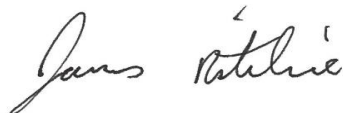
The calculation of actuarial liabilities for valuation purposes is based on a current estimate of future benefit payments. The calculation includes a computation of the "present value" of those estimated future benefit payments using an assumed discount rate; the higher the discount rate assumption, 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 Nitro, West Virginia Policemen'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	\$ 13,909,848
Plan fiduciary net position	(4,456,305)
Employer's net pension liability	<u>\$ 9,453,543</u>
Plan fiduciary net position as a percentage of the total pension liability	32.04%

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)	4.0692%
Single discount rate (EOY)	4.2200%
Investment rate of return	5.00 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	2068
Year assets are expected to be depleted for a closed plan	2044

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 3.22%	Current Discount Rate 4.22%	1% Increase 5.22%
Employer's net pension liability	\$ 12,314,992	\$ 9,453,543	\$ 7,258,213

City of Nitro, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
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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	\$ 14,204,746	\$ 4,135,800	\$ 10,068,946
Changes for the year:			
Service cost	618,647		618,647
Interest	570,802		570,802
Changes of benefit terms	-		-
Differences between expected and actual experience	(750,724)		(750,724)
Changes of assumptions	(378,869)		(378,869)
Contributions - employer (including Premium Tax Allocation)		351,077	(351,077)
Contributions - member		91,478	(91,478)
Net investment income		243,964	(243,964)
Benefit payments, including refunds of member contributions	(354,754)	(354,754)	-
Administrative expense		(11,260)	11,260
Other		-	-
Net Changes	<u>(294,898)</u>	<u>320,505</u>	<u>(615,403)</u>
Balances at 6/30/19	<u>\$ 13,909,848</u>	<u>\$ 4,456,305</u>	<u>\$ 9,453,543</u>
Return on Investments		5.8%	

City of Nitro, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
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Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2019

Note	Description	Amount
A	Service Cost	\$ 618,647
B	Interest on the total pension liability	570,802
A	Changes of benefit terms	-
C	Differences between expected and actual experience	(63,909)
C	Changes of assumptions	584,387
A	Employee contributions	(91,478)
D	Projected earnings on pension plan investments	(208,703)
C	Differences between expected and actual earnings on plan investments	(60,096)
A	Pension plan administrative expense	11,260
A	Other changes in fiduciary net position	-
Total Pension Expense		\$ 1,360,910

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	\$ 14,204,746	100%	4.07%	\$ 578,020
Service Cost (End of Year)	618,647	0%	4.07%	-
Benefit payments, including refunds of employee contributions	(354,754)	50%	4.07%	(7,218)
Total interest on the total pension liability				\$ 570,802

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	\$ 4,135,800	100%	5.00%	\$ 206,790
Employer contributions	351,077	50%	5.00%	8,777
Employee contributions	91,478	50%	5.00%	2,287
Benefit payments, including refunds of employee contributions	(354,754)	50%	5.00%	(8,869)
Administrative expense and other	(11,260)	50%	5.00%	(282)
Total Projected Earnings				\$ 208,703

City of Nitro, West Virginia Policemen’s Pension and Relief Fund
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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	\$ 607,333	\$ 1,081,688
Changes of assumptions	1,928,150	1,543,242
Net difference between projected and actual earnings on pension plan investments	-	188,732
Total	\$ 2,535,483	\$ 2,813,662

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	\$ 447,952
2021	398,847
2022	(487,932)
2023	(324,345)
2024	(151,328)
Thereafter	(161,373)

City of Nitro, West Virginia Policemen'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	\$ 618,647	\$ 598,321	\$ 711,164	\$ 314,562	\$ 285,508	\$ 255,694	\$ -	\$ -	\$ -	\$ -
Interest	570,802	547,497	448,588	487,352	466,748	438,033	-	-	-	-
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(750,724)	830,663	(777,301)	(37,232)	200,889	-	-	-	-	-
Changes of assumptions	(378,869)	(130,855)	(2,064,480)	5,255,570	656,653	-	-	-	-	-
Benefit payments, including refunds of member contributions	(354,754)	(285,165)	(289,927)	(289,815)	(318,959)	(287,238)	-	-	-	-
Net change in total pension liability	(294,898)	1,560,461	(1,971,956)	5,730,437	1,290,839	406,489	-	-	-	-
Total pension liability - beginning	14,204,746	12,644,285	14,616,241	8,885,804	7,594,965	7,188,476	-	-	-	-
Total pension liability - ending (a)	\$ 13,909,848	\$ 14,204,746	\$ 12,644,285	\$ 14,616,241	\$ 8,885,804	\$ 7,594,965	\$ -	\$ -	\$ -	\$ -
Plan fiduciary net position	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Contributions - employer (including Premium Tax Allocation)	\$ 351,077	\$ 330,950	\$ 315,828	\$ 317,221	\$ 248,577	\$ 192,256	\$ -	\$ -	\$ -	\$ -
Contributions - member	91,478	89,265	92,460	79,333	75,139	76,496	-	-	-	-
Net investment income	243,964	287,729	349,585	155,340	110,431	287,530	-	-	-	-
Benefit payments, including refunds of member contributions	(354,754)	(285,165)	(289,927)	(289,815)	(318,959)	(287,238)	-	-	-	-
Administrative expense	(11,260)	(4,203)	(2,400)	(652)	(2,400)	(2,400)	-	-	-	-
Other	-	-	-	1,992	-	-	-	-	-	-
Net change in plan fiduciary net position	\$ 320,505	\$ 418,576	\$ 465,546	\$ 263,419	\$ 112,788	\$ 266,644	\$ -	\$ -	\$ -	\$ -
Plan fiduciary net position - beginning	4,135,800	3,717,223	3,251,677	2,988,258	2,875,470	2,608,826	-	-	-	-
Plan fiduciary net position - ending (b)	\$ 4,456,305	\$ 4,135,800	\$ 3,717,223	\$ 3,251,677	\$ 2,988,258	\$ 2,875,470	\$ -	\$ -	\$ -	\$ -
Employer's net pension liability - ending (a)-(b)	\$ 9,453,543	\$ 10,068,946	\$ 8,927,062	\$ 11,364,564	\$ 5,897,546	\$ 4,719,495	\$ -	\$ -	\$ -	\$ -
Plan fiduciary net position as a percentage of the total pension liability	32.04%	29.12%	29.40%	22.25%	33.63%	37.86%	0.00%	0.00%	0.00%	0.00%
Covered payroll	\$ 1,096,302	\$ 1,003,494	\$ 960,443	\$ 878,065	\$ 919,991	\$ 821,706	\$ -	\$ -	\$ -	\$ -
Employer's net pension liability as a percentage of covered payroll	862.31%	1003.39%	929.47%	1294.27%	641.04%	574.35%	0.00%	0.00%	0.00%	0.00%
Expected average remaining service years of all participants	7.00	6.09	6.63	6.02	6.64	-	-	-	-	-

Notes to Schedule:

Benefit changes: There were no changes for FY2019.

Changes of assumptions: The discount rate changed from 4.0692% to 4.2200%.

City of Nitro, West Virginia Policemen's Pension and Relief Fund
 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	\$ 851,980	\$ 760,991	\$ 686,729	\$ 737,278	\$ 501,944	\$ 404,846	\$ 385,045	\$ -	\$ -	\$ -
Contributions in relation to the actuarially determined contribution										
Employer provided	190,276	177,827	166,193	155,321	138,861	60,683	125,227	-	-	-
State provided	160,801	153,124	149,635	161,900	109,716	131,573	283,718	-	-	-
Contribution deficiency (excess)	<u>\$ 500,903</u>	<u>\$ 430,040</u>	<u>\$ 370,901</u>	<u>\$ 420,057</u>	<u>\$ 253,367</u>	<u>\$ 212,590</u>	<u>\$ (23,900)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	\$ 1,096,302	\$ 1,003,494	\$ 960,443	\$ 878,065	\$ 919,991	\$ 821,706	\$ 792,843	\$ -	\$ -	\$ -
Contributions as a percentage of covered employee payroll	32.02%	33.00%	33.00%	36.00%	27.00%	23.00%	52.00%	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	5.00 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

City of Nitro, West Virginia Policemen'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	\$ 62,168	5	\$ 12,434	12,434	12,434	12,434	12,432				
2016	11,987	5		\$ 2,397	2,397	2,397	2,397	2,399			
2017	(203,487)	5			\$ (40,697)	(40,697)	(40,697)	(40,697)	(40,699)		
2018	(135,878)	5				\$ (27,176)	(27,176)	(27,176)	(27,176)	(27,174)	
2019	(35,261)	5					\$ (7,052)	(7,052)	(7,052)	(7,052)	(7,053)
Net increase (decrease) in pension expense							\$ (60,096)	(72,526)	(74,927)	(34,226)	(7,053)

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	\$ 62,168	\$ -	\$ 62,168	\$ -	\$ -
2016	11,987	-	9,588	2,399	-
2017	-	203,487	122,091	-	81,396
2018	-	135,878	54,352	-	81,526
2019	-	35,261	7,052	-	28,209
				\$ 2,399	\$ 191,131

City of Nitro, West Virginia Policemen'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	\$ -		\$ -													
2014	-	1	\$ -													
2015	200,889	6.638436			\$ 30,261	30,261	30,261	30,261	30,261	30,261	19,323					
2016	(37,232)	6.024461				\$ (6,180)	(6,180)	(6,180)	(6,180)	(6,180)	(6,180)	(152)				
2017	(777,301)	6.632187					\$ (117,201)	(117,201)	(117,201)	(117,201)	(117,201)	(117,201)	(74,095)			
2018	830,663	6.087379						\$ 136,457	136,457	136,457	136,457	136,457	136,457	11,921	-	
2019	(750,724)	7							\$ (107,246)	(107,246)	(107,246)	(107,246)	(107,246)	(107,246)	(107,248)	
Net increase (decrease) in pension expense									\$ (63,909)	\$ (63,909)	\$ (74,847)	\$ (88,142)	\$ (44,884)	\$ (95,325)	\$ (107,248)	

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	\$ -	\$ -	\$ -	\$ -	\$ -
2014	-	-	-	-	-
2015	200,889	-	151,305	49,584	-
2016	-	37,232	24,720	-	12,512
2017	-	777,301	351,603	-	425,698
2018	830,663	-	272,914	557,749	-
2019	-	750,724	107,246	-	643,478
				\$ 607,333	\$ 1,081,688

City of Nitro, West Virginia Policemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
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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	\$ -		\$ -	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	1		\$ -											
2015	656,653	6.638436			\$ 98,917	98,917	98,917	98,917	98,917	98,917	63,151				
2016	5,255,570	6.024461				\$ 872,372	872,372	872,372	872,372	872,372	872,372	21,338			
2017	(2,064,480)	6.632187					\$ (311,282)	(311,282)	(311,282)	(311,282)	(311,282)	(311,282)	(196,788)		
2018	(130,855)	6.087379						\$ (21,496)	(21,496)	(21,496)	(21,496)	(21,496)	(21,496)	(1,879)	-
2019	(378,869)	7							\$ (54,124)	(54,124)	(54,124)	(54,124)	(54,124)	\$ (54,124)	(54,125)
Net increase (decrease) in pension expense									\$ 584,387	\$ 584,387	\$ 548,621	\$ (365,564)	\$ (272,408)	\$ (56,003)	\$ (54,125)

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	\$ -	\$ -	\$ -	\$ -	\$ -
2014	-	-	-	-	-
2015	656,653	-	494,585	162,068	-
2016	5,255,570	-	3,489,488	1,766,082	-
2017	-	2,064,480	933,846	-	1,130,634
2018	-	130,855	42,992	-	87,863
2019	-	378,869	54,124	-	324,745
				\$ 1,928,150	\$ 1,543,242

City of Nitro, West Virginia Policemen'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)

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	\$ 484,312	\$ -	\$ 484,312	\$ 92,795	\$ -	\$ 92,795	\$ 391,517	\$ -	\$ 391,517	\$ 2,466	\$ -	\$ 2,466	\$ 190,275	\$ -	\$ 190,275	\$ 160,801	\$ -	\$ 160,801
2020	\$ 499,897	\$ 17,168	\$ 517,065	\$ 95,736	\$ 3,634	\$ 99,370	\$ 404,161	\$ 13,534	\$ 417,695	\$ 2,603	\$ -	\$ 2,603	\$ 189,726	\$ 13,868	\$ 203,594	\$ 175,848	\$ -	\$ 175,848
2021	\$ 511,271	\$ 36,163	\$ 547,434	\$ 97,676	\$ 7,660	\$ 105,336	\$ 413,595	\$ 28,503	\$ 442,098	\$ 2,594	\$ 81	\$ 2,675	\$ 188,558	\$ 29,288	\$ 217,846	\$ 179,952	\$ -	\$ 179,952
2022	\$ 516,626	\$ 55,938	\$ 572,564	\$ 98,644	\$ 11,855	\$ 110,499	\$ 417,982	\$ 44,083	\$ 462,065	\$ 2,665	\$ 164	\$ 2,829	\$ 187,759	\$ 45,336	\$ 233,095	\$ 184,146	\$ -	\$ 184,146
2023	\$ 505,204	\$ 81,332	\$ 586,536	\$ 96,892	\$ 17,248	\$ 114,140	\$ 408,312	\$ 64,084	\$ 472,396	\$ 2,738	\$ 169	\$ 2,907	\$ 183,576	\$ 65,836	\$ 249,412	\$ 188,457	\$ -	\$ 188,457
2024	\$ 489,809	\$ 119,312	\$ 609,121	\$ 94,451	\$ 25,325	\$ 119,776	\$ 395,358	\$ 93,987	\$ 489,345	\$ 2,725	\$ 347	\$ 3,072	\$ 170,216	\$ 96,655	\$ 266,871	\$ 192,886	\$ -	\$ 192,886
2025	\$ 482,282	\$ 152,277	\$ 634,559	\$ 93,540	\$ 32,341	\$ 125,881	\$ 388,742	\$ 119,936	\$ 508,678	\$ 2,800	\$ 444	\$ 3,244	\$ 162,210	\$ 123,342	\$ 285,552	\$ 199,558	\$ -	\$ 199,558
2026	\$ 469,721	\$ 189,328	\$ 659,049	\$ 91,977	\$ 40,235	\$ 132,212	\$ 377,744	\$ 149,093	\$ 526,837	\$ 2,784	\$ 639	\$ 3,423	\$ 152,127	\$ 153,414	\$ 305,541	\$ 204,278	\$ -	\$ 204,278
2027	\$ 451,969	\$ 232,254	\$ 684,223	\$ 89,428	\$ 49,388	\$ 138,816	\$ 362,541	\$ 182,866	\$ 545,407	\$ 2,861	\$ 749	\$ 3,610	\$ 138,798	\$ 188,131	\$ 326,929	\$ 209,127	\$ -	\$ 209,127
2028	\$ 422,537	\$ 277,696	\$ 700,233	\$ 84,592	\$ 59,087	\$ 143,679	\$ 337,945	\$ 218,609	\$ 556,554	\$ 2,940	\$ 769	\$ 3,709	\$ 125,037	\$ 224,777	\$ 349,814	\$ 214,110	\$ -	\$ 214,110
2029	\$ 390,390	\$ 333,705	\$ 724,095	\$ 79,299	\$ 71,409	\$ 150,348	\$ 311,091	\$ 262,656	\$ 573,747	\$ 3,122	\$ 884	\$ 4,006	\$ 104,275	\$ 270,026	\$ 374,301	\$ 220,022	\$ -	\$ 220,022
2030	\$ 371,225	\$ 382,807	\$ 754,032	\$ 76,331	\$ 81,542	\$ 157,873	\$ 294,894	\$ 301,265	\$ 596,159	\$ 3,104	\$ 1,012	\$ 4,116	\$ 90,785	\$ 309,717	\$ 400,502	\$ 225,300	\$ -	\$ 225,300
2031	\$ 348,013	\$ 433,372	\$ 781,385	\$ 72,686	\$ 92,351	\$ 165,037	\$ 275,327	\$ 341,021	\$ 616,348	\$ 3,189	\$ 1,143	\$ 4,332	\$ 77,951	\$ 350,586	\$ 428,537	\$ 230,724	\$ -	\$ 230,724
2032	\$ 328,609	\$ 488,479	\$ 817,088	\$ 69,674	\$ 104,141	\$ 173,815	\$ 258,935	\$ 384,338	\$ 643,273	\$ 3,167	\$ 1,390	\$ 4,557	\$ 63,316	\$ 395,219	\$ 458,535	\$ 236,296	\$ -	\$ 236,296
2033	\$ 308,532	\$ 537,991	\$ 846,523	\$ 66,727	\$ 114,736	\$ 181,463	\$ 241,805	\$ 423,255	\$ 665,060	\$ 3,254	\$ 1,428	\$ 4,682	\$ 55,497	\$ 435,135	\$ 490,632	\$ 242,022	\$ -	\$ 242,022
2034	\$ 310,018	\$ 589,137	\$ 899,155	\$ 67,326	\$ 125,683	\$ 193,009	\$ 242,692	\$ 463,454	\$ 706,146	\$ 3,343	\$ 1,580	\$ 4,923	\$ 48,497	\$ 476,479	\$ 524,976	\$ 255,851	\$ -	\$ 255,851
2035	\$ 313,754	\$ 634,216	\$ 947,970	\$ 68,337	\$ 135,332	\$ 203,669	\$ 245,417	\$ 498,884	\$ 744,301	\$ 3,435	\$ 1,623	\$ 5,058	\$ 48,897	\$ 512,827	\$ 561,724	\$ 262,074	\$ -	\$ 262,074
2036	\$ 258,003	\$ 678,900	\$ 936,903	\$ 58,442	\$ 144,898	\$ 203,340	\$ 199,561	\$ 534,002	\$ 733,563	\$ 3,408	\$ 1,789	\$ 5,197	\$ 52,067	\$ 548,978	\$ 601,045	\$ 268,468	\$ -	\$ 268,468
2037	\$ 246,298	\$ 750,168	\$ 996,466	\$ 56,413	\$ 160,177	\$ 216,590	\$ 189,885	\$ 589,991	\$ 779,876	\$ 3,502	\$ 1,959	\$ 5,461	\$ 36,598	\$ 606,520	\$ 643,118	\$ 275,038	\$ -	\$ 275,038
2038	\$ 228,157	\$ 819,256	\$ 1,047,413	\$ 53,041	\$ 174,990	\$ 228,031	\$ 175,116	\$ 644,266	\$ 819,382	\$ 3,598	\$ 2,013	\$ 5,611	\$ 25,947	\$ 662,189	\$ 688,136	\$ 281,789	\$ -	\$ 281,789
2039	\$ 203,333	\$ 879,854	\$ 1,083,187	\$ 47,619	\$ 187,980	\$ 235,599	\$ 155,714	\$ 691,874	\$ 847,588	\$ 3,565	\$ 2,200	\$ 5,765	\$ 25,146	\$ 711,160	\$ 736,306	\$ 292,098	\$ -	\$ 292,098
2040	\$ 169,716	\$ 959,876	\$ 1,129,592	\$ 40,002	\$ 205,152	\$ 245,154	\$ 129,714	\$ 754,724	\$ 884,438	\$ 3,799	\$ 2,256	\$ 6,055	\$ 12,229	\$ 775,618	\$ 787,847	\$ 299,304	\$ -	\$ 299,304
2041	\$ 144,182	\$ 1,031,277	\$ 1,175,459	\$ 34,252	\$ 220,484	\$ 254,736	\$ 109,930	\$ 810,793	\$ 920,723	\$ 3,764	\$ 2,458	\$ 6,222	\$ 9,722	\$ 833,274	\$ 842,996	\$ 306,708	\$ -	\$ 306,708
2042	\$ 121,922	\$ 1,104,244	\$ 1,226,166	\$ 29,067	\$ 236,188	\$ 265,255	\$ 92,855	\$ 868,056	\$ 960,911	\$ 3,868	\$ 2,664	\$ 6,532	\$ 9,849	\$ 892,157	\$ 902,006	\$ 314,316	\$ -	\$ 314,316
2043	\$ 108,558	\$ 1,168,620	\$ 1,277,178	\$ 26,017	\$ 250,072	\$ 276,089	\$ 82,541	\$ 918,548	\$ 1,001,089	\$ 3,827	\$ 2,885	\$ 6,712	\$ 21,029	\$ 944,117	\$ 965,146	\$ 329,902	\$ -	\$ 329,902
2044	\$ 98,980	\$ 1,230,526	\$ 1,329,506	\$ 23,850	\$ 263,441	\$ 287,291	\$ 75,130	\$ 967,085	\$ 1,042,215	\$ 3,932	\$ 2,965	\$ 6,897	\$ 38,774	\$ 993,932	\$ 1,032,706	\$ 338,121	\$ -	\$ 338,121
2045	\$ 80,194	\$ 1,289,785	\$ 1,369,979	\$ 19,467	\$ 276,268	\$ 295,735	\$ 60,727	\$ 1,013,517	\$ 1,074,244	\$ 4,040	\$ 3,197	\$ 7,237	\$ 63,252	\$ 1,041,743	\$ 1,104,995	\$ 346,565	\$ -	\$ 346,565
2046	\$ 58,237	\$ 1,358,293	\$ 1,416,530	\$ 14,229	\$ 291,113	\$ 305,342	\$ 44,008	\$ 1,067,180	\$ 1,111,188	\$ 4,151	\$ 3,285	\$ 7,436	\$ 85,526	\$ 1,096,819	\$ 1,182,345	\$ 355,242	\$ -	\$ 355,242
2047	\$ 41,663	\$ 1,420,277	\$ 1,461,940	\$ 10,286	\$ 304,564	\$ 314,850	\$ 31,377	\$ 1,115,713	\$ 1,147,090	\$ 4,265	\$ 3,375	\$ 7,640	\$ 118,468	\$ 1,146,641	\$ 1,265,109	\$ 389,408	\$ -	\$ 389,408
2048	\$ 27,171	\$ 1,486,597	\$ 1,513,768	\$ 6,750	\$ 318,960	\$ 325,710	\$ 20,421	\$ 1,167,637	\$ 1,188,058	\$ 4,045	\$ 3,969	\$ 8,014	\$ 153,226	\$ 1,200,441	\$ 1,353,667	\$ 399,193	\$ -	\$ 399,193
2049	\$ 18,026	\$ 1,548,882	\$ 1,566,908	\$ 4,479	\$ 332,502	\$ 336,981	\$ 13,547	\$ 1,216,380	\$ 1,229,927	\$ 4,156	\$ 4,078	\$ 8,234	\$ 197,927	\$ 1,250,497	\$ 1,448,424	\$ 409,247	\$ -	\$ 409,247
2050	\$ 13,017	\$ 1,608,701	\$ 1,621,718	\$ 3,234	\$ 345,524	\$ 348,758	\$ 9,783	\$ 1,263,177	\$ 1,272,960	\$ 4,270	\$ 4,363	\$ 8,633	\$ 251,080	\$ 1,298,734	\$ 1,549,814	\$ 419,577	\$ -	\$ 419,577
2051	\$ 8,648	\$ 1,666,818	\$ 1,675,466	\$ 2,148	\$ 358,187	\$ 360,335	\$ 6,500	\$ 1,308,631	\$ 1,315,131	\$ 4,205	\$ 4,665	\$ 8,870	\$ 312,688	\$ 1,345,613	\$ 1,658,301	\$ 620,114	\$ -	\$ 620,114
2052	\$ 6,032	\$ 1,726,232	\$ 1,732,264	\$ 1,500	\$ 371,123	\$ 372,623	\$ 4,532	\$ 1,355,109	\$ 1,359,641	\$ 4,321	\$ 4,793	\$ 9,114	\$ 381,015	\$ 1,393,367	\$ 1,774,382	\$ 635,972	\$ -	\$ 635,972
2053	\$ 4,154	\$ 1,788,401	\$ 1,792,555	\$ 1,034	\$ 384,645	\$ 385,679	\$ 3,120	\$ 1,403,756	\$ 1,406,876	\$ 4,247	\$ 5,305	\$ 9,552	\$ 454,862	\$ 1,443,727	\$ 1,898,589	\$ 652,265	\$ -	\$ 652,265
2054	\$ 2,788	\$ 1,853,341	\$ 1,856,129	\$ 694	\$ 398,757	\$ 399,451	\$ 2,094	\$ 1,454,584	\$ 1,456,678	\$ 4,364	\$ 5,451	\$ 9,815	\$ 535,534	\$ 1,495,956	\$ 2,031,490	\$ 669,007	\$ -	\$ 669,007
2055	\$ 754	\$ 1,921,922	\$ 1,922,676	\$ 196	\$ 413,639	\$ 413,835	\$ 558	\$ 1,508,283	\$ 1,508,841	\$ 4,280	\$ 5,805	\$ 10,085	\$ 622,359	\$ 1,551,335	\$ 2,173,694	\$ 686,210	\$ -	\$ 686,210
2056	\$ 506	\$ 1,996,158	\$ 1,996,664	\$ 132	\$ 429,722	\$ 429,854	\$ 374	\$ 1,566,436	\$ 1,566,810	\$ 4,398	\$ 6,168	\$ 10,566	\$ 714,566	\$ 1,611,287	\$ 2,325,853	\$ 1,659,779	\$ -	\$ 1,659,779
2057	\$ -	\$ 2,075,683	\$ 2,075,683	\$ -	\$ 446,928	\$ 446,928	\$ -	\$ 1,628,755	\$ 1,628,755	\$ 4,304	\$ 6,553	\$ 10,857	\$ 813,133	\$ 1,675,530	\$ 2,488,663	\$ 1,703,721	\$ -	\$ 1,703,721
2058	\$ -	\$ 2,159,142	\$ 2,159,142	\$ -	\$ 464,984	\$ 464,984	\$ -	\$ 1,694,158	\$ 1,694,158	\$ 4,422	\$ 6,734	\$ 11,156	\$ 920,140	\$ 1,742,729	\$ 2,662,869	\$ 1,748,871	\$ -	\$ 1,748,871
2059	\$ -	\$ 2,242,185	\$ 2,242,185	\$ -	\$ 482,964	\$ 482,964	\$ -	\$ 1,759,221	\$ 1,759,221	\$ 4,316	\$ 7,147	\$ 11,463	\$ 1,039,458	\$ 1,809,812	\$ 2,849,270	\$ 1,795,263	\$ -	\$ 1,795,263

City of Nitro, West Virginia Policemen'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)

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	\$ 11,434,137	\$ -	\$ 11,434,137	\$ 4,456,305	38.97%	\$ 95,087	\$ 351,076	\$ 304,570	\$ 2,466	\$ 226,251
2020	\$ 12,202,103	\$ -	\$ 12,202,103	\$ 4,821,683	39.52%	\$ 98,100	\$ 365,574	\$ 312,462	\$ 2,603	\$ 244,754
2021	\$ 13,016,922	\$ 17,921	\$ 13,034,843	\$ 5,215,046	40.06%	\$ 100,088	\$ 368,510	\$ 322,022	\$ 2,594	\$ 264,308
2022	\$ 13,874,628	\$ 56,399	\$ 13,931,027	\$ 5,623,336	40.53%	\$ 101,080	\$ 371,905	\$ 335,184	\$ 2,665	\$ 284,504
2023	\$ 14,767,355	\$ 117,104	\$ 14,884,459	\$ 6,042,976	40.92%	\$ 99,285	\$ 372,033	\$ 421,346	\$ 2,738	\$ 303,315
2024	\$ 15,604,436	\$ 206,814	\$ 15,811,250	\$ 6,393,526	40.97%	\$ 96,783	\$ 363,102	\$ 464,622	\$ 2,725	\$ 319,492
2025	\$ 16,422,861	\$ 339,837	\$ 16,762,698	\$ 6,705,556	40.83%	\$ 95,850	\$ 361,768	\$ 496,042	\$ 2,800	\$ 334,260
2026	\$ 17,242,108	\$ 512,728	\$ 17,754,836	\$ 6,998,592	40.59%	\$ 94,248	\$ 356,405	\$ 533,260	\$ 2,784	\$ 347,821
2027	\$ 18,050,992	\$ 731,424	\$ 18,782,416	\$ 7,261,022	40.23%	\$ 91,636	\$ 347,925	\$ 586,552	\$ 2,861	\$ 359,350
2028	\$ 18,827,072	\$ 1,004,061	\$ 19,831,133	\$ 7,470,520	39.68%	\$ 86,681	\$ 339,147	\$ 664,460	\$ 2,940	\$ 367,560
2029	\$ 19,531,221	\$ 1,335,727	\$ 20,866,948	\$ 7,596,509	38.89%	\$ 81,257	\$ 324,297	\$ 735,838	\$ 3,122	\$ 371,592
2030	\$ 20,163,682	\$ 1,740,153	\$ 21,903,835	\$ 7,634,694	37.86%	\$ 78,216	\$ 316,085	\$ 787,764	\$ 3,104	\$ 371,941
2031	\$ 20,754,434	\$ 2,213,365	\$ 22,967,799	\$ 7,610,068	36.67%	\$ 74,481	\$ 308,675	\$ 848,274	\$ 3,189	\$ 368,939
2032	\$ 21,288,347	\$ 2,759,946	\$ 24,048,293	\$ 7,510,701	35.28%	\$ 71,395	\$ 299,612	\$ 897,741	\$ 3,167	\$ 362,449
2033	\$ 21,777,893	\$ 3,387,907	\$ 25,165,800	\$ 7,343,249	33.72%	\$ 68,375	\$ 297,519	\$ 945,401	\$ 3,254	\$ 352,771
2034	\$ 22,221,998	\$ 4,095,111	\$ 26,317,109	\$ 7,113,258	32.01%	\$ 68,989	\$ 304,348	\$ 963,157	\$ 3,343	\$ 341,015
2035	\$ 22,671,675	\$ 4,886,768	\$ 27,558,443	\$ 6,861,110	30.26%	\$ 70,025	\$ 310,971	\$ 980,312	\$ 3,435	\$ 328,171
2036	\$ 23,130,180	\$ 5,760,227	\$ 28,890,407	\$ 6,586,530	28.48%	\$ 59,885	\$ 320,535	\$ 1,056,387	\$ 3,408	\$ 312,549
2037	\$ 23,475,118	\$ 6,718,822	\$ 30,193,940	\$ 6,219,704	26.49%	\$ 57,806	\$ 311,636	\$ 1,091,658	\$ 3,502	\$ 293,064
2038	\$ 23,788,870	\$ 7,794,073	\$ 31,582,943	\$ 5,787,050	24.33%	\$ 54,351	\$ 307,736	\$ 1,128,159	\$ 3,598	\$ 270,345
2039	\$ 24,061,859	\$ 8,988,762	\$ 33,050,621	\$ 5,287,725	21.98%	\$ 48,795	\$ 317,244	\$ 1,194,807	\$ 3,565	\$ 243,832
2040	\$ 24,254,139	\$ 10,299,250	\$ 34,553,389	\$ 4,699,224	19.37%	\$ 40,990	\$ 311,533	\$ 1,260,570	\$ 3,799	\$ 212,443
2041	\$ 24,353,348	\$ 11,752,384	\$ 36,105,732	\$ 3,999,821	16.42%	\$ 35,098	\$ 316,430	\$ 1,319,684	\$ 3,764	\$ 175,989
2042	\$ 24,370,133	\$ 13,342,689	\$ 37,712,822	\$ 3,203,891	13.15%	\$ 29,785	\$ 324,165	\$ 1,365,383	\$ 3,868	\$ 135,122
2043	\$ 24,317,557	\$ 15,069,265	\$ 39,386,822	\$ 2,323,712	9.56%	\$ 26,659	\$ 350,931	\$ 1,394,227	\$ 3,827	\$ 90,985
2044	\$ 24,218,763	\$ 16,917,107	\$ 41,135,870	\$ 1,394,233	5.76%	\$ 24,439	\$ 376,895	\$ 1,414,828	\$ 3,932	\$ 44,586
2045	\$ 24,083,863	\$ 18,880,169	\$ 42,964,032	\$ 421,393	1.75%	\$ 19,948	\$ 409,817	\$ 1,461,275	\$ 4,040	\$ -
2046	\$ 23,874,899	\$ 20,950,333	\$ 44,825,232	\$ -	0.00%	\$ 14,580	\$ 440,768	\$ 1,499,999	\$ 4,151	\$ -
2047	\$ 23,592,751	\$ 23,129,544	\$ 46,722,295	\$ -	0.00%	\$ 10,540	\$ 507,876	\$ 1,532,394	\$ 4,265	\$ -
2048	\$ 23,245,898	\$ 25,404,268	\$ 48,650,166	\$ -	0.00%	\$ 6,917	\$ 552,419	\$ 1,554,800	\$ 4,045	\$ -
2049	\$ 22,843,527	\$ 27,774,703	\$ 50,618,230	\$ -	0.00%	\$ 4,590	\$ 607,174	\$ 1,566,110	\$ 4,156	\$ -
2050	\$ 22,399,845	\$ 30,232,533	\$ 52,632,378	\$ -	0.00%	\$ 3,314	\$ 670,657	\$ 1,568,122	\$ 4,270	\$ -
2051	\$ 21,926,658	\$ 32,766,900	\$ 54,693,558	\$ -	0.00%	\$ 2,201	\$ 932,802	\$ 1,567,477	\$ 4,205	\$ -
2052	\$ 21,425,885	\$ 35,368,285	\$ 56,794,170	\$ -	0.00%	\$ 1,537	\$ 1,016,987	\$ 1,562,144	\$ 4,321	\$ -
2053	\$ 20,902,792	\$ 38,033,108	\$ 58,935,900	\$ -	0.00%	\$ 1,060	\$ 1,107,127	\$ 1,554,041	\$ 4,247	\$ -
2054	\$ 20,359,875	\$ 40,762,796	\$ 61,122,671	\$ -	0.00%	\$ 711	\$ 1,204,541	\$ 1,543,705	\$ 4,364	\$ -
2055	\$ 19,798,969	\$ 43,560,987	\$ 63,359,956	\$ -	0.00%	\$ 201	\$ 1,308,569	\$ 1,533,172	\$ 4,280	\$ -
2056	\$ 19,218,675	\$ 46,432,657	\$ 65,651,332	\$ -	0.00%	\$ 135	\$ 2,374,345	\$ 1,518,067	\$ 4,398	\$ 21,041
2057	\$ 18,624,584	\$ 49,389,289	\$ 68,013,873	\$ 873,056	4.69%	\$ -	\$ 2,516,854	\$ 1,502,086	\$ 4,304	\$ 68,606
2058	\$ 18,016,633	\$ 52,447,680	\$ 70,464,313	\$ 1,952,126	10.84%	\$ -	\$ 2,669,011	\$ 1,483,682	\$ 4,422	\$ 126,769
2059	\$ 17,397,143	\$ 55,618,450	\$ 73,015,593	\$ 3,259,801	18.74%	\$ -	\$ 2,834,721	\$ 1,463,758	\$ 4,316	\$ 196,740

City of Nitro, West Virginia Policemen'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)

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	\$ 304,570	\$ -	\$ 297,230	\$ -	\$ 298,343
2020	\$ 312,462	\$ -	\$ 290,411	\$ -	\$ 293,687
2021	\$ 322,022	\$ -	\$ 285,044	\$ -	\$ 290,424
2022	\$ 335,184	\$ -	\$ 282,567	\$ -	\$ 290,061
2023	\$ 421,346	\$ -	\$ 338,288	\$ -	\$ 349,867
2024	\$ 464,622	\$ -	\$ 355,270	\$ -	\$ 370,188
2025	\$ 496,042	\$ -	\$ 361,233	\$ -	\$ 379,228
2026	\$ 533,260	\$ -	\$ 369,845	\$ -	\$ 391,183
2027	\$ 586,552	\$ -	\$ 387,434	\$ -	\$ 412,863
2028	\$ 664,460	\$ -	\$ 417,994	\$ -	\$ 448,773
2029	\$ 735,838	\$ -	\$ 440,854	\$ -	\$ 476,869
2030	\$ 787,764	\$ -	\$ 449,489	\$ -	\$ 489,860
2031	\$ 848,274	\$ -	\$ 460,967	\$ -	\$ 506,140
2032	\$ 897,741	\$ -	\$ 464,617	\$ -	\$ 513,977
2033	\$ 945,401	\$ -	\$ 465,984	\$ -	\$ 519,359
2034	\$ 963,157	\$ -	\$ 452,130	\$ -	\$ 507,700
2035	\$ 980,312	\$ -	\$ 438,269	\$ -	\$ 495,831
2036	\$ 1,056,387	\$ -	\$ 449,791	\$ -	\$ 512,685
2037	\$ 1,091,658	\$ -	\$ 442,675	\$ -	\$ 508,362
2038	\$ 1,128,159	\$ -	\$ 435,691	\$ -	\$ 504,099
2039	\$ 1,194,807	\$ -	\$ 439,458	\$ -	\$ 512,273
2040	\$ 1,260,570	\$ -	\$ 441,567	\$ -	\$ 518,597
2041	\$ 1,319,684	\$ -	\$ 440,262	\$ -	\$ 520,945
2042	\$ 1,365,383	\$ -	\$ 433,816	\$ -	\$ 517,172
2043	\$ 1,394,227	\$ -	\$ 421,887	\$ -	\$ 506,725
2044	\$ -	\$ 1,414,828	\$ -	\$ 644,742	\$ 493,403
2045	\$ -	\$ 1,461,275	\$ -	\$ 645,697	\$ 488,977
2046	\$ -	\$ 1,499,999	\$ -	\$ 642,692	\$ 481,622
2047	\$ -	\$ 1,532,394	\$ -	\$ 636,645	\$ 472,111
2048	\$ -	\$ 1,554,800	\$ -	\$ 626,349	\$ 459,629
2049	\$ -	\$ 1,566,110	\$ -	\$ 611,757	\$ 444,236
2050	\$ -	\$ 1,568,122	\$ -	\$ 593,953	\$ 426,806
2051	\$ -	\$ 1,567,477	\$ -	\$ 575,689	\$ 409,364
2052	\$ -	\$ 1,562,144	\$ -	\$ 556,318	\$ 391,461
2053	\$ -	\$ 1,554,041	\$ -	\$ 536,635	\$ 373,671
2054	\$ -	\$ 1,543,705	\$ -	\$ 516,888	\$ 356,164
2055	\$ -	\$ 1,533,172	\$ -	\$ 497,780	\$ 339,418
2056	\$ -	\$ 1,518,067	\$ -	\$ 477,917	\$ 322,473
2057	\$ -	\$ 1,502,086	\$ -	\$ 458,534	\$ 306,165
2058	\$ 1,483,682	\$ -	\$ 215,955	\$ -	\$ 290,176
2059	\$ 1,463,758	\$ -	\$ 202,910	\$ -	\$ 274,693