

GASB 68 Actuarial Information for the Measurement Period Ending June 30, 2020



Submitted by:

James Ritchie, ASA, EA, FCA, MAAA Senior Consulting Actuary 443.573.3924 jritchie@boltonusa.com Jordan McClane, FSA, EA, FCA, MAAA Actuary 667.218.6935 jmcclane@boltonusa.com



November 10, 2020

Honorable John Syner City Treasurer Town of Belle P.O. Box 697/1100 Dupont Avenue Belle, WV 25015 Chief Robert Glenn
Pension Board Secretary
Town of Belle
Policemen's Pension and Relief Fund

Re: Town of Belle Policemen's Pension and Relief Fund
GASB 68 Actuarial Information for the Measurement Period Ending June 30, 2020

Dear John,

The following report contains the GASB 67 and GASB 68 actuarial information for the Town of Belle Policemen's Pension and Relief Fund to be included in the Town's financial statements for FY 2020. The GASB 67 information has been provided as of June 30, 2020 (the GASB 68 measurement date for FY 2020).

Methodology, Reliance and Certification

This report is prepared for the Town. The report contains the actuarial information to be included with the Town's financial statements for the year ending June 30, 2020 (the Town's fiscal year end date) as required by GASB 68. This information has been prepared for use in the financial statements of the Town. 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, 2019 actuarial valuation rolled forward to June 30, 2020. The methods, assumptions, and participant data used are detailed in the July 1, 2019 actuarial valuation report with the exception of the actuarial cost method. These calculations are based on the Entry Age Normal cost method as required by GASB 67. The calculation of the Actuarially Determined Contribution for the fiscal year ending June 30, 2020 is contained in the July 1, 2018 actuarial valuation report. The discount rate assumption may have changed if a blended rate was used for GASB purposes.

The included calculations assume that the members and the Town will continue to make all required contributions in accordance with the Town'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) and is based on the fund's current funding ratio, liquidity ratio, equity exposure and expected funded status in 15 years.

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.

Methodology, Reliance and Certification (cont.)

This is a deterministic valuation in that it is based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. Other assumptions may be equally valid. The future is uncertain and the plan's actual experience will differ from the assumptions; the differences may be significant or material because the results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions. We may consider that some factors are not material to the valuation of the plan and may not provide a specific assumption for those factors. We may have used other assumptions in the past. We will likely consider changes in assumptions at a future date.

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

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

The cost of this plan is determined by the benefits promised by the plan, the plan's participant population, the investment experience of the plan and many other factors. An actuarial valuation is a budgeting tool for the Town 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 Town. 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 valuation was completed using both proprietary and third-party models (including software and tools). We have tested these models to ensure they are used for their intended purposes, within their known limitations, and without any known material inconsistencies unless otherwise stated.



Honorable John Syner November 10, 2020 Page 3

Methodology, Reliance and Certification (cont.)

The Town 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 Town.

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

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

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

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

The undersigned enrolled actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The July 1, 2019 actuarial valuation report contains information that is integral to the results contained herein and a copy may be provided upon request.

Sincerely,

James Ritchie, ASA, EA, FCA, MAAA

Jordan McClane, FSA, EA, FCA, MAAA

ful Mide



Actuarial Information to Include in the Financial Statements for the June 30, 2020 Measurement Date



Net Pension Liability of the Employer

The components of the net pension liability of the Employer at June 30, 2020, were as follows:

Total pension liability	\$ 1,583,515
Plan fiduciary net position	(1,354,655)
Employer's net pension liability	\$ 228,860
Plan fiduciary net position as a percentage of the total pension liability	85.55%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2019 rolled forward to June 30, 2020 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) 7.00% Single discount rate (EOY) 7.00%

Investment rate of return (BOY)
7.00%, net of pension plan investment expense, including inflation
7.00%, net of pension plan investment expense, including inflation
7.00%, net of pension plan investment expense, including inflation

2024

N/A

Long-term municpal bond rate (BOY) 3.13% Long-term municpal bond rate (EOY) 2.45%

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

Year Fund is projected to be fully funded Year assets are expected to be depleted

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, 2019 actuarial valuation report.

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

			Current		
	Decrease 6.00%	Dis	count Rate 7.00%	1%	Increase 8.00%
Employer's net pension liability	\$ 375,310	\$	228,860	\$	104,266

Town of Belle, West Virginia Policemen's Pension and Relief Fund Actuarial Information to Include in the Financial Statements for the June 30, 2020 Measurement Date



Changes in the Net Pension Liability

	То	tal Pension Liability (a)	Pla	ase (Decrease an Fiduciary et Position (b)	Ne I	t Pension Liability (a) - (b)
Balances at 6/30/19	\$	1,617,971	\$	1,504,297	\$	113,674
Changes for the year:						
Service cost		-				-
Interest		106,997				106,997
Changes of benefit terms		-				-
Differences between expected and actual experience		37,426				37,426
Changes of assumptions		-				-
Contributions - employer (including Premium Tax Allocation)				-		-
Contributions - member				-		-
Net investment income				28,261		(28,261)
Benefit payments, including refunds of member contributions		(178,879)		(178,879)		-
Administrative expense				976		(976)
Other				-		-
Net Changes		(34,456)		(149,642)		115,186
Balances at 6/30/20	\$	1,583,515	\$	1,354,655	\$	228,860
Return on Investments				2.0%		





Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2020

Note	Description	ı	Amount
Α	Service cost	\$	-
В	Interest on the total pension liability		106,997
Α	Changes of benefit terms		-
С	Differences between expected and actual experience		37,426
С	Changes of assumptions		-
Α	Employee contributions		-
D	Projected earnings on pension plan investments		(99,074)
С	Differences between expected and actual earnings on		7,415
	plan investments		
Α	Pension plan administrative expense		(976)
Α	Other changes in fiduciary net position		-
	Total Pension Expense	\$	51,788

Notes:

A Provided in the Changes in Net Pension Liability exhibit.

B Based on the following calculation:

	A	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	E	rojected arnings x (b) x (c)
Beginning total pension liability	\$	1,617,971	100%	7.00%	\$	113,258
Service cost (End of Year)		-	0%	7.00%		-
Benefit payments, including refunds of employee contributions		(178,879)	50%	7.00%		(6,261)
Total interest on the total pension liability					\$	106,997

C Provided in the Schedules of Deferrals.

D Based on the following calculation:

	А	mount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	E	rojected arnings x (b) x (c)
Beginning plan fiduciary net position	\$	1,504,297	100%	7.00%	\$	105,301
Employer contributions		-	50%	7.00%		-
Employee contributions		-	50%	7.00%		-
Benefit payments, including refunds of employee contributions		(178,879)	50%	7.00%		(6,261)
Administrative expense and other		976	50%	7.00%		34
Total Projected Earnings					\$	99,074





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

At June 30, 2020, the Employer reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	ed Outflows esources	erred Inflows Resources
Differences between expected and actual experience	\$ -	\$ -
Changes of assumptions	-	-
Net difference between projected and actual earnings	30,751	
on pension plan investments		-
Total	\$ 30,751	\$ -

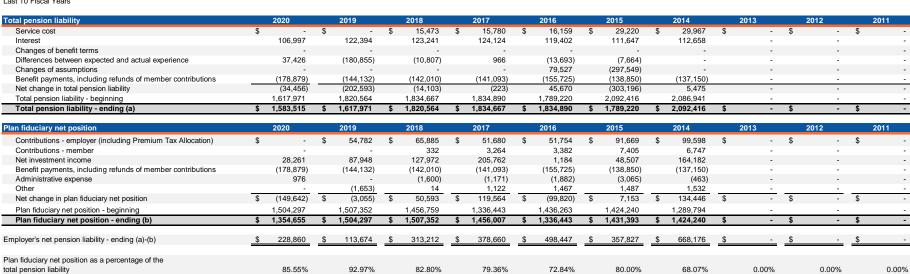
Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	
2021	\$ (11,746)
2022	11,296
2023	17,040
2024	14,161
2025	-
Thereafter	-

Actuarial Information to Include in the Financial Statements

for the June 30, 2020 Measurement Date

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



49,053

771.94%

1.55

51,838

961.55%

1.67

82,625

433.07%

3.40

85,647

780.15%

0.00%

0.00%

0.00%

Notes to Schedule:

Covered payroll

covered payroll

Benefit changes: There were no changes for FY2020.

Changes of assumptions: There were no changes for FY2020.

Expected average remaining service years of all participants

Employer's net pension liability as a percentage of

47,270

662.60%

1.43

N/A

N/A

N/A

N/A

B

^{*}The Plan Fiduciary Net Position as of July 1, 2019 provided to Bolton by the City does not match the Plan Fiduciary Net Position as of June 30, 2019 as provided in the prior GASB report. The difference of \$1,111 has been included as investment income for the measurement period ending June 30, 2020.

^{*}Market value of assets as of July 1, 2017, includes \$752, excluded from the market value of assets as of June 30, 2017, used for the actuarial valuation report for the fiscal year end June 30, 2017.

^{*}Market value of assets as of July 1, 2015, includes \$4,870, excluded from the market value of assets as of June 30, 2015, used for the actuarial valuation report for the fiscal year end June 30, 2015.

Actuarial Information to Include in the Financial Statements for the June 30, 2020 Measurement Date

Schedule of Employer Contributions

Last 10 Fiscal Years



	2020	2019	2018	2017	2016	2015	2014	2013	2012		2011
Actuarially determined contribution	\$ 44,669	\$ 54,769	\$ 65,637	\$ 57,140	\$ 52,938	\$ 94,802	\$ 96,980	\$ 100,181	\$	-	\$ -
Contributions in relation to the actuarially determined contribution											
Employer provided	-	12,353	37,001	24,935	19,948	59,844	59,844	60,427		-	-
State provided	 -	42,429	28,884	26,745	31,806	31,825	39,754	41,488		-	-
Contribution deficiency (excess)	\$ 44,669	\$ (13)	\$ (248)	\$ 5,460	\$ 1,184	\$ 3,133	\$ (2,618)	\$ (1,734)	\$	_	\$ -
Covered payroll	N/A	N/A	\$ 47,270	\$ 49,053	\$ 51,838	\$ 82,625	\$ 85,647	\$ 83,976	\$	-	\$ -
Contributions as a percentage of covered employee payroll	N/A	N/A	139.38%	105.36%	99.84%	110.95%	116.29%	121.36%	N	I/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 13 years
Asset valuation method Market Value
Inflation 2.75 percent

Salary increases Rates vary by years of service

Investment rate of return 7.00%, net of pension plan investment expense, including inflation

Retirement age Rates vary by ag

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, 2020 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	betwee and Ad on F	ifferences een Projected ctual Earnings Pension Plan vestments	Recognition Period (Years)	Increa	se (De	ecrease) in Pe 2017	nsion	Expense Aris	sing f	rom the Reco	gnitio	n of Differenc 2020	es betv	veen Project 2021	ed and	d Actual Earr	nings o	n Plan Inves 2023	tments	2024		
2016	\$	95,819	5	\$ 19,164		19,164				19,164		19,163										
2017		(115,228)	5		\$	(23,046)		(23,046)		(23,046)		(23,046)		(23,044)								
2018		(28,707)	5				\$	(5,741)		(5,741)		(5,741)		(5,741)		(5,743)						
2019		14,381	5								\$	2,876		2,876		2,876		2,876		2,877		
2020		70,813	5								\$	14,163		14,163		14,163		14,163		14,161		
Net increas	se (decre	ease) in pension e	expense								\$	7,415	\$	(11,746)	\$	11,296	\$	17,040	\$	14,161		

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)	reater Than Projected June 30, 2020					Deferred oflows of esources (b) - (c)
2016	\$ 95,819	\$ -	\$	95,819	\$	-	\$	
2017	-	115,228		92,184		-		23,044
2018	-	28,707		17,223		-		11,484
2019	14,381	-		5,752		8,629		-
2020	70,813	-		14,163		56,650		-
					\$	65,279	\$	34,528

Actuarial Information to Include in the Financial Statements for the June 30, 2020 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.

	Differences between Expected and Actual	Recognition Period					Increas	ie (Decrease) ir	n Pension	Expense	Arising fro	m the R	Recognition o	f Differences b	etween	Expected	d and Actual E	xperience					
Year	Experience	(Years)	Prior	2011	2012	2013	2014	2015	2	2016	2017		2018	2019	20	020	2021	2022		2023	2024	2025	Thereafter
Prior	-	-																		-	-	-	
2011	-	-																					
2012	-	-																					
2013	-	-																					
2014	-	-																					
2015	(7,664)	3.397382						\$ (2,256	6)	(2,256)	(2,2	56)	(896)										
2016	(13,693)	1.673177							\$	(8,184)	(5,5	09)											
2017	966	1.551597									\$ 6	23	343										
2018	(10,807)	1.427296										\$	(7,572)	(3,235)									
2019	(180,855)	1.000000												\$ (180,855)									
2020	37,426	1.000000													\$:	37,426							
Net increa	se (decrease) in pe	nsion expense													\$:	37,426	\$ -	\$	-	\$ -	\$ -	\$ -	\$ -

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

Experience Losses Year (a)		Experience Gains (b)	Amounts Recognized in Pension Expense Through June 30, 2020 (c)		Deferred Inflows of Resources (b) - (c)	
Prior	\$ -	\$ -	\$ -	\$ -	\$ -	
2011	-	-	-	-	-	
2012	-	-	-	-	-	
2013	-	-	-	-	-	
2014	-	-	-	-	-	
2015	-	7,664	7,664	-	-	
2016	-	13,693	13,693	-	-	
2017	966	-	966	-	-	
2018	-	10,807	10,807	-	-	
2019	-	180,855	180,855	-	-	
2020	37,426	-	37,426	-	-	
				\$ -	\$ -	

Town of Belle, West Virginia Policemen's Pension and Relief Fund Actuarial Information to Include in the Financial Statements

for the June 30, 2020 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.

		Recognition		Increase (Decrease) in Pension Expense Arising from the Effects of Changes of Assumptions																	
Year	Changes of Assumptions	Period (Years)	Prior	2011	2012	2013	2014	2015	2	2016	2017	2018	2019	2020	2021	202	2	2023	2024	2025	Th
Prior	\$ -	-																			
2011	-	-																			
2012	-	-																			
2013	-	-																			
2014		-																			
2015	(297,549)	3.397382						\$ (87,582)		(87,582)	(87,582)	(34,803)									
2016	79,527	1.673177							\$	47,531	31,996										
2017	-	1.551597																			
2018		1.427296																			
2019	-																				
2020	-	-																			
	se (decrease) in pe	nsion expense												\$ -	\$	\$	- 9	-	\$ -	\$ -	- \$

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, 2020 (c)			Dices at 80, 2020 Deferred Inflows of Resources (b) - (c)	
Prior	\$ -	\$ -	\$ -	\$	-	\$ -	
2011	-	-	-		-	-	
2012	-	-	-		-	-	
2013	-	-	-		-	-	
2014	-	-	-		-	-	
2015	-	297,549	297,549		-	-	
2016	79,527	-	79,527		-	-	
2017	-	-	-		-	-	
2018	-	-	-		-	-	
2019	-	-	-		-	-	
2020	-	-	-		-	-	
				\$	-	\$ -	