Municipal Pensions Oversight Board

City of Dunbar
West Virginia
Firemen's Pension and Relief Fund

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

Bolton

Submitted by:

James Ritchie, ASA, EA, FCA, MAAA
President of Bolton Retirement
443.573.3924
jritchie@boltonusa.com

Jordan McClane, FSA, EA, FCA, MAAA
Actuary
667.218.6935
jmcclane@boltonusa.com

November 5, 2021

Ms. Connie Fulknier
City Clerk
City of Dunbar
210 12th St. / P.O. Box 483
Dunbar, WV 25064

Assistant Chief Josh Bowers
Pension Board Secretary
City of Dunbar
Firemen's Pension and Relief Fund

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

Dear Connie,

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

Methodology, Reliance and Certification

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

The total pension liability is based on the July 1, 2020 actuarial valuation rolled forward to June 30, 2021. The methods, assumptions, and participant data used are detailed in the July 1, 2020 actuarial valuation report with the exception of the actuarial cost method. These calculations are based on the Entry Age Normal cost method as required by GASB 67. The calculation of the Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2021 is contained in the July 1, 2019 valuation report. The discount rate assumption may have changed if a blended rate was used for GASB purposes. The ADC and blended rate determination are based on the Plan using the Conservation funding policy as described in WV Code §8-22-20. Under this funding policy, the City makes contributions to two separate accounts: the Benefit Payment Account and the Accumulation Account. The Benefit Payment Account is used to pay benefits on a pay-as-you-go basis while the Accumulation Account cannot be used to pay benefits and expenses until assets equal or exceed actuarial liabilities.

The included calculations are based on a blended discount rate of 2.70%. A long-term expected rate of investment return of 4.25% has been blended with the 1.92% yield corresponding to the 20-year maturity on a municipal general obligation AA bond yield curve published on Fidelity's Fixed Income Market Data webpage as of June 30, 2021. We assumed benefits are discounted at the municipal bond rate when paid from the Benefit Payment Account and at the long-term rate of return when paid from the Accumulation Account. The development of the blended discount rate is included within this report.

Methodology, Reliance and Certification (cont.)

The included calculations assume that the members and the City will continue to make all required contributions in accordance with the City's funding policy.

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

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

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

The cost of this plan is determined by the benefits promised by the plan, the plan's participant population, the investment experience of the plan and many other factors. An actuarial valuation is a budgeting tool for the City or, in this case, a measure of accounting expense. It does not affect the cost of the plan. As the experience of the plan evolves, it is normal for the level of contributions and expense of the plan to change.

We make every effort to ensure that our calculations are accurately performed. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

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

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.

Methodology, Reliance and Certification (cont.)

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.

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

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

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

As described on page 1, the municipal bond rate is used to discount benefit payments assumed to be made from the Benefit Payment Account while the expected long-term rate of return on plan investments assumption is used to discount benefit payments made from the Accumulation Account. If, instead, the municipal bond rate were used to discount all benefit payments from both accounts, the estimated present value of future and accrued benefits could substantially increase.

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

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

The undersigned enrolled actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The July 1, 2020 actuarial valuation report contains information that is integral to the results contained herein and a copy may be provided upon request.

Sincerely,

James Ritchie, ASA, EA, FCA, MAAA

Jordan McClane, FSA, EA, FCA, MAAA

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

Net Pension Liability of the Employer

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

Total pension liability	$ 18,836,788
Plan fiduciary net position	(2,142,893)
Employer's net pension liability	$ 16,693,895
Plan fiduciary net position as a percentage of the total pension liability	11.38%

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

Inflation	2.50 percent
Salary increases	Rates vary by years of service
Single discount rate (BOY)	3.24%
Single discount rate (EOY)	2.70%
Investment rate of return (BOY)	4.50%, net of pension plan investment expense, including inflation
Investment rate of return (EOY)	4.25%, net of pension plan investment expense, including inflation
Long-term municpal bond rate (BOY)	2.45%
Long-term municpal bond rate (EOY)	1.92%
Mortality	SOA PubS-2010(B) with generational projection using Scale MP-2019
Year Fund is projected to be fully funded	2054
Year assets are expected to be depleted for a closed plan	N/A

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

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

	1% Decrease 1.70%	Current Discount Rate 2.70%	1% Increase 3.70%
Employer's net pension liability	$ 20,312,572	$ 16,693,895	$ 13,895,562

Changes in the Net Pension Liability

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/20	$ 18,581,746	$ 1,547,018	$ 17,034,728
Changes for the year:			
Service cost	518,755		518,755
Interest	591,419		591,419
Changes of benefit terms	-		-
Differences between expected and actual experience	(86,508)		(86,508)
Changes of assumptions	(112,421)		(112,421)
Contributions - employer (including Premium Tax Allocation)		1,000,167	(1,000,167)
Contributions - member		57,590	(57,590)
Net investment income		202,781	(202,781)
Benefit payments, including refunds of member contributions	(656,203)	(656,203)	-
Administrative expense		(8,460)	8,460
Other		-	-
Net Changes	255,042	595,875	(340,833)
Balances at 6/30/21	$ 18,836,788	$ 2,142,893	$ 16,693,895
Return on Investments		11.6%	

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

Note	Description	Amount
A	Service cost	$ 518,755
B	Interest on the total pension liability	591,419
A	Changes of benefit terms	-
C	Differences between expected and actual experience	155,094
C	Changes of assumptions	635,725
A	Employee contributions	(57,590)
D	Projected earnings on pension plan investments	(78,461)
C	Differences between expected and actual earnings on plan investments	(33,126)
A	Pension plan administrative expense	8,460
A	Other changes in fiduciary net position	-
	Total Pension Expense	**$ 1,740,276**

Notes:

A Provided in the Changes in Net Pension Liability exhibit.

B Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	Projected Earnings (a) x (b) x (c)
Beginning total pension liability	$ 18,581,746	100%	3.24%	$ 602,049
Service cost (End of Year)	518,755	0%	3.24%	-
Benefit payments, including refunds of employee contributions	(656,203)	50%	3.24%	(10,630)
Total interest on the total pension liability				**$ 591,419**

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	$ 1,547,018	100%	4.50%	$ 69,616
Employer contributions	1,000,167	50%	4.50%	22,504
Employee contributions	57,590	50%	4.50%	1,296
Benefit payments, including refunds of employee contributions	(656,203)	50%	4.50%	(14,765)
Administrative expense and other	(8,460)	50%	4.50%	(190)
Total Projected Earnings				**$ 78,461**

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

At June 30, 2021, the Employer reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 448,425	$ 64,881
Changes of assumptions	1,574,208	84,316
Net difference between projected and actual earnings on pension plan investments	-	108,944
Total	**$ 2,022,633**	**$ 258,141**

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

Year ended June 30:	
2022	$ 767,534
2023	767,427
2024	254,395
2025	(24,864)
2026	-
Thereafter	-

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

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

Total pension liability	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Service cost	$ 518,755	$ 468,817	$ 448,283	$ 244,966	$ 320,736	$ 244,394	$ 249,928	$ 236,285	$ -	$ -
Interest	591,419	590,818	592,735	588,292	576,067	547,277	536,856	547,237	-	-
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(86,508)	411,174	504,301	(11,318)	(36,906)	(24,065)	(330,636)	-	-	-
Changes of assumptions	(112,421)	1,232,754	2,086,393	-	-	1,605,283	-	-	-	-
Benefit payments, including refunds of member contributions	(656,203)	(617,241)	(616,327)	(607,765)	(544,127)	(540,414)	(562,626)	(535,745)	-	-
Net change in total pension liability	255,042	2,086,322	3,015,385	214,175	315,770	1,832,475	(106,478)	247,777	-	-
Total pension liability - beginning	18,581,746	16,495,424	13,480,039	13,265,864	12,950,094	11,117,619	11,224,097	10,976,320	-	-
Total pension liability - ending (a)	**$ 18,836,788**	**$ 18,581,746**	**$ 16,495,424**	**$ 13,480,039**	**$ 13,265,864**	**$ 12,950,094**	**$ 11,117,619**	**$ 11,224,097**	**$ -**	**$ -**

Plan fiduciary net position	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Contributions - employer (including Premium Tax Allocation)	$ 1,000,167	$ 1,110,142	$ 709,109	$ 535,194	$ 563,503	$ 541,297	$ 629,703	$ 485,587	$ -	$ -
Contributions - member	57,590	60,863	62,601	56,717	57,782	52,073	54,262	51,229	-	-
Net investment income	202,781	55,740	65,723	35,229	49,690	3,956	2,465	41,634	-	-
Benefit payments, including refunds of member contributions	(656,203)	(617,241)	(616,327)	(607,765)	(544,127)	(540,414)	(562,626)	(535,745)	-	-
Administrative expense	(8,460)	(95,155)	(6,154)	(6,216)	(6,357)	(4,324)	(4,538)	(3,267)	-	-
Other	-	-	(904)	-	2,926	-	-	-	-	-
Net change in plan fiduciary net position	$ 595,875	$ 514,349	$ 214,048	$ 13,159	$ 123,417	$ 52,588	$ 119,266	$ 39,438	$ -	$ -
Plan fiduciary net position - beginning	1,547,018	1,032,669	818,621	805,463	682,046	629,458	510,192	470,754	-	-
Plan fiduciary net position - ending (b)	**$ 2,142,893**	**$ 1,547,018**	**$ 1,032,669**	**$ 818,621**	**$ 805,463**	**$ 682,046**	**$ 629,458**	**$ 510,192**	**$ -**	**$ -**
Employer's net pension liability - ending (a)-(b)	$ 16,693,895	$ 17,034,728	$ 15,462,755	$ 12,661,418	$ 12,460,401	$ 12,268,048	$ 10,488,161	$ 10,713,905	$ -	$ -
Plan fiduciary net position as a percentage of the total pension liability	11.38%	8.33%	6.26%	6.07%	6.07%	5.27%	5.66%	4.55%	0.00%	0.00%
Covered payroll	$ 724,033	$ 749,877	$ 725,037	$ 470,997	$ 619,269	$ 623,201	$ 627,860	$ 592,912	$ -	$ -
Employer's net pension liability as a percentage of covered payroll	2305.68%	2271.67%	2132.68%	2688.22%	2012.11%	1968.55%	1670.46%	1807.00%	0.00%	0.00%
Expected average remaining service years of all participants	4.00	5.00	5.00	3.82	4.48	4.58	4.59	-	-	-

Notes to Schedule:

Benefit changes: There were no changes for FY2021.

Changes of assumptions: The discount rate changed from 3.24% to 2.70%. Changes were made to salary scale assumptions, pay spiking assumptions, inflation, cost-of-living increases, mortality rates, retirement rates, termination rates, disability rates, marital status, and non-spouse beneficiary loads.

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

Schedule of Employer Contributions
Last 10 Fiscal Years

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Actuarially determined contribution	$ 1,119,004	$ 1,065,058	$ 928,165	$ 793,100	$ 824,818	$ 798,593	$ 654,768	$ 634,303	$ 610,973	$ -
Contributions in relation to the actuarially determined contribution										
Employer provided	826,535	841,236	475,264	444,172	415,114	387,957	362,577	338,857	316,689	-
State provided	173,632	268,906	233,845	91,022	148,389	153,340	267,126	146,730	11,700	-
Contribution deficiency (excess)	$ 118,837	$ (45,084)	$ 219,056	$ 257,906	$ 261,315	$ 257,296	$ 25,065	$ 148,716	$ 282,584	$ -
Covered payroll	$ 724,033	$ 749,877	$ 725,037	$ 470,997	$ 619,269	$ 623,201	$ 627,860	$ 592,912	$ 596,503	$ -
Contributions as a percentage of covered employee payroll	138.14%	148.04%	97.80%	113.63%	90.99%	86.86%	100.29%	81.90%	55.05%	N/A

Notes to Schedule

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

Methods and assumptions used to determine contribution rates:

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

Schedule of Differences between Projected and Actual Earnings on Pension Plan Investments

In conformity with paragraph 33b of Statement 68, the effects of differences between projected and actual earnings on pension plan investments are recognized in pension expense using a systematic and rational method over a closed five-year period, beginning in the current reporting period. The following table illustrates the application of this requirement.

			Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Plan Investments								
Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025
2017	$ (17,339)	5	$ (3,468)	(3,468)	(3,468)	(3,468)	(3,467)				
2018	520	5		$ 104	104	104	104	104			
2019	(25,547)	5			$ (5,109)	(5,109)	(5,109)	(5,109)	(5,111)		
2020	1,048	5				$ 210	210	210	210	208	
2021	(124,320)	5					$ (24,864)	(24,864)	(24,864)	(24,864)	(24,864)
Net increase (decrease) in pension expense							$ (33,126)	$ (29,659)	$ (29,765)	$ (24,656)	$ (24,864)

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

				Balances at June 30, 2021	
Year	Investment Earnings Less than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in Pension Expense Through June 30, 2021 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2017	$ -	$ 17,339	$ 17,339	$ -	$ -
2018	520	-	416	104	-
2019	-	25,547	15,327	-	10,220
2020	1,048	-	420	628	-
2021	-	124,320	24,864	-	99,456
				$ 732	**$ 109,676**

Schedule of Differences between Expected and Actual Experience

In conformity with paragraph 33a of Statement 68, the effects of differences between expected and actual experience are recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

			Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience																
Year	Differences between Expected and Actual Experience	Recognition Period (Years)	Prior	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Thereafter
Prior	-	-														-	-	-	-
2012	-	-																	
2013	-	-																	
2014	-	-																	
2015	(330,636)	4.594798					$ (71,959)	(71,959)	(71,959)	(71,959)	(42,800)								
2016	(24,065)	4.582518						$ (5,251)	(5,251)	(5,251)	(5,251)	(3,061)							
2017	(36,906)	4.478126							$ (8,241)	(8,241)	(8,241)	(8,241)	(3,942)						
2018	(11,318)	3.821274								$ (2,962)	(2,962)	(2,962)	(2,432)						
2019	504,301	5.000000									$ 100,860	100,860	100,860	100,860	100,861				
2020	411,174	5.000000										$ 82,235	82,235	82,235	82,235	82,234			
2021	(86,508)	4.000000											$ (21,627)	(21,627)	(21,627)	(21,627)			
Net increase (decrease) in pension expense													$ 155,094	$ 161,468	$ 161,469	$ 60,607	$ -	$ -	$ -

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

				Balances at June 30, 2021	
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense Through June 30, 2021 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	$ -	$ -	$ -	$ -	$ -
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	330,636	330,636	-	-
2016	-	24,065	24,065	-	-
2017	-	36,906	36,906	-	-
2018	-	11,318	11,318	-	-
2019	504,301	-	302,580	201,721	-
2020	411,174	-	164,470	246,704	-
2021	-	86,508	21,627	-	64,881
				$ 448,425	**$ 64,881**

Schedule of Changes of Assumptions

In conformity with paragraph 33a of Statement 68, the effects of changes of assumptions should be recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

			Increase (Decrease) in Pension Expense Arising from the Effects of Changes of Assumptions																	
Year	Changes of Assumptions	Recognition Period (Years)	Prior	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Thereafter
Prior	$ -	-																	-
2012	-	-																	
2013	-	-																	
2014	-	-																	
2015	-	4.594798																	
2016	1,605,283	4.582518						$ 350,306	350,306	350,306	350,306	204,059							
2017	-	4.478126																	
2018	-	3.821274																	
2019	2,086,393	5.000000									$ 417,279	417,279	417,279	417,279	417,277				
2020	1,232,754	5.000000										$ 246,551	246,551	246,551	246,551	246,550			
2021	(112,421)	4.000000											$ (28,105)	(28,105)	(28,105)	(28,106)			
Net increase (decrease) in pension expense													$ 635,725	$ 635,725	$ 635,723	$ 218,444	$ -	$ -	$ -

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

				Balances at June 30, 2021	
Year	Increases in the Total Pension Liability (a)	Decreases in the Total Pension Liability (b)	Amounts Recognized in Pension Expense Through June 30, 2021 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	$ -	$ -	$ -	$ -	$ -
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	-	-	-	-
2016	1,605,283	-	1,605,283	-	-
2017	-	-	-	-	-
2018	-	-	-	-	-
2019	2,086,393	-	1,251,837	834,556	-
2020	1,232,754	-	493,102	739,652	-
2021	-	112,421	28,105	-	84,316
				$ 1,574,208	**$ 84,316**

Projection of Pension Plan's Fiduciary Net Position

	Number (BOY)		Benefit Payment Account							Accumulation Account								
Fiscal Year	Active	Non-Active	Assets (BOY)	Net Benefit Pmts and Expenses	Employer Contributions	Employee Contributions	63.65% of Premium Tax Allocation	Investment Income	Transfer (To)/From Accumulation Account	Assets (BOY)	Net Benefit Pmts and Expenses	Employer Contributions	1.50% of Pay Employee Contributions	36.35% of Premium Tax Allocation	Investment Income	Accrued Liability	Unfunded Liability	Funded Ratio
2022	13	22	$ 709,310	$ 644,795	$ 484,120	$ 50,651	$ 110,024	$ 30,146	$ (739,456)	$ 1,433,583	$ -	$ -	$ 10,640	$ 62,832	$ 62,472	$ 15,119,772	$ 12,810,789	15%
2023	12	22	$ -	$ 662,000	$ 502,543	$ 48,510	$ 110,947	$ -	$ -	$ 2,308,983	$ -	$ -	$ 10,172	$ 63,360	$ 99,678	$ 15,456,354	$ 12,974,161	16%
2024	11	22	$ -	$ 680,236	$ 518,158	$ 46,114	$ 115,964	$ -	$ -	$ 2,482,193	$ -	$ -	$ 9,647	$ 66,225	$ 107,089	$ 15,771,861	$ 13,106,707	17%
2025	11	22	$ -	$ 688,748	$ 524,981	$ 44,742	$ 119,025	$ -	$ -	$ 2,665,154	$ -	$ -	$ 9,354	$ 67,973	$ 114,895	$ 16,084,075	$ 13,226,699	18%
2026	10	22	$ -	$ 692,926	$ 527,115	$ 43,648	$ 122,163	$ -	$ -	$ 2,857,376	$ -	$ -	$ 9,126	$ 69,764	$ 123,097	$ 16,399,459	$ 13,340,096	19%
2027	10	22	$ -	$ 695,066	$ 526,677	$ 42,764	$ 125,625	$ -	$ -	$ 3,059,363	$ -	$ -	$ 8,943	$ 71,742	$ 131,720	$ 16,722,295	$ 13,450,527	20%
2028	10	21	$ -	$ 695,102	$ 523,332	$ 42,039	$ 129,731	$ -	$ -	$ 3,271,768	$ -	$ -	$ 8,792	$ 74,086	$ 140,793	$ 17,056,153	$ 13,560,714	20%
2029	9	21	$ -	$ 695,829	$ 520,760	$ 41,424	$ 133,645	$ -	$ -	$ 3,495,439	$ -	$ -	$ 8,664	$ 76,322	$ 150,343	$ 17,402,057	$ 13,671,289	21%
2030	9	21	$ -	$ 714,548	$ 537,363	$ 39,131	$ 138,054	$ -	$ -	$ 3,730,768	$ -	$ -	$ 8,143	$ 78,839	$ 160,387	$ 17,726,049	$ 13,747,912	22%
2031	8	22	$ -	$ 748,181	$ 571,135	$ 35,383	$ 141,663	$ -	$ -	$ 3,978,137	$ -	$ -	$ 7,291	$ 80,901	$ 170,925	$ 17,997,755	$ 13,760,501	24%
2032	7	22	$ -	$ 777,886	$ 600,496	$ 32,027	$ 145,363	$ -	$ -	$ 4,237,254	$ -	$ -	$ 6,529	$ 83,013	$ 181,966	$ 18,222,364	$ 13,713,602	25%
2033	6	23	$ -	$ 807,302	$ 629,236	$ 28,518	$ 149,548	$ -	$ -	$ 4,508,762	$ -	$ -	$ 5,773	$ 85,404	$ 193,540	$ 18,397,835	$ 13,604,356	26%
2034	5	23	$ -	$ 838,369	$ 658,814	$ 25,069	$ 154,486	$ -	$ -	$ 4,793,479	$ -	$ -	$ 5,045	$ 88,223	$ 205,684	$ 18,522,230	$ 13,429,799	27%
2035	5	23	$ -	$ 876,457	$ 695,689	$ 21,643	$ 159,125	$ -	$ -	$ 5,092,431	$ -	$ -	$ 4,283	$ 90,872	$ 218,429	$ 18,587,658	$ 13,181,643	29%
2036	4	23	$ -	$ 902,599	$ 715,765	$ 18,494	$ 168,340	$ -	$ -	$ 5,406,015	$ -	$ -	$ 3,603	$ 96,136	$ 231,853	$ 18,605,873	$ 12,868,266	31%
2037	3	24	$ -	$ 915,312	$ 724,578	$ 16,208	$ 174,526	$ -	$ -	$ 5,737,607	$ -	$ -	$ 3,132	$ 99,668	$ 246,010	$ 18,594,761	$ 12,508,344	33%
2038	3	23	$ -	$ 928,499	$ 735,521	$ 13,931	$ 179,047	$ -	$ -	$ 6,086,417	$ -	$ -	$ 2,678	$ 102,249	$ 260,879	$ 18,552,279	$ 12,100,056	35%
2039	2	23	$ -	$ 937,626	$ 737,692	$ 11,894	$ 188,040	$ -	$ -	$ 6,452,223	$ -	$ -	$ 2,280	$ 107,386	$ 276,526	$ 18,482,925	$ 11,644,510	37%
2040	2	23	$ -	$ 940,222	$ 736,665	$ 10,659	$ 192,898	$ -	$ -	$ 6,838,415	$ -	$ -	$ 2,030	$ 110,160	$ 292,992	$ 18,397,912	$ 11,154,315	39%
2041	2	23	$ -	$ 937,611	$ 729,880	$ 9,853	$ 197,878	$ -	$ -	$ 7,243,597	$ -	$ -	$ 1,867	$ 113,003	$ 310,268	$ 18,305,993	$ 10,637,258	42%
2042	2	22	$ -	$ 939,323	$ 727,860	$ 8,482	$ 202,981	$ -	$ -	$ 7,668,735	$ -	$ -	$ 1,600	$ 115,918	$ 328,393	$ 18,197,799	$ 10,083,153	45%
2043	1	22	$ -	$ 948,565	$ 728,358	$ 6,249	$ 213,958	$ -	$ -	$ 8,114,646	$ -	$ -	$ 1,178	$ 122,187	$ 347,467	$ 18,058,420	$ 9,472,942	48%
2044	1	22	$ -	$ 950,659	$ 726,590	$ 4,601	$ 219,468	$ -	$ -	$ 8,585,478	$ -	$ -	$ 866	$ 125,333	$ 367,537	$ 17,898,687	$ 8,819,473	51%
2045	1	22	$ -	$ 945,839	$ 714,874	$ 3,627	$ 227,338	$ -	$ -	$ 9,079,214	$ -	$ -	$ 679	$ 129,827	$ 388,611	$ 17,729,259	$ 8,130,928	54%
2046	1	21	$ -	$ 933,892	$ 687,941	$ 3,241	$ 242,710	$ -	$ -	$ 9,598,331	$ -	$ -	$ 607	$ 138,606	$ 410,857	$ 17,562,003	$ 7,413,602	58%
2047	0	21	$ -	$ 928,690	$ 673,713	$ 2,366	$ 252,611	$ -	$ -	$ 10,148,401	$ -	$ -	$ 442	$ 144,261	$ 434,350	$ 17,386,842	$ 6,659,388	62%
2048	0	20	$ -	$ 921,719	$ 652,617	$ 1,285	$ 267,817	$ -	$ -	$ 10,727,454	$ -	$ -	$ 240	$ 152,944	$ 459,138	$ 17,203,417	$ 5,863,641	66%
2049	0	20	$ -	$ 908,181	$ 631,424	$ 872	$ 275,885	$ -	$ -	$ 11,339,776	$ -	$ -	$ 163	$ 157,551	$ 485,257	$ 17,023,310	$ 5,040,563	70%
2050	0	19	$ -	$ 892,147	$ 516,906	$ 617	$ 374,624	$ -	$ -	$ 11,982,747	$ -	$ -	$ 115	$ 213,940	$ 513,768	$ 16,849,806	$ 4,139,236	75%
2051	0	19	$ -	$ 875,099	$ 487,781	$ 459	$ 386,859	$ -	$ -	$ 12,710,570	$ -	$ -	$ 86	$ 220,926	$ 544,847	$ 16,685,353	$ 3,208,924	81%
2052	0	18	$ -	$ 857,524	$ 452,132	$ 276	$ 405,116	$ -	$ -	$ 13,476,429	$ -	$ -	$ 52	$ 231,352	$ 577,614	$ 16,529,950	$ 2,244,503	86%
2053	0	17	$ -	$ 839,234	$ 420,531	$ 150	$ 418,553	$ -	$ -	$ 14,285,447	$ -	$ -	$ 28	$ 239,026	$ 612,159	$ 16,385,207	$ 1,248,547	92%
2054	0	17	$ -	$ 820,451	$ 8,403	$ 112	$ 811,936	$ -	$ -	$ 15,136,660	$ -	$ -	$ 21	$ 463,678	$ 653,059	$ 16,253,418	$ -	100%
2055	0	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,253,418	$ 801,115	$ 8,738	$ 99	$ -	$ 674,110	$ 16,135,250	$ -	100%
2056	0	16	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,135,250	$ 782,327	$ 8,800	$ 75	$ -	$ 669,483	$ 16,031,281	$ -	100%
2057	0	15	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,031,281	$ 763,601	$ 7,984	$ -	$ -	$ 665,440	$ 15,941,104	$ -	100%
2058	0	15	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,941,104	$ 744,949	$ 8,184	$ -	$ -	$ 662,004	$ 15,866,343	$ -	100%
2059	0	14	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,866,343	$ 725,913	$ 7,829	$ -	$ -	$ 659,219	$ 15,807,478	$ -	100%
2060	0	14	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,807,478	$ 707,631	$ 8,025	$ -	$ -	$ 657,106	$ 15,764,978	$ -	100%
2061	0	13	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,764,978	$ 688,975	$ 7,638	$ -	$ -	$ 655,684	$ 15,739,325	$ -	100%

Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Projected BP	"Funded" Portion of BP	"Unfunded" Portion of BP	PV of "Funded" Portion of BP	PV of "Unfunded" Portion of BP	PV of BP Using a Single DR
2021	$ 656,203	$ -	$ 656,203	$ -	$ 649,993	$ 647,512
2022	$ 636,946	$ -	$ 636,946	$ -	$ 619,033	$ 611,971
2023	$ 654,185	$ -	$ 654,185	$ -	$ 623,810	$ 611,994
2024	$ 672,461	$ -	$ 672,461	$ -	$ 629,157	$ 612,537
2025	$ 680,779	$ -	$ 680,779	$ -	$ 624,941	$ 603,796
2026	$ 685,005	$ -	$ 685,005	$ -	$ 616,974	$ 591,557
2027	$ 686,947	$ -	$ 686,947	$ -	$ 607,068	$ 577,624
2028	$ 687,040	$ -	$ 687,040	$ -	$ 595,712	$ 562,500
2029	$ 687,832	$ -	$ 687,832	$ -	$ 585,164	$ 548,329
2030	$ 706,351	$ -	$ 706,351	$ -	$ 589,598	$ 548,275
2031	$ 739,779	$ -	$ 739,779	$ -	$ 605,868	$ 559,112
2032	$ 769,561	$ -	$ 769,561	$ -	$ 618,386	$ 566,315
2033	$ 798,769	$ -	$ 798,769	$ -	$ 629,765	$ 572,342
2034	$ 829,924	$ -	$ 829,924	$ -	$ 642,002	$ 579,017
2035	$ 867,801	$ -	$ 867,801	$ -	$ 658,656	$ 589,511
2036	$ 894,043	$ -	$ 894,043	$ -	$ 665,790	$ 591,356
2037	$ 906,542	$ -	$ 906,542	$ -	$ 662,381	$ 583,844
2038	$ 919,843	$ -	$ 919,843	$ -	$ 659,438	$ 576,821
2039	$ 929,095	$ -	$ 929,095	$ -	$ 653,523	$ 567,292
2040	$ 931,478	$ -	$ 931,478	$ -	$ 642,856	$ 553,781
2041	$ 928,648	$ -	$ 928,648	$ -	$ 628,830	$ 537,570
2042	$ 930,503	$ -	$ 930,503	$ -	$ 618,216	$ 524,470
2043	$ 939,901	$ -	$ 939,901	$ -	$ 612,696	$ 515,826
2044	$ 941,778	$ -	$ 941,778	$ -	$ 602,355	$ 503,256
2045	$ 936,736	$ -	$ 936,736	$ -	$ 587,843	$ 487,389
2046	$ 924,967	$ -	$ 924,967	$ -	$ 569,523	$ 468,602
2047	$ 919,958	$ -	$ 919,958	$ -	$ 555,768	$ 453,800
2048	$ 913,195	$ -	$ 913,195	$ -	$ 541,290	$ 438,610
2049	$ 899,444	$ -	$ 899,444	$ -	$ 523,095	$ 420,637
2050	$ 883,639	$ -	$ 883,639	$ -	$ 504,222	$ 402,372
2051	$ 866,378	$ -	$ 866,378	$ -	$ 485,060	$ 384,130
2052	$ 849,055	$ -	$ 849,055	$ -	$ 466,406	$ 366,544
2053	$ 831,036	$ -	$ 831,036	$ -	$ 447,908	$ 349,324
2054	$ 812,048	$ -	$ 812,048	$ -	$ 429,429	$ 332,360
2055	$ 793,009	$ 793,009	$ -	$ 188,649	$ -	$ 316,027
2056	$ 774,018	$ 774,018	$ -	$ 176,624	$ -	$ 300,342
2057	$ 755,617	$ 755,617	$ -	$ 165,396	$ -	$ 285,486
2058	$ 736,765	$ 736,765	$ -	$ 154,695	$ -	$ 271,039
2059	$ 718,084	$ 718,084	$ -	$ 144,626	$ -	$ 257,215
2060	$ 699,606	$ 699,606	$ -	$ 135,160	$ -	$ 244,002
2061	$ 681,337	$ 681,337	$ -	$ 126,265	$ -	$ 231,377