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

GASB Statement Nos. 67 and 68 Plan Reporting and Accounting Schedules
June 30, 2018





October 8, 2018

Ms. Eileen V. Layman, Finance Director City of Fairmont 200 Jackson St., 3rd Floor Ste 301 Fairmont, WV 26554 Firefighter Jason C. Barker
Pension Board Secretary
City of Fairmont Firemen's Pension and Relief Fund

Dear Ms. Layman and Firefighter Barker:

This report provides accounting and financial information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 for the City of Fairmont, West Virginia Firemen's Pension and Relief Fund ("Plan"). These calculations have been made on a basis that is consistent with our understanding of these accounting standards.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems, on behalf of fiscal years beginning after June 15, 2013. GASB Statement No. 68 establishes accounting and financial reporting for State and local government employers who provide their employees (including former employees) pension benefits through a trust, and applies to fiscal years beginning after June 15, 2014.

This report contains GASB Statement Nos. 67 and 68 reporting information applicable to the plan year ending June 30, 2018, and the sponsor's fiscal year ending June 30, 2018.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement Nos. 67 and 68. The calculation of the Plan's liability for this report may not be applicable for funding purposes of the Plan. A calculation of the Plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the City of Fairmont, West Virginia Firemen's Pension and Relief Fund ("Plan") only in its entirety and only with the permission of the Plan. GRS is not responsible for unauthorized use of this report.

West Virginia Code §8-22-20 (c)(4), requires a review of the actuarial assumptions and methods at least once every five years and that the Actuary shall provide a report to the Oversight Board with recommendations on any changes to the actuarial process. Consequently, an experience review was performed for the period July 1, 2009, through June 30, 2014. The actuarial assumptions and methods were recommended by the Actuary in the report 2016 Experience Review for the Years July 1, 2009, to July 1, 2014, and approved by the Municipal Pensions Oversight Board, and were first applied beginning with the actuarial valuation for the plan year ending June 30, 2016.

Ms. Eileen V. Layman, Finance Director Page 2

Our actuarial valuation and projections assume the sponsor will make the contributions required by State statute. To the extent the sponsor does not make the statutory required contribution the results contained in this report could be significantly different.

This report is based upon information, furnished to us by the Plan, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different, please let us know. This information was checked for internal consistency, but it was not audited.

To the best of our knowledge, the information contained in this report is accurate and fairly represents the actuarial position of the City of Fairmont, West Virginia Firemen's Pension and Relief Fund for GASB Statement Nos. 67 and 68 accounting purposes. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

This report complements the actuarial valuation report that was provided to the plan sponsor and should be considered in conjunction with that report. Please see the actuarial valuation report as of June 30, 2017, for additional discussion of the nature of actuarial calculations and additional information related to participant data, economic and demographic assumptions and benefit provisions.

Heidi G. Barry and Judith A. Kermans are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The signing individuals are independent of the plan sponsor.

Respectfully submitted,

Heidi G. Barry, ASA, MAAA, FCA

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Heidi & Barry

Judith A. Kermans, EA, MAAA, FCA





Auditor's Note – This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan's financial statements.

This actuarial valuation report assumes the following:

- The Plan Sponsor first adopted GASB Statement No. 68 effective for the fiscal year end June 30, 2015.
- The Net Pension Liability as of the first year of adoption, i.e., fiscal year end June 30, 2015, was based on a projection of actuarial liabilities from July 1, 2014, to June 30, 2015, and the market value of assets as of June 30, 2015.
- The Pension Expense for fiscal year end June 30, 2015, recognizes deferred inflows and outflows for the fiscal year end June 30, 2015.
- The Pension Expense for fiscal years after June 30, 2015, recognizes deferred inflows and outflows beginning with the fiscal year end June 30, 2015.

The Plan Sponsor may need to adjust the results in this report if a different policy is implemented. Examples of different policies include:

- Adopting GASB Statement No. 68 effective for fiscal years ending prior to June 30, 2015.
- Using an earlier measurement date, such as using a measurement date of June 30, 2014, for purposes of completing financial reporting for the fiscal year end June 30, 2015.
- Recognizing deferred inflows and outflows prior to the initial year of adoption, such as recognizing deferred inflows and outflows starting with the fiscal year end June 30, 2014.



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SECTION A

EXECUTIVE SUMMARY

Executive Summary as of June 30, 2018

Actuarial Valuation Date	June 30, 2017
Pension Plan's Fiscal Year Ending Date (Measurement Date & Reporting Date)	June 30, 2018
Membership ^a	
Number of	
- Retirees and Beneficiaries	55
- Inactive, Nonretired Members	-
- Active Members	40
- Total	 95
Expected Payroll	\$ 1,864,926
Net Pension Liability	
Total Pension Liability ^b	\$ 44,809,246
Plan Fiduciary Net Position	 3,126,658
Net Pension Liability	\$ 41,682,588
Plan Fiduciary Net Position as a Percentage	
of Total Pension Liability	6.98%
Net Pension Liability as a Percentage	
of Covered Payroll	2,235.08%
Development of the Single Discount Rate	
Single Discount Beginning of Year	3.8057%
Single Discount Rate End of Year	3.8562%
Long-Term Expected Rate of Return before 2053	4.00%
Long-Term Expected Rate of Return after 2053	4.50%
Long-Term Municipal Bond Rate Beginning of Year ^c	3.56%
Long-Term Municipal Bond Rate End of Year ^c	3.62%
Year Plan is projected to be fully funded	2053
Year assets are expected to be depleted for closed plan	N/A
GASB No. 68 Pension Expense	\$ 2,922,176

Deferred Outflows and Deferred Inflows of Resources to be recognized in Future Pension Expenses

			Deferred (Inflows) of Resources	
\$	854	\$	(1,100,788)	
	2,006,255		(1,636,506)	
gs				
	31,590		(102,213)	
\$	2,038,699	\$	(2,839,507)	
		2,006,255 ngs 31,590	of Resources \$ 854 \$ 2,006,255 ags 31,590	

^a Census data measured as of June 30, 2017.



^b Total pension liability projected from July 1, 2017, to June 30, 2018, based on the results of July 1, 2017, actuarial valuation.

^c Based on the 20-Year Municipal GO Index of mixed maturity general obligation municipal bonds as of the weekly rate closest to but not later than the Measurement Date.

Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for State and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain additional non-actuarial required information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires State or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets.

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements, are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents additions, such as contributions and investment income, and deductions, such as benefit payments and expenses and net increase or decrease in the fiduciary net position.



Notes to Financial Statements

GASB Statement No. 68 requires, in the notes of the employer's financial statements, a disclosure of the total pension expense, the pension plan's liabilities and assets and deferred outflows and inflows of resources related to pensions.

Both GASB Statement Nos. 67 and 68, require the notes of the financial statements for the employers and pension plans, to include certain additional information. The list of additional disclosure items should include:

- A description of benefits provided by the plan;
- The type of employees and number of members covered by the pension plan;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The pension plan's investment policies;
- The pension plan's fiduciary net position, net pension liability and the pension plan's fiduciary net position as a percentage of the total pension liability;
- The net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the total pension liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan's board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.



Required Supplementary Information

Statement No. 67 requires a 10-year fiscal history of:

- Sources of changes in the net pension liability;
- Information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability and the net pension liability as a percent of covered-employee payroll;
- Comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy; and
- The annual money-weighted rate of return on pension plan investments for each year.

These tables may be built prospectively as the information becomes available.

Measurement of the Net Pension Liability

The net pension liability is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In traditional actuarial terms, this will be the accrued liability less the market value of assets.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least once every two years. If the actuarial valuation is not calculated as of the plan's fiscal year end, the total pension liability is required to be rolled forward from the actuarial valuation date to the pension plan's fiscal year end.

The total pension liability shown in this report is based on an actuarial valuation performed as of July 1, 2017, and projected to the measurement date of June 30, 2018.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a single discount rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be available and sufficient to pay benefits) and (2) a tax-exempt municipal bond rate based on an index of 20-year mixed maturity general obligation bonds with an average AA credit rating (which is published by Fidelity) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is the municipal bond rate of 3.62% before 2053 (based on the weekly rate closest to but not later than the measurement date of the "20-Year Municipal GO Index" as published by Fidelity) and 4.50% after 2053, and the resulting single discount rate is 3.8562%.



Effective Date and Transition

GASB Statement No. 67 is effective for a pension plan's fiscal years beginning after June 15, 2013, and GASB Statement No. 68 is effective for a pension plan's fiscal years beginning after June 15, 2014; however, earlier application is encouraged by the GASB.

Assumption Changes

The actuarial assumptions and methods were recommended by the Actuary, in the report 2016 Experience Review for the Years July 1, 2009, to July 1, 2014, approved by the Municipal Pension Oversight Board and became effective beginning with the actuarial valuation applicable to plan year end June 30, 2016. Since the last valuation as of June 30, 2017, and for purposes of the accounting actuarial valuation, we assumed a discount rate based on the municipal bond rate of 3.62% prior to 2053 and a discount rate of 4.50% for plan years after 2053 which resulted in a blended discount rate of 3.8562%. Since the last valuation as of June 30, 2017, the blended interest rate used to discount liabilities was changed from 3.8057% to 3.8562%. The actuarial assumptions are disclosed in Section G of the report.



SECTION B

FINANCIAL STATEMENTS

Statement of Fiduciary Net Position as of June 30, 2018

Assets

Cash and Deposits	\$ 1,147,466
Receivables	
Contributions	1,449
Investment Income	2,881
Total Receivables	\$ 4,330
Investment	
Government Securities	\$ -
Corporate Bonds	610,468
Corporate Stocks	1,364,394
Alternative Investments	-
Other	 -
Total Investments	\$ 1,974,862
Total Assets	\$ 3,126,658
Liabilities	
Payables	-
Total Liabilities	\$
Net Position Restricted for Pensions*	\$ 3,126,658

^{*}Totals may not add due to rounding



Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2018

		Benefit	Ac	cumulation			
Additions		Account		Account	Total		
Contributions							
Employer	\$	1,286,686	\$	-	\$	1,286,686	
State	·	335,877		98,606		434,483	
Employee		164,420		15,583		180,003	
Receivable Employer		1,449		-		1,449	
Receivable State		-		-		-	
Receivable Employee		-		-		-	
Other		-		-		-	
Total Contributions	\$	1,788,432	\$	114,189	\$	1,902,621	
Net investment gain (loss) from							
Net Appreciation (Depreciation)	\$	-	\$	72,224	\$	72,224	
Net Realized Gain (Loss) on Sale or Exchange		-		-		-	
Interest and Dividends		-		91,786		91,786	
Other income		36		-		36	
Investment Expense		-		(11,428)		(11,428)	
Receivable Investment Income		-		2,881		2,881	
Payable Investment Expenses		-		-		<u>-</u> _	
Net Investment Income	\$	36	\$	155,463	\$	155,499	
Other Revenue	\$	17,488	\$	445,677	\$	463,165	
Total Additions	\$	1,805,956	\$	715,329	\$	2,521,285	
Deductions							
Benefit payments	\$	1,518,962	\$	-	\$	1,518,962	
Refunds		5,249		-		5,249	
Pension Plan Administrative Expense		2,350		-		2,350	
Other		-		-		-	
Payable Benefits and Withdrawals		-		-		-	
Payable Administrative Expenses		-		-		-	
Total Deductions	\$	1,526,561	\$	-	\$	1,526,561	
Net Increase in Net Position	\$	279,395	\$	715,329	\$	994,724	
Net Position Restricted for Pensions *							
Beginning of Year	\$	227,401	\$	1,904,533	\$	2,131,934	
End of Year	\$	506,796	\$	2,619,862	\$	3,126,658	

^{*}Totals may not add due to rounding



Long-Term Expected Return on Plan Assets

The investment policy covering the allocation of invested assets for the City of Fairmont, West Virginia Firemen's Pension and Relief Fund is established by the Board of Trustees and is subject to the limitations defined in West Virginia Code §8-22-22 and §8-22-22a.

GASB Statement Nos. 67 and 68 require the disclosure of certain information contained in the investment policy including the target asset allocation by major asset class and the long-term expected real rate of return by major asset class. This information is generally available from the investment consultant, investment manager or plan trustee.

Information on the target asset allocation and long-term real return by major asset class was not provided to the actuary.

The discount rate used by the actuary for the purpose of developing the statutory contribution requirement, including the statutory solvency requirement, is shown in the Actuarial Assumptions Section of this report. This same discount rate is also used by the actuary to determine the GASB Statement Nos. 67 and 68 single discount rate.

Money-Weighted Rate of Return

GASB Statement Nos. 67 and 68 also require the disclosure of the money weighted rate of return, net of investment expenses, using monthly data. This information was not provided to the actuary, but should be available from the investment consultant, investment manager or plan trustee.





REQUIRED SUPPLEMENTARY INFORMATION

Schedules of Required Supplementary Information Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Fiscal year ending June 30	 2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Pension Liability										
Service Cost	\$ 1,244,719 \$	1,383,404 \$	868,066 \$	812,884 \$	767,965					
Interest on the Total Pension Liability	1,660,005	1,540,023	1,648,491	1,625,068	1,693,559					
Benefit Changes	-	-	-	-	-					
Difference between Expected and Actual Experience	(517,413)	(1,654,431)	4,042	(1,337,486)	-					
Assumption Changes	(329,939)	(3,163,235)	9,497,572	593,316	1,099,407					
Benefit Payments	(1,518,962)	(1,522,331)	(1,547,140)	(1,534,428)	(1,557,909)					
Refunds	 (5,249)	(6,898)	-	(60,759)	(5,581)					
Net Change in Total Pension Liability	533,161	(3,423,468)	10,471,031	98,595	1,997,441					
Total Pension Liability - Beginning	 44,276,085	47,699,553	37,228,522	37,129,927	35,132,486					
Total Pension Liability - Ending (a)	\$ 44,809,246 \$	44,276,085 \$	47,699,553 \$	37,228,522 \$	37,129,927					
Plan Fiduciary Net Position										
Employer Contributions (Local and State)	\$ 1,722,618 \$	1,422,301 \$	1,342,753 \$	1,324,270 \$	1,209,650					
Employee Contributions	180,003	165,937	165,382	164,249	162,770					
Pension Plan Net Investment Income	155,499	165,421	21,071	51,321	258,994					
Benefit Payments	(1,518,962)	(1,522,331)	(1,547,140)	(1,534,428)	(1,557,909)					
Refunds	(5,249)	(6,898)	-	(60,759)	(5,581)					
Pension Plan Administrative Expense	(2,350)	(1,777)	(1,433)	(1,189)	(1,752)					
Other	 463,165	218,861	25,958	752	54,076					
Net Change in Plan Fiduciary Net Position	994,724	441,514	6,591	(55,784)	120,248					
Plan Fiduciary Net Position - Beginning	 2,131,934	1,690,420	1,683,829	1,739,613	1,619,365					
Plan Fiduciary Net Position - Ending* (b)	\$ 3,126,658 \$	2,131,934 \$	1,690,420 \$	1,683,829 \$	1,739,613					
Net Pension Liability - Ending (a) - (b)	41,682,588	42,144,151	46,009,133	35,544,693	35,390,314					
Plan Fiduciary Net Position as a Percentage										
of Total Pension Liability	6.98 %	4.82 %	3.54 %	4.52 %	4.69 %					
Covered Employee Payroll	\$ 1,864,926 \$	1,831,847 \$	1,925,962 \$	1,841,996 \$	1,825,201					
Net Pension Liability as a Percentage										
of Covered Employee Payroll	2,235.08 %	2,300.64 %	2,388.89 %	1,929.68 %	1,938.98 %					
Notes to Schedule:										

^{*}Totals may not add due to rounding



Schedules of Required Supplementary Information Schedule of the Net Pension Liability Multiyear

Last 10 Fiscal Years (which may be built prospectively)

FY Ending June 30	 Total Pension Liability	 Plan Net Position	 Net Pension Liability	Plan Net Position as a % of Total Pension Liability	 Covered Payroll	Net Pension Liability as a % of Covered Payroll
2009						
2010						
2011						
2012						
2013						
2014	\$ 37,129,927	\$ 1,739,613	\$ 35,390,314	4.69%	\$ 1,825,201	1,938.98 %
2015	\$ 37,228,522	\$ 1,683,829	\$ 35,544,693	4.52%	\$ 1,841,996	1,929.68 %
2016	\$ 47,699,553	\$ 1,690,420	\$ 46,009,133	3.54%	\$ 1,925,962	2,388.89 %
2017	\$ 44,276,085	\$ 2,131,934	\$ 42,144,151	4.82%	\$ 1,831,847	2,300.64 %
2018	\$ 44,809,246	\$ 3,126,658	\$ 41,682,588	6.98%	\$ 1,864,926	2,235.08 %



Schedule of Contributions Multiyear

Fiscal Year Ended	De	ctuarially etermined ntribution (a)	Employer ontribution (b)	Co	State ontribution (c)	Percentage Contributed [(b)+(c)]/(a)	Covered Payroll (f)	Actual Contribution as a % of Covered Payroll [(b)+(c)]/(f)
6/30/2013	\$	1,875,854	\$ 753,076	\$	432,491	63%	\$ 1,781,502	67%
6/30/2014	\$	1,952,499	\$ 805,791	\$	403,859	62%	\$ 1,825,201	66%
6/30/2015	\$	1,974,513	\$ 907,479	\$	416,791	67%	\$ 1,841,996	72%
6/30/2016	\$	2,677,659	\$ 924,310	\$	418,443	50%	\$ 1,925,962	70%
6/30/2017	\$	2,721,289	\$ 988,285	\$	434,016	52%	\$ 1,831,847	78%
6/30/2018	\$	2,833,286	\$ 1,288,135	\$	434,483	61%	\$ 1,864,926	92%



Notes to Schedule of Contributions

June 30, 2018, measurement date based on actuarial liabilities as

The information requested in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

wieusurement Dute	of July 1, 2017
Actuarial Cost Method	Entry Age Normal, Level-Percentage-of-Pay
Actuarial Value of Assets	Market value used for GASB Statement Nos. 67 and 68 reporting
Contribution Policy and Amortization Method	The sponsor finances benefits using the Conservation funding policy as defined in state statutes. The sponsor makes contributions to two separate accounts – the Benefit Payment Account and the Accumulation Account. The Benefit Payment Account is used to finance benefits and expenses on a pay-as-yougo basis. Sources to pay current year benefits and expenses include minimum employee contributions of 6.5% of pay, any remaining state premium tax allocation as described below, and employer contributions. The Accumulation Account cannot be used to pay benefits and expenses until assets exceed actuarial liabilities. Contributions to the Accumulation Account include employee contributions of 1.5% of pay and the percentage of premium tax allocation which is projected to fully finance the projected liability in 35 years, since the adoption of the Conservation funding policy in 2018. Any remaining state premium tax allocation can be used to finance benefits and expenses during the year. The plan is closed to new members as of the adoption of the Conservation funding policy.
Actuarial Assumptions:	
Investment Rate of Return	4.00% per year before 2053, and 4.50% per year after 2053
GASB 67/68 Discount Rate	3.8562% per year at June 30, 2018, and 3.8057% at June 30, 2017
Projected Salary Increases	Service-based increases: 20.00% in year 1, 6.50% in year 2,

increases for service over 34

payable to all members receiving payments.



Cost of Living Increases

Measurement Date

reducing over years of service down to 1.25% in years 30-34.0%

2.75% on first \$15,000 of Annual Benefit and on the accumulated supplemental pension amounts for prior years. Assumed to be



NOTES TO FINANCIAL STATEMENTS

Single Discount Rate

A GASB Statement Nos. 67 and 68 single discount rate of 3.8562% was used to measure the total pension liability as of June 30, 2018. This single discount rate was based on the expected rate of return on pension plan investments of 3.62% (the municipal bond rate) before 2053, and 4.50% after 2053. The projection of cash flows used to determine this single discount rate assumed that the Plan sponsor would make the statutory required contribution as defined by the funding policy. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make projected future benefit payments, on behalf of current plan members after plan year 2053. Therefore, the single discount rate of 3.8562% was applied to all periods of projected benefit payments to determine the total pension liability.



Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 3.8562%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

	Current Single Discount						
1% Decrease	Rate Assumption	1% Increase					
2.8562%	3.8562%	4.8562%					
\$49,038,522	\$41,682,588	\$35,828,196					





GASB STATEMENT No. 68 PENSION EXPENSE

Net Pension Liability For Fiscal Year Ending June 30, 2018

A. Total Pension Liability	
1. Service Cost	\$ 1,244,719
2. Interest on the Total Pension Liability	1,660,005
3. Changes of benefit terms	-
 Difference between expected and actual experience of the Total Pension Liability 	(517,413)
5. Changes of assumptions	(329,939)
6. Benefit payments, including refunds of employee contributions	(1,524,211)
7. Net change in total pension liability	\$ 533,161
8. Total pension liability – beginning (July 1, 2017)	 44,276,085
9. Total pension liability – ending (June 30, 2018)	\$ 44,809,246
B. Plan Fiduciary Net Position	
1. Contributions – employer	\$ 1,722,618
2. Contributions – employee	180,003
3. Net investment income	155,499
4. Benefit payments, including refunds of employee contributions	(1,524,211)
5. Pension Plan Administrative Expense	(2,350)
6. Other	 463,165
7. Net change in plan fiduciary net position	\$ 994,724
8. Plan fiduciary net position – beginning (July 1, 2017)	 2,131,934
9. Plan fiduciary net position – ending (June 30, 2018)*	\$ 3,126,658
C. Net pension liability as of June 30, 2018	\$ 41,682,588
D. Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	6.98%
E. Covered-employee Payroll	\$ 1,864,926
F. Net Pension Liability as a Percentage of Covered Employee Payroll	2,235.08%

^{*}Totals may not add due to rounding



Pension Expense For Fiscal Year Ending June 30, 2018

Α.	Expense
----	---------

1. Service Cost	\$ 1,244,719
2. Interest on the Total Pension Liability	1,660,005
3. Current-Period Benefit Changes	-
4. Employee Contributions (made negative for addition here)	(180,003)
5. Projected Earnings on Plan Investments (made negative for addition here)	(97,022)
6. Pension Plan Administrative Expense	2,350
7. Other Changes in Plan Fiduciary Net Position	(463,165)
8. Recognition of Outflow/(Inflow) due to Non-investment Experience	(870,203)
9. Recognition of Outflow/(Inflow) due to Assumption Changes	1,636,602
10. Recognition of Outflow/(Inflow) due to Investment Experience	 (11,107)
11. Total Pension Expense	\$ 2,922,176

B. Reconciliation of Net Pension Liability

1. Net Pension Liability beginning of year	\$ 42,144,151
2. Pension Expense	2,922,176
3. Employer Contributions	(1,722,618)
4. Change in Outflow/(Inflow) due to Non-investment Experience	352,790
5. Change in Outflow/(Inflow) due to Assumption Changes	(1,966,541)
6. Change in Outflow/(Inflow) due to Investment Experience	 (47,370)
7. Net Pension Liability End of year	\$ 41,682,588



Schedule of Outflows and Inflows of Resources

		Non-Investme	nt Experience		=		Assumpti	on Changes			Inv	estment	Experience	
Plan Year Beginning	7/1/2014	7/1/2015	7/1/2016	7/1/2017		7/1/2014	7/1/2015	7/1/2016	7/1/2017	7/1	/2014 7/1/2	<u>2015</u>	7/1/2016	7/1/2017
(Gain)/Loss	\$ (1,337,486)	\$ 4,042	\$ (1,654,431) \$	5 (517,413)		\$ 593,316	\$ 9,497,572	\$ (3,163,235)	\$ (329,939)	\$ 3	2,712 \$	62,618	\$ (92,386) \$	(58,477)
Amortization Factor	3.726428	3.803432	3.592531	3.449032		3.726428	3.803432	3.592531	3.449032	5.00	0000 5.0	000000	5.000000	5.000000
Amortization Amount	\$ (358,919)	\$ 1,063	\$ (460,520) \$	(150,017)	:	\$ 159,218	\$ 2,497,106	\$ (880,503)	\$ (95,661)	\$	5,542 \$	12,524	\$ (18,477) \$	(11,695)
Amortization for Plan Year End					Total					Total				To
6/30/2015	\$ (358,919)			\$	(358,919)	\$ 159,218				\$ 159,218 \$	5,542			\$
6/30/2016	(358,919)	\$ 1,063			(357,856)	159,218	\$ 2,497,106			2,656,324	5,542 \$	12,524		
6/30/2017	(358,919)	1,063	\$ (460,520)		(818,376)	159,218	2,497,106	\$ (880,503)		1,775,821	5,542	12,524	\$ (18,477)	
6/30/2018	(260,729)	1,063	(460,520)	(150,017)	(870,203)	115,661	2,497,106	(880,503)	\$ (95,661)	1,636,602	5,542	12,524	(18,477) \$	(11,695)
6/30/2019	-	854	(460,520)	(150,017)	(609,683)	-	2,006,255	(880,503)	(95,661)	, ,	5,542	12,524	(18,477)	(11,695)
6/30/2020	-	-	(272,872)	(150,017)	(422,889)	-	-	(521,725)	(95,661)	(617,387)	-	12,524	(18,477)	(11,695)
6/30/2021	-	-	-	(67,362)	(67,362)	-	-	-	(42,955)	(42,955)	-	-	(18,477)	(11,695)
6/30/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	(11,695)
6/30/2023	-	-	-		-	-	-	-	-	-	-	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	\$ (1,337,486)	\$ 4,042	\$ (1,654,431) \$	(517,413)	_	\$ 593,316	\$ 9,497,572	\$ (3,163,235)	\$ (329,939)	\$ 3	2,712 \$	62,618	\$ (92,386) \$	(58,477)
Deferred Outflows/(Inflows) Recognized in Pension Expense for Current Plan Year End		Outflows	(Inflows)	Net			Outflows	(Inflows)	Net		Outf	lows	(Inflows)	Net
Expense for Current Flair Tear Life		Outriows	(IIIIIOWS)	Net			Outilows	(IIIIIOWS)	Net		Outi	IUWS	(IIIIIOWS)	Net
6/30/2018		\$ 1,063	\$ (871,265) \$	(870,203)			\$ 2,612,766	\$ (976,165)	\$ 1,636,602		\$	19,066	\$ (30,173) \$	(11,107)
Deferred Outflows/(Inflows) Recognized in Pension Expense for Future Plan Years Ending														
6/30/2019		\$ 854	\$ (610,536) \$	(609,683)			\$ 2,006,255	\$ (976,165)	\$ 1,030,091		\$	19,066	\$ (30,173) \$	(11,107)
6/30/2020		-	(422,889)	(422,889)			-	(617,387)	(617,387)			12,524	(30,173)	(17,649)
6/30/2021		-	(67,362)	(67,362)			-	(42,955)	(42,955)			-	(30,173)	(30,173)
6/30/2022		-	-	-			-	-	-			-	(11,695)	(11,695)
6/30/2023		-	-	-			-	-	-			-	-	-
6/30/2024		-	-	-			-	-	-			-	-	-
Total		\$ 854	\$ (1,100,788) \$	(1,099,934)			\$ 2,006,255	\$ (1,636,506)	\$ 369,749		\$	31,590	\$ (102,213) \$	(70,624)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End														
6/30/2018			Ş	352,790				:	\$ (1,966,541)				\$	(47,370)



SECTION **F**

SUMMARY OF BENEFITS

Employee Eligibility — All compensated employees of the Fire Department hired before January 1, 2018, are eligible to participate in the Firemen's Pension and Relief Fund.

Average Annual Compensation — The average of any three twelve-consecutive-month periods of employment which produces the highest average annual compensation.

Each twelve-consecutive-month annual compensation is limited to 120% of the *Average Adjusted Salary* received by the member in the two consecutive twelve-consecutive-month periods immediately preceding the twelve-consecutive-month period used in determining benefits.

The Average Adjusted Salary is base salary (exclusive of all overtime and other pay) of the year used in determining benefits multiplied by the ratio of total salary (includes all overtime and other pay) to base salary from the respective preceding twelve-consecutive-month period.

Determining Years of Service Credit (Credited Service**)** — The number of years that the member has contributed to the employees retirement and benefit fund.

Prior Military Service — A city may provide that members who have been honorably discharged from the military shall receive up to two years prior service credit for military service prior to their employment with the city.

Current Military Service — Any current member who has been on qualified military service in the armed forces of the United States with an honorable discharge may, within six months from his or her date of discharge, be given credit for continuous service in the paid police or fire department.

Any member who has served in active duty with the armed forces of the United States, whether prior to or subsequent to becoming a member of a paid police or fire department, shall receive one additional percent for each year so served in active military duty, up to a maximum of four additional percent.

Absence from the service because of sickness or injury for a period of two years or less shall not be construed as time out of service.

Contributions — Participating employees contribute 8.5% of compensation. Participating employees hired on or after January 1, 2010, contribute 9.5% of pay. The municipality has elected to contribute the minimum employer contribution under the Conservation Method.

Normal Retirement — Members are eligible at the earlier of age 50 with 20 years of credited service or age 65.

Benefit Commencement — Annual retirement pension benefits commence upon retirement or upon the member attaining age fifty, whichever is later, payable in twelve monthly installments.



Accrued Benefit — The annual retirement benefit equals 60% of average annual compensation, not less than \$6,000, plus an additional percentage of average annual compensation for service over 20 years equal to 2% for each year of service between 20 and 25 and 1% for each year of service between 25 and 30 years. Employees serving in the military are eligible for an additional 1% of average annual compensation for each year of military service up to four years. The maximum benefit is limited to 75% of average annual compensation. Benefits continue for life.

Disability Retirement — Members are eligible after earning five years of service. No service requirement if disability is service related.

The monthly disability benefit equals the greater of 60% of monthly salary at disability or \$500. Employees serving in the military are eligible for an additional benefit of 1% of monthly salary at disability for each year of military service up to four years. Disability benefits, when aggregated with monthly State workers compensation benefits, shall not exceed 100% of the member's monthly compensation at the time of disability. Benefits continue for life or until recovery.

Death Benefits — Members are eligible after earning five years of service. No service requirement if death is service related. Retirees and terminated vested participants are also eligible.

The benefit is equal to 60% of the participant's benefit, but not less than \$300 per month, payable to the spouse until death or remarriage. Other dependents (children, parents, brothers and sisters) are also eligible for death benefits. To each dependent child, twenty percent of the participant's benefit until the child attains eighteen or marries; to each dependent orphaned child, twenty-five percent of the participant's benefit until the child attains eighteen or marries; to each dependent parent, ten percent of the participant's benefit for life, and to each dependent brother or sister, the sum of fifty dollars per month (but a total not to exceed \$100 per month) until such individual attains the age of eighteen years or marries.

In no case shall the payments to the surviving spouse and children be reduced below sixty-five percent of the total amount paid to all dependents.

Supplemental Pension Benefits — All retirees, surviving beneficiaries and disability pensioners are eligible for automatic cost-of-living benefits commencing on the first day of July following two years of retirement. The benefits equal the percentage increase in the Consumer Price Index, limited to 4% (2% for some disability retirees), multiplied by the sum of the allowable amount which is the first \$15,000 of the total annual benefits paid and the accumulated supplemental pension amounts for prior years.

Termination Benefits — Any member who terminates employment prior to retirement will be entitled to a refund of contributions without interest.

Refunds — Any member who terminates from their department without receiving a retirement pension shall be refunded all deductions made from his salary, without interest. Any member who receives such a refund and subsequently wishes to reenter the department must repay to the pension fund all sums refunded with interest at the rate of eight percent annual.





ACTUARIAL VALUATION ASSUMPTIONS

Actuarial Valuation Assumptions

	1					
Investment return						
7/1/2016	4.00%					
7/1/2016 7/1/2017 to 6/30/2053	4.00%					
7/1/2017 to 0/30/2033						
After 6/30/2053	4.50% for GASB 67/68 , 4.00% for Funding					
General Inflation	2.75%					
General illination	2.7370					
	General Inflation:					
	2.75% plus					
	Wage Inflation:					
	1.00% plus					
	Service Based Increase:					
	Years of					
Expected Salary Increase	_Service <u>Increase</u>					
	1 20.00%					
	2 6.50%					
	3 3.50%					
	4 2.75%					
	5-9 2.50%					
	10-29 2.00%					
	30-34 1.25%					
	after 34 years of service 0.00%					
	2.75% on first \$15,000 of Annual Benefit					
Post-retirement COLA	and on the accumulated supplemental pension					
	amounts for prior years.					
Increase in State Insurance						
Premium Tax Allocation	2.75% on and after year 1					
Tremiani Tax Anocation						



Actuarial Valuation Assumptions

	Entry-Age Normal Level-Percentage-of-Pay					
Cost Method	The sponsor finances benefits using the Conservation funding policy as defined by state statute. This policy does not directly amortize the unfunded actuarial liability. The policy is projected to fully finance the closed group actuarial liability by 2053.					
	30 – Year Closed Level-Percentage-of-Pay Amortization for Actuarially Determined Contribution (from July 1, 2010). 24 years remaining as of July 1, 2016.					
Asset Method	Market Value					
	Sample Rates –					
	Age Rates					
	25 9%					
Turnover	35 4%					
	45 2%					
	50 0%					
	Age Rates ^a					
	50 45%					
	51-55 30%					
Retirement	56-59 35%					
Retirement	60 100%					
	^a Terminated vested participants are assumed to retire at age 50					



Actuarial Valuation Assumptions

	Active: RP-2014 Blue Collar Healthy Employee ^b						
	Post-Retirement:						
	RP-2014 Blue Collar Healthy Annuitant						
	Disabled:						
Mortality	RP-2014 Blue Collar Healthy Annuitant set forward						
	four years						
	Tables above incorporate generational mortality improvement using MP-2014 two-dimensional mortality improvement scales						
	mortancy improvement scares						
	^b Assumes 10% of deaths are duty-related and 90% are non- duty-related.						
	Sample Rates –						
	Age Rates ^c						
	30 0.22%						
Disability	40 0.50%						
	50 0.79%						
	^c Assumes 60% duty related and 40% non-duty related. Also assumes 10% of non-duty disabled members receive a 20% reduction in benefits due to gainful employment.						
Percent Married	90%						
Spouse Age	Females 3 years younger than males						



Discount Rate

The following table outlines the factors used to determine the discount rate:

Funded Ratio as of Valuation Date ¹	Liquidity Ratio ²	Equity Exposure ³	Projected Funded Ratio after 15 Years ¹	Discount Rate
60% or more	10	50% or more	70% or more	6.50%
40% or more	8	40% or more	60% or more	6.00%
30% or more	6	30% or more	50% or more	5.50%
15% or more	4	n/a	40% or more	5.00%
Less than 15%	n/a	n/a	15% or more	4.50%
Less than 15%	n/a	n/a	Less than 15%	4.00%

Funded ratios based on a 6.00% investment return assumption for plans using an actuarially sound policy (standard or optional) and a 5.50% investment return assumption for other plans (alternative or conservation).

³ Based on investment policy.

As of June 30, 2017 *							
Assets	\$2,131,934						
Liabilities using a 5.50% discount rate	\$34,657,156						
Funded Ratio	6%						
Expected Benefit Payments	\$1,609,964						
Liquidity Ratio	1.32						
Equity Exposure	50%						
Projected Funded Ratio after 15 years	24%						

^{*}Based on funding valuation results as of June 30, 2017.

Discount Rate	4.00%



² Liquidity ratio equals assets as of the valuation date divided by expected benefit payments for the year.



CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement Nos. 67 and 68 include specific requirements for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be available or sufficient to meet benefit payments, the use of a "risk-free" rate is required, as described in the following paragraph.

The *single discount rate* (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) a tax-exempt municipal bond rate based on an index of 20-year mixed maturity general obligation bonds with an average AA credit rating (which is published by Fidelity) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

The sponsor finances benefits using the **Conservation** funding policy as defined in State statutes. The sponsor makes contributions to two separate accounts – the Benefit Payment Account and the Accumulation Account. The Benefit Payment Account is used to finance benefits and expenses on a pay-as-you-go basis. Sources to pay current year benefits and expenses include minimum employee contributions of 6.50% of pay, any remaining State premium tax allocation as described below, and employer contributions. The Accumulation Account cannot be used to pay benefits and expenses until assets exceed actuarial liabilities. Contributions to the Accumulation Account include employee contributions of 1.50% of pay and the percentage of premium tax allocation which is projected to fully finance the projected liability in 35 years, since the adoption of the Conservation funding policy in 2018. Any remaining State premium tax allocation, not assigned to the Accumulation Account, can be used to finance benefits and expenses during the year. The plan is closed to new members as of the adoption of the Conservation funding policy.

For purposes of developing the single equivalent discount rate, we have assumed benefits are discounted at the municipal bond rate if paid from the pay-as-you-go Benefit Account, or at the long-term expected rate of return if paid from the Accumulation Account. We have assumed a long-term expected rate of return after 2053 of 4.50%. The long-term rate of return assumes assets in the Accumulation Account are invested in a well-diversified portfolio with 40% to 50% allocated to equities.

For the purpose of this valuation, the municipal bond rate is 3.62%, the long-term expected rate of return is 4.50% after 2053, and the resulting single discount rate is 3.8562%.

The tables on the following pages show the projection of assets and funded status for current members as of the valuation date. Our projections assume the sponsor will make the required statutory contributions. The projections are based on the statutory funding actuarial valuation and projection report as of June 30, 2017.



GASB Statement Nos. 67 and 68 - Conservation Funding Policy Projection of assets and funded status

			Benefit P	ayment Accoun	nt			Accumulation Account c			Funded Status			
Plan					7.11% of Pay	73.00% of		1.50% of Pay	27.00% of		Actuarial			
Year End	Assets	Benefits		Employer	Employee	Premium Tax	Assets	Employee	Premium Tax	Investment	Accrued	Funded	Funded	
30-Jun	(boy)	Payments	Expenses	Contributions	Contributions	Allocation	(boy)	Contributions	Allocation	Income	Liability (boy)	Ratio ^a	Ratio ^b	
2019	506,796	1,710,118	2,363	1,263,537	125,381	323,563	2,619,862	26,867	119,675	127,969	43,811,964	1%	7.1%	
2020	0	1,775,648	2,375	1,317,444	121,424	339,155	3,401,169	26,020	125,441	139,046	44,954,680	0%	7.6%	
2021	0	1,851,979	2,389	1,390,487	116,150	347,731	3,691,676	24,889	128,613	150,707	46,035,315	0%	8.0%	
2022	0	1,927,140	2,407	1,459,711	111,420	358,416	3,995,885	23,876	132,566	162,934	47,028,794	0%	8.5%	
2023	0	1,986,885	2,427	1,514,819	107,791	366,702	4,315,261	23,098	135,630	175,754	47,938,823	0%	9.0%	
2024	0	2,062,388	2,447	1,585,494	101,913	377,428	4,649,743	21,839	139,597	189,187	48,786,818	0%	9.5%	
2025	0	2,157,701	2,470	1,676,969	94,599	388,603	5,000,366	20,271	143,731	203,263	49,530,881	0%	10.1%	
2026	0	2,274,321	2,493	1,790,832	85,126	400,856	5,367,631	18,241	148,263	218,003	50,133,417	0%	10.7%	
2027	0	2,394,508	2,517	1,907,603	74,846	414,576	5,752,138	16,038	153,337	233,440	50,548,107	0%	11.4%	
2028	0	2,493,364	2,541	2,001,304	66,012	428,589	6,154,953	14,145	158,520	249,618	50,757,753	0%	12.1%	
2029	0	2,580,423	2,567	2,082,846	58,597	441,547	6,577,236	12,557	163,312	266,572	50,788,977	0%	13.0%	
2030	0	2,660,764	2,593	2,157,289	51,965	454,103	7,019,677	11,135	167,956	284,334	50,662,193	0%	13.9%	
2031	0	2,726,838	2,619	2,217,093	46,151	466,213	7,483,102	9,890	172,436	302,935	50,388,073	0%	14.9%	
2032	0	2,770,650	2,645	2,252,935	41,905	478,455	7,968,363	8,980	176,963	322,417	49,982,860	0%	15.9%	
2033	0	2,789,640	2,671	2,262,652	39,692	489,967	8,476,723	8,505	181,221	342,826	49,478,125	0%	17.1%	
2034	0	2,816,513	2,695	2,282,075	36,099	501,034	9,009,275	7,736	185,315	364,194	48,913,331	0%	18.4%	
2035	0	2,854,757	2,719	2,311,634	31,233	514,609	9,566,520	6,693	190,335	386,563	48,268,265	0%	19.8%	
2036	0	2,883,721	2,740	2,331,710	27,049	527,702	10,150,111	5,796	195,178	409,985	47,518,729	0%	21.4%	
2037	0	2,894,920	2,759	2,333,091	23,880	540,708	10,761,070	5,117	199,989	434,505	46,675,786	0%	23.1%	
2038	0	2,897,391	2,774	2,325,961	20,864	553,340	11,400,681	4,471	204,661	460,169	45,762,169	0%	24.9%	
2039	0	2,893,512	2,786	2,311,047	17,924	567,327	12,069,982	3,841	209,834	487,031	44,785,545	0%	27.0%	
2040	0	2,872,457	2,794	2,277,568	16,287	581,396	12,770,688	3,490	215,038	515,155	43,750,723	0%	29.2%	
2041	0	2,853,020	2,797	2,245,798	14,147	595,872	13,504,371	3,031	220,392	544,599	42,682,802	0%	31.6%	
2042	0	2,842,865	2,796	2,223,078	10,835	611,748	14,272,393	2,322	226,264	575,423	41,575,489	0%	34.3%	
2043	0	2,821,456	2,790	2,188,442	8,109	627,695	15,076,402	1,738	232,162	607,688	40,410,689	0%	37.3%	
2044	0	2,783,270	2,780	2,135,775	6,470	643,805	15,917,990	1,386	238,120	641,463	39,202,471	0%	40.6%	
2045	0	2,738,170	2,767	2,075,480	5,259	660,198	16,798,959	1,127	244,184	676,816	37,973,316	0%	44.2%	
2046	0	2,686,830	2,749	2,007,716	4,457	677,406	17,721,086	955	250,548	713,824	36,732,386	0%	48.2%	
2047	0	2,631,099	2,729	1,934,186	3,918	695,724	18,686,413	840	257,323	752,569	35,488,502	0%	52.7%	
2048	0	2,580,272	2,705	1,864,974	2,924	715,079	19,697,145	627	264,483	793,136	34,247,914	0%	57.5%	
2049	0	2,529,522	2,680	1,794,781	1,819	735,602	20,755,391	390	272,073	835,611	33,003,458	0%	62.9%	
2050	0	2,471,092	2,654	1,715,767	1,290	756,689	21,863,465	277	279,873	880,087	31,754,511	0%	68.9%	
2051	0	2,411,649	2,626	1,635,076	874	778,325	23,023,702	187	287,875	926,653	30,512,115	0%	75.5%	
2052	0	2,351,786	2,598	1,553,085	538	800,761	24,238,417	115	296,173	975,404	29,278,157	0%	82.8%	
2053	0	2,291,233	2,569	1,469,639	345	823,808	25,510,109	74	304,697	1,026,440	28,053,889	0%	90.9%	
2054	0	2,230,614	2,541	0	0	0	26,841,309	294	0	1,029,503	26,841,310	0%	100.0%	

^a Funded ratio based on assets available to pay benefits. After plan year end June 30, 2053, assets in Accumulation Account will be available to pay benefits.

Projected amounts from 2018 and beyond come directly from the June 30, 2017 actuarial valuation and do not reflect actual experience for the plan year ended June 30, 2018.



^b Funded ratio based on all assets in trust, including the Benefit Payment Account and the Accumulation Account.

^c Includes plan year end 2054 Benefit Payments of \$2,170,553, Expenses of \$2,513, and Employer Contributions of \$0.

GASB Statement Nos. 67 and 68 - Conservation Funding Policy Development of single equivalent discount rate

		Discounted		Single	Discounted
Plan Year	Benefit	Discount	Benefit	Discount	Benefit
End 6/30	Payments	Rate	Payments	Rate	Payments
2018	\$1,609,964	3.62%	\$1,581,722	3.8562%	\$1,579,931
2019	1,710,118	3.62%	1,621,423	3.8562%	1,615,904
2020	1,775,648	3.62%	1,624,739	3.8562%	1,615,527
2021	1,851,979	3.62%	1,635,382	3.8562%	1,622,412
2022	1,927,140	3.62%	1,642,301	3.8562%	1,625,571
2023	1,986,885	3.62%	1,634,063	3.8562%	1,613,738
2024	2,062,388	3.62%	1,636,902	3.8562%	1,612,867
2025	2,157,701	3.62%	1,652,723	3.8562%	1,624,752
2026	2,274,321	3.62%	1,681,191	3.8562%	1,648,979
2027	2,394,508	3.62%	1,708,197	3.8562%	1,671,658
2028	2,493,364	3.62%	1,716,579	3.8562%	1,676,041
2029	2,580,423	3.62%	1,714,452	3.8562%	1,670,158
2030	2,660,764	3.62%	1,706,072	3.8562%	1,658,214
2031	2,726,838	3.62%	1,687,356	3.8562%	1,636,294
2032	2,770,650	3.62%	1,654,571	3.8562%	1,600,853
2033	2,789,640	3.62%	1,607,712	3.8562%	1,551,978
2034	2,816,513	3.62%	1,566,492	3.8562%	1,508,748
2035	2,854,757	3.62%	1,532,294	3.8562%	1,472,455
2036	2,883,721	3.62%	1,493,766	3.8562%	1,432,167
2037	2,894,920	3.62%	1,447,179	3.8562%	1,384,346
2038	2,897,391	3.62%	1,397,814	3.8562%	1,334,083
2039	2,893,512	3.62%	1,347,175	3.8562%	1,282,829
2040	2,872,457	3.62%	1,290,650	3.8562%	1,226,210
2041	2,853,020	3.62%	1,237,133	3.8562%	1,172,692
2042	2,842,865	3.62%	1,189,663	3.8562%	1,125,131
2043	2,821,456	3.62%	1,139,456	3.8562%	1,075,196
2044	2,783,270	3.62%	1,084,766	3.8562%	1,021,263
2045	2,738,170	3.62%	1,029,906	3.8562%	967,409
2046	2,686,830	3.62%	975,290	3.8562%	914,024
2047	2,631,099	3.62%	921,695	3.8562%	861,831
2048	2,580,272	3.62%	872,312	3.8562%	813,801
2049	2,529,522	3.62%	825,280	3.8562%	768,173
2050	2,471,092	3.62%	778,051	3.8562%	722,565
2051	2,411,649	3.62%	732,807	3.8562%	679,000
2052	2,351,786	3.62%	689,652	3.8562%	637,561
2053	2,291,233	3.62%	648,422	3.8562%	598,082
2054	2,230,614	4.50%	449,316	3.8562%	560,639
2055	2,170,553	4.50%	418,390	3.8562%	525,288
2056	2,110,963	4.50%	389,382	3.8562%	491,898
2057	2,051,773	4.50%	362,166	3.8562%	460,354
2058	1,992,943	4.50%	336,633	3.8562%	430,551
2059	1,933,941	4.50%	312,600	3.8562%	402,291
2069	1,278,111	4.50%	133,031	3.8562%	182,114
2079	576,065	4.50%	38,609	3.8562%	56,224
2109	1,201	4.50%	21	3.8562%	38
Tota	l Present Value		\$53,985,200		\$53,985,200



SECTION I

GLOSSARY OF TERMS

Actuarial Accrued Liability (AAL)

The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."

Actuarial Assumptions

These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.

Accrued Service

Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Equivalent

A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.

Actuarial Gain (Loss)

The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.

Actuarial Present Value (APV)

The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.

Actuarial Valuation

The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability and related actuarial present value of projected benefit payments for pensions.

Actuarial Valuation Date

The date as of which an actuarial valuation is performed.



Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC) A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Amortization Method

The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year.

Amortization Payment

The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.

Cost-of-Living Adjustments

Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)

A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

Covered-Employee Payroll

The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.

Deferred Inflows and Outflows

The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.

Deferred Retirement Option Program (DROP)

A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.



Discount Rate

For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically:

The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period and;

The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Entry Age Actuarial Cost Method (EAN)

The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Fiduciary Net Position

The fiduciary net position is the value of the assets of the trust.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Long-Term Expected Rate of Return

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

Money-Weighted Rate of Return

The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.

Multiple-Employer Defined Benefit Pension Plan

A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.



Municipal Bond Rate The Municipal Bond Rate is the discount rate to be used for those benefit

payments that occur after the assets of the trust have been depleted.

Net Pension Liability (NPL) The NPL is the liability of employers and non-employer contribution

entities to plan members for benefits provided through a defined benefit

pension plan.

Non-employer Contribution

Entities

Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered non-employer contribution entities.

Normal Cost The actuarial present value of the pension trust benefits allocated to the

current year by the actuarial cost method.

Other Postemployment Benefits (OPEB) All postemployment benefits other than retirement income (such as death benefits, life insurance, disability and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.

Real Rate of Return The real rate of return is the rate of return on an investment after

adjustment to eliminate inflation.

Service Cost The service cost is the portion of the actuarial present value of projected

benefit payments that is attributed to a valuation year.

Total Pension ExpenseThe total pension expense is the sum of the following items that are

recognized at the end of the employer's fiscal year:

1. Service Cost

2. Interest on the Total Pension Liability

3. Current-Period Benefit Changes

4. Employee Contributions (made negative for addition here)

5. Projected Earnings on Plan Investments (made negative for addition here)

addition nere;

6. Pension Plan Administrative Expense

7. Other Changes in Plan Fiduciary Net Position

8. Recognition of Outflow/(Inflow) of Resources due to Liabilities

9. Recognition of Outflow/(Inflow) of Resources due to Assets



Total Pension Liability (TPL) The TPL is the portion of the actuarial present value of projected benefit

payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued

Liability (UAAL)

The UAAL is the difference between actuarial accrued liability and

valuation assets.

Valuation Assets The valuation assets are the assets used in determining the unfunded

liability of the plan. For purposes of the GASB Statement No. 67, the

valuation asset is equal to the market value of assets.

