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

GASB Statement Nos. 67 and 68 Plan Reporting and Accounting Schedules

June 30, 2018

GRS

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October 22, 2018

Mr. Billie L. Trump, City Treasurer, Recorder	Captain Jamel (Jake) Corey
City of Beckley	Pension Board Secretary
409 S. Kanawha Street	City of Beckley Policemen's Pension and Relief
Beckley, WV 25801	Fund

Dear Mr. Trump and Captain Corey:

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 Beckley, West Virginia Policemen'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 Beckley, West Virginia Policemen'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.

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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 does not evaluate the plan sponsor's ability or willingness to make contributions to the Pension and Relief Fund.

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 Beckley, West Virginia Policemen'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

Heidi G. Barry, ASA, MAAA, FCA

Judith A. Kermans

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		49
- Inactive, Nonretired Members		2
- Active Members		54
- Total		105
Expected Payroll	$	2,580,777
Net Pension Liability		
Total Pension Liability[b]	$	34,872,905
Plan Fiduciary Net Position		22,217,794
Net Pension Liability	$	12,655,111
Plan Fiduciary Net Position as a Percentage of Total Pension Liability		63.71%
Net Pension Liability as a Percentage of Covered Payroll		490.36%
Development of the Single Discount Rate		
Single Discount Beginning of Year		5.50%
Single Discount Rate End of Year		6.00%
Long-Term Expected Rate of Return		6.00%
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		2049
Year assets are expected to be depleted for closed plan		**N/A**
GASB No. 68 Pension Expense	$	2,117,002

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

	Deferred Outflows of Resources	Deferred (Inflows) of Resources
Difference between expected and actual non-investment experience	$ -	$ (1,039,522)
Changes in assumptions	3,385,286	(2,468,369)
Net difference between projected and actual earnings on pension plan investments	291,946	(394,416)
Total	$ 3,677,233	$ (3,902,306)

[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 6.00%, the municipal bond rate is 3.62% (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 the resulting single discount rate is 6.00%.

Please see important comments about the Alternative Funding Policy in the actuarial valuation report (used for funding) including its inability to fund for expected benefit payments in an already severely underfunded plan.

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, the blended interest rate used to discount liabilities was changed from 5.50% to 6.00%. 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	$	90,617
Receivables		
Contributions		-
Investment Income		51,400
Total Receivables	**$**	**51,400**
Investment		
Government Securities	$	2,722,132
Corporate Bonds		5,672,736
Corporate Stocks		13,017,517
Alternative Investments		663,392
Other		-
Total Investments	**$**	**22,075,777**
Total Assets	**$**	**22,217,794**
Liabilities		
Payables		-
Total Liabilities	**$**	**-**
Net Position Restricted for Pensions*	**$**	**22,217,794**

**Totals may not add due to rounding*

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

Additions		
Contributions		
Employer	$	614,036
State		515,032
Employee		207,438
Receivable Employer		-
Receivable State		-
Receivable Employee		-
Other		-
Total Contributions	**$**	**1,336,506**
Net investment gain (loss) from		
Net Appreciation (Depreciation)	$	(17,369)
Net Realized Gain (Loss) on Sale or Exchange		756,198
Interest and Dividends		689,898
Other income		-
Investment Expense		(75,548)
Receivable Investment Income		51,400
Payable Investment Expenses		-
Net Investment Income	**$**	**1,404,579**
Other Revenue	$	-
Total Additions	**$**	**2,741,085**
Deductions		
Benefit payments	$	1,588,104
Refunds		17,697
Pension Plan Administrative Expense		24
Other		-
Payable Benefits and Withdrawals		-
Payable Administrative Expenses		-
Total Deductions	**$**	**1,605,825**
Net Increase in Net Position	$	1,135,260
Net Position Restricted for Pensions *		
Beginning of Year	**$**	**21,082,534**
End of Year	**$**	**22,217,794**

**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 Beckley, West Virginia Policemen'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.

SECTION C

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
Total Pension Liability					
Service Cost	$ 1,083,032	$ 932,441	$ 527,526	$ 605,759	$ 566,516
Interest on the Total Pension Liability	1,958,079	1,913,373	1,873,424	1,822,041	1,800,224
Benefit Changes	-	-	-	-	-
Difference between Expected and Actual Experience	(539,579)	(579,180)	(367,023)	(240,296)	-
Assumption Changes	(2,425,222)	-	7,544,910	(1,724,947)	-
Benefit Payments	(1,588,104)	(1,522,138)	(1,555,886)	(1,548,023)	(1,466,921)
Refunds	(17,697)	(9,448)	-	(25,921)	(13,466)
Net Change in Total Pension Liability	(1,529,491)	735,048	8,022,951	(1,111,387)	886,353
Total Pension Liability - Beginning	36,402,396	35,667,348	27,644,397	28,755,784	27,869,431
Total Pension Liability - Ending (a)	$ 34,872,905	$ 36,402,396	$ 35,667,348	$ 27,644,397	$ 28,755,784
Plan Fiduciary Net Position					
Employer Contributions (Local and State)	$ 1,129,068	$ 967,969	$ 892,200	$ 870,447	$ 834,851
Employee Contributions	207,438	204,974	183,202	163,569	167,926
Pension Plan Net Investment Income	1,404,579	1,409,529	917,047	650,402	2,169,818
Benefit Payments	(1,588,104)	(1,522,138)	(1,555,886)	(1,548,023)	(1,466,921)
Refunds	(17,697)	(9,448)	-	(25,921)	(13,466)
Pension Plan Administrative Expense	(24)	(24)	-	(68,325)	(63,349)
Other	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	1,135,260	1,050,862	436,563	42,149	1,628,859
Plan Fiduciary Net Position - Beginning	21,082,534	20,031,672	19,506,341	19,553,486	17,924,627
Plan Fiduciary Net Position - Ending* (b)	$ 22,217,794	$ 21,082,534	$ 19,942,904	$ 19,595,635	$ 19,553,486
Net Pension Liability - Ending (a) - (b)	12,655,111	15,319,862	15,724,444	8,048,762	9,202,298
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	63.71 %	57.92 %	55.91 %	70.88 %	68.00 %
Covered Employee Payroll	$ 2,580,777	$ 2,217,255	$ 2,100,749	$ 2,202,152	$ 2,076,451
Net Pension Liability as a Percentage of Covered Employee Payroll	490.36 %	690.94 %	748.52 %	365.50 %	443.17 %

Notes to Schedule:

**Totals may not add due to rounding*

Market value of assets as of July 1, 2016, includes $88,768, excluded from the market value of assets as of June 30, 2016, used for the actuarial valuation report for the fiscal year end June 30, 2016.

Market value of assets as of July 1, 2015, excludes $89,294, included in the market value of assets as of June 30, 2015, used for the actuarial valuation report for the fiscal year end June 30, 2015.

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	$ 28,755,784	$ 19,553,486	$ 9,202,298	68.00%	$ 2,076,451	443.17 %
2015	$ 27,644,397	$ 19,595,635	$ 8,048,762	70.88%	$ 2,202,152	365.50 %
2016	$ 35,667,348	$ 19,942,904	$ 15,724,444	55.91%	$ 2,100,749	748.52 %
2017	$ 36,402,396	$ 21,082,534	$ 15,319,862	57.92%	$ 2,217,255	690.94 %
2018	$ 34,872,905	$ 22,217,794	$ 12,655,111	63.71%	$ 2,580,777	490.36 %

Schedule of Contributions Multiyear

Fiscal Year Ended	Actuarially Determined Contribution (a)	Employer Contribution (b)	State Contribution (c)	Percentage Contributed [(b)+(c)]/(a)	Covered Payroll (f)	Actual Contribution as a % of Covered Payroll [(b)+(c)]/(f)
6/30/2013	$ 856,764	$ 366,500	$ 702,751	125%	$ 1,865,580	57%
6/30/2014	$ 908,970	$ 392,155	$ 405,775	88%	$ 2,076,451	38%
6/30/2015	$ 769,449	$ 419,606	$ 450,841	113%	$ 2,202,152	40%
6/30/2016	$ 1,424,813	$ 448,978	$ 443,222	63%	$ 2,100,749	42%
6/30/2017	$ 1,526,595	$ 480,407	$ 487,562	63%	$ 2,217,255	44%
6/30/2018	$ 1,443,038	$ 614,036	$ 515,032	78%	$ 2,580,777	44%

Notes to Schedule of Contributions

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:

Measurement Date	June 30, 2018, measurement date based on actuarial liabilities as 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 Alternative funding policy as defined in state statute. Sponsor contributions are equal to 107 percent of the prior year contribution. The plan also receives state contributions based on an allocation of premium tax that depends on the number of active and retired members. This funding policy does not directly amortize the unfunded actuarial liability. However, projected sponsor, state and member contributions along with projected investment earnings are expected to fully fund the projected actuarial liability for current plan members by 2049.

Actuarial Assumptions:

Investment Rate of Return	6.00% per year
GASB 67/68 Discount Rate	6.00% per year at June 30, 2018, and 5.50% at June 30, 2017
Projected Salary Increases	Service-based increases: 20.00% in year 1, 6.50% in year 2, reducing over years of service down to 1.25% in years 30-34. 0% increases for service over 34
Cost of Living Increases	2.75% on first $15,000 of Annual Benefit and on the accumulated supplemental pension amounts for prior years. Assumed to be payable to all members receiving payments.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Single Discount Rate

A GASB Statement Nos. 67 and 68 single discount rate of 6.00% 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 6.00%, and the municipal bond rate 3.62%. 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 for all future plan years. Therefore, the single discount rate of 6.00% 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 6.00%, 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:

1% Decrease 5.0000%	Current Single Discount Rate Assumption 6.0000%	1% Increase 7.0000%
$17,784,447	$12,655,111	$8,504,183

SECTION E

GASB STATEMENT NO. 68 PENSION EXPENSE

Net Pension Liability
For Fiscal Year Ending June 30, 2018

A. Total Pension Liability		
1. Service Cost	$	1,083,032
2. Interest on the Total Pension Liability		1,958,079
3. Changes of benefit terms		-
4. Difference between expected and actual experience of the Total Pension Liability		(539,579)
5. Changes of assumptions		(2,425,222)
6. Benefit payments, including refunds of employee contributions		(1,605,801)
7. Net change in total pension liability	$	(1,529,491)
8. Total pension liability – beginning (July 1, 2017)		36,402,396
9. Total pension liability – ending (June 30, 2018)	**$**	**34,872,905**
B. Plan Fiduciary Net Position		
1. Contributions – employer	$	1,129,068
2. Contributions – employee		207,438
3. Net investment income		1,404,579
4. Benefit payments, including refunds of employee contributions		(1,605,801)
5. Pension Plan Administrative Expense		(24)
6. Other		-
7. Net change in plan fiduciary net position	$	1,135,260
8. Plan fiduciary net position – beginning (July 1, 2017)		21,082,534
9. Plan fiduciary net position – ending (June 30, 2018)*	**$**	**22,217,794**
C. Net pension liability as of June 30, 2018	**$**	**12,655,111**
D. Plan Fiduciary Net Position as a Percentage of the Total Pension Liability		**63.71%**
E. Covered-employee Payroll	**$**	**2,580,777**
F. Net Pension Liability as a Percentage of Covered Employee Payroll		**490.36%**

**Totals may not add due to rounding*

Pension Expense
For Fiscal Year Ending June 30, 2018

A. Expense

1. Service Cost	$	1,083,032
2. Interest on the Total Pension Liability		1,958,079
3. Current-Period Benefit Changes		-
4. Employee Contributions (made negative for addition here)		(207,438)
5. Projected Earnings on Plan Investments (made negative for addition here)		(1,150,720)
6. Pension Plan Administrative Expense		24
7. Other Changes in Plan Fiduciary Net Position		-
8. Recognition of Outflow/(Inflow) due to Non-investment Experience		(311,650)
9. Recognition of Outflow/(Inflow) due to Assumption Changes		654,593
10. Recognition of Outflow/(Inflow) due to Investment Experience		91,082
11. Total Pension Expense	**$**	**2,117,002**

B. Reconciliation of Net Pension Liability

1. Net Pension Liability beginning of year	**$**	**15,319,862**
2. Pension Expense		2,117,002
3. Employer Contributions		(1,129,068)
4. Change in Outflow/(Inflow) due to Non-investment Experience		(227,929)
5. Change in Outflow/(Inflow) due to Assumption Changes		(3,079,815)
6. Change in Outflow/(Inflow) due to Investment Experience		(344,941)
7. Net Pension Liability End of year*	**$**	**12,655,111**

**Totals may not add due to rounding*

Schedule of Outflows and Inflows of Resources

Non-Investment Experience

Plan Year Beginning	7/1/2014	7/1/2015	7/1/2016	7/1/2017	
(Gain)/Loss	$ (240,296)	$ (367,023)	$ (579,180)	$ (539,579)	
Amortization Factor	5.448048	5.441533	5.378254	5.839255	
Amortization Amount	$ (44,107)	$ (67,448)	$ (107,689)	$ (92,405)	
Amortization for Plan Year End					**Total**
6/30/2014					
6/30/2015	$ (44,107)				$ (44,107)
6/30/2016	(44,107)	$ (67,448)			(111,555)
6/30/2017	(44,107)	(67,448)	$ (107,689)		(219,244)
6/30/2018	**(44,107)**	**(67,448)**	**(107,689)**	**$ (92,405)**	**(311,650)**
6/30/2019	(44,107)	(67,448)	(107,689)	(92,405)	(311,650)
6/30/2020	(19,762)	(67,448)	(107,689)	(92,405)	(287,305)
6/30/2021	-	(29,781)	(107,689)	(92,405)	(229,875)
6/30/2022	-	-	(40,734)	(92,405)	(133,139)
6/30/2023	-	-	-	(77,552)	(77,552)
6/30/2024	-	-	-	-	-
Total	**$ (240,296)**	**$ (367,023)**	**$ (579,180)**	**$ (539,579)**	

Assumption Changes

Plan Year Beginning	7/1/2014	7/1/2015	7/1/2016	7/1/2017	
(Gain)/Loss	$ (1,724,947)	$ 7,544,910	$ -	$ (2,425,222)	
Amortization Factor	5.448048	5.441533	5.378254	5.839255	
Amortization Amount	$ (316,617)	$ 1,386,541	$ -	$ (415,331)	
Amortization for Plan Year End					**Total**
6/30/2014					
6/30/2015	(316,617)				$ (316,617)
6/30/2016	(316,617)	$ 1,386,541			1,069,924
6/30/2017	(316,617)	1,386,541	$ -		1,069,924
6/30/2018	**(316,617)**	**1,386,541**	**-**	**$ (415,331)**	**654,593**
6/30/2019	(316,617)	1,386,541	-	(415,331)	654,593
6/30/2020	(141,860)	1,386,541	-	(415,331)	829,351
6/30/2021	-	612,204	-	(415,331)	196,873
6/30/2022	-	-	-	(415,331)	(415,331)
6/30/2023	-	-	-	(348,568)	(348,568)
6/30/2024	-	-	-	-	-
Total	**$ (1,724,947)**	**$ 7,544,910**	**$ -**	**$ (2,425,222)**	

Investment Experience

Plan Year Beginning	7/1/2014	7/1/2015	7/1/2016	7/1/2017	
(Gain)/Loss	$ 596,572	$ 431,580	$ (318,881)	$ (253,859)	
Amortization Factor	5.000000	5.000000	5.000000	5.000000	
Amortization Amount	$ 119,314	$ 86,316	$ (63,776)	$ (50,772)	
Amortization for Plan Year End					**Total**
6/30/2014					
6/30/2015	$ 119,314				$ 119,314
6/30/2016	119,314	$ 86,316			205,630
6/30/2017	119,314	86,316	$ (63,776)		141,854
6/30/2018	**119,314**	**86,316**	**(63,776)**	**$ (50,772)**	**91,082**
6/30/2019	119,314	86,316	(63,776)	(50,772)	91,082
6/30/2020	-	86,316	(63,776)	(50,772)	(28,232)
6/30/2021	-	-	(63,776)	(50,772)	(114,548)
6/30/2022	-	-	-	(50,772)	(50,772)
6/30/2023	-	-	-	-	-
6/30/2024	-	-	-	-	-
Total	**$ 596,572**	**$ 431,580**	**$ (318,881)**	**$ (253,859)**	

	Non-Investment Experience			Assumption Changes			Investment Experience		
Deferred Outflows/(Inflows) Recognized in Pension Expense for Current Plan Year End	**Outflows**	**(Inflows)**	**Net**	**Outflows**	**(Inflows)**	**Net**	**Outflows**	**(Inflows)**	**Net**
6/30/2018	$ -	$ (311,650)	$ (311,650)	$ 1,386,541	$ (731,948)	$ 654,593	$ 205,630	$ (114,548)	$ 91,082
Deferred Outflows/(Inflows) Recognized in Pension Expense for Future Plan Years Ending									
6/30/2019	$ -	$ (311,650)	$ (311,650)	$ 1,386,541	$ (731,948)	$ 654,593	$ 205,630	$ (114,548)	$ 91,082
6/30/2020	-	(287,305)	(287,305)	1,386,541	(557,191)	829,351	86,316	(114,548)	(28,232)
6/30/2021	-	(229,875)	(229,875)	612,204	(415,331)	196,873	-	(114,548)	(114,548)
6/30/2022	-	(133,139)	(133,139)	-	(415,331)	(415,331)	-	(50,772)	(50,772)
6/30/2023	-	(77,552)	(77,552)	-	(348,568)	(348,568)	-	-	-
6/30/2024	-	-	-	-	-	-	-	-	-
Total	$ -	$ (1,039,522)	$ (1,039,522)	$ 3,385,286	$ (2,468,369)	$ 916,918	$ 291,946	$ (394,416)	$ (102,469)
Change In Deferred Outflows/(Inflows) Recognized in Liability and Assets for Current Plan Year End									
6/30/2018			$ (227,929)			$ (3,079,815)			$ (344,941)

SECTION F

SUMMARY OF BENEFITS

Employee Eligibility — All compensated employees of the Police Department are eligible to participate in the Policemen'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 7.0% 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 Alternative 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.

SECTION G

ACTUARIAL VALUATION ASSUMPTIONS

Actuarial Valuation Assumptions

General Inflation	2.75%
Expected Salary Increase	General Inflation: 2.75% *plus* Wage Inflation: 1.00% *plus* Service Based Increase: Years of Service — Increase 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%
Post-retirement COLA	2.75% on first $15,000 of Annual Benefit and on the accumulated supplemental pension amounts for prior years. Assumed to be payable to all members receiving payments.
Increase in State Insurance Premium Tax Allocation	2.75% on and after year 1

Actuarial Valuation Assumptions

Cost Method	Entry-Age Normal Level-Percentage-of-Pay **The sponsor finances benefits using the Alternative 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 2049.** 30-Year Closed Level-Percentage-of-Pay Amortization for Actuarially Determined Contribution (from July 1, 2010). 23 years remaining as of July 1, 2017.
Asset Method	Market Value
Turnover	Sample Rates – Age / Rates 25 / 9% 35 / 4% 45 / 2% 50 / 0%
Retirement	Age / Rates[a] 50 / 45% 51-55 / 30% 56-59 / 35% 60 / 100% [a] *Terminated vested participants are assumed to retire at age 50*

Actuarial Valuation Assumptions

Mortality	Active: RP-2014 Blue Collar Healthy Employee[b] Post-Retirement: RP-2014 Blue Collar Healthy Annuitant Disabled: RP-2014 Blue Collar Healthy Annuitant set forward four years Tables above incorporate generational mortality improvement using MP-2014 two-dimensional mortality improvement scales [b] *Assumes 10% of deaths are duty-related and 90% are non-duty-related.*
Disability	Sample Rates – <u>Age</u> <u>Rates</u>[c] 30 0.22% 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%

[1] *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).*

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

[3] *Based on investment policy.*

As of June 30, 2017 *	
Assets	$21,082,534
Liabilities using a 5.50% discount rate	$35,862,817
Funded Ratio	59%
Expected Benefit Payments	$1,578,247
Liquidity Ratio	13.36
Equity Exposure	54%
Projected Funded Ratio after 15 years	60%

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

Discount Rate	6.00%

SECTION H

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).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.00%, the municipal bond rate is 3.62%, and the resulting single discount rate is 6.00%.

The sponsor finances benefits using the Alternative funding policy as defined in State statute. Sponsor contributions are equal to 107 percent of the prior year contribution. The plan also receives State contributions based on an allocation of premium tax that depends on the number of actives and retired members. This funding policy does not directly amortize the unfunded actuarial liability. The statutory contribution does not explicitly separate projected employer contributions between current plan members and future plan members. **Please see important comments about the Alternative Funding Policy in the actuarial valuation report (used for funding) including its inability to fund for expected benefit payments in an already severely underfunded plan.**

For purposes of developing the single equivalent discount rate, we have assumed the actuarial liability for future members will be fully financed, to the extent that assets are available, and any remaining asset will be assigned to current plan members. **Based on this assignment of assets and employer contributions, the projected actuarial liability for current plan members is projected to be fully financed by 2049.**

The tables on the following pages show the assignment of assets and employer contributions and the projection of assets 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 - Alternative Funding Policy
Assignment of assets which provides 100% financing of future member actuarial liability

Plan Year End 6/30	Open Group Actuarial Liability (a)	Closed Group Actuarial Liability (b)	Future Member Actuarial Liability (c) = (a)-(b)	Open Group Assets (d)	Future Member Assigned Assets (e)=min[(c), (d)]	Closed Group Assigned Assets (f)=(d)-(e)	Funded Ratio Current Members (g)=(f)/(b)	Funded Ratio Future Members (h)=(e)/(c)
2017	$ 33,526,320	$ 33,526,320	$ 0	$ 21,082,534	$ 0	$ 21,082,534	62.9%	100.0%
2018	34,904,796	34,902,338	2,458	21,983,138	2,458	21,980,680	63.0%	100.0%
2019	36,347,723	36,303,520	44,203	22,940,450	44,203	22,896,247	63.1%	100.0%
2020	37,873,300	37,740,376	132,924	23,974,364	132,924	23,841,440	63.2%	100.0%
2021	39,468,453	39,199,654	268,799	25,068,657	268,799	24,799,858	63.3%	100.0%
2022	41,116,985	40,650,024	466,961	26,216,574	466,961	25,749,613	63.3%	100.0%
2023	42,806,301	42,075,109	731,192	27,406,191	731,192	26,674,999	63.4%	100.0%
2024	44,510,850	43,438,713	1,072,137	28,639,980	1,072,137	27,567,843	63.5%	100.0%
2025	46,213,205	44,705,525	1,507,680	29,902,849	1,507,680	28,395,169	63.5%	100.0%
2026	47,975,009	45,932,626	2,042,383	31,234,434	2,042,383	29,192,051	63.6%	100.0%
2027	49,849,586	47,182,995	2,666,591	32,685,788	2,666,591	30,019,197	63.6%	100.0%
2028	51,777,361	48,396,277	3,381,084	34,218,358	3,381,084	30,837,274	63.7%	100.0%
2029	53,743,518	49,523,969	4,219,549	35,823,676	4,219,549	31,604,127	63.8%	100.0%
2030	55,775,239	50,584,829	5,190,410	37,532,212	5,190,410	32,341,802	63.9%	100.0%
2031	57,848,748	51,546,299	6,302,449	39,335,675	6,302,449	33,033,226	64.1%	100.0%
2032	59,950,765	52,377,384	7,573,381	41,231,015	7,573,381	33,657,634	64.3%	100.0%
2033	62,033,341	53,017,627	9,015,714	43,202,113	9,015,714	34,186,399	64.5%	100.0%
2034	64,170,935	53,510,945	10,659,990	45,314,027	10,659,990	34,654,037	64.8%	100.0%
2035	66,393,301	53,904,108	12,489,193	47,597,871	12,489,193	35,108,678	65.1%	100.0%
2036	68,599,135	54,058,726	14,540,409	49,990,976	14,540,409	35,450,567	65.6%	100.0%
2037	70,836,477	53,978,599	16,857,878	52,539,996	16,857,878	35,682,118	66.1%	100.0%
2038	73,201,972	53,788,579	19,413,393	55,344,101	19,413,393	35,930,708	66.8%	100.0%
2039	75,697,243	53,507,211	22,190,032	58,430,708	22,190,032	36,240,676	67.7%	100.0%
2040	78,316,909	53,118,607	25,198,302	61,809,140	25,198,302	36,610,838	68.9%	100.0%
2041	81,058,084	52,616,132	28,441,952	65,498,750	28,441,952	37,056,798	70.4%	100.0%
2042	83,907,107	51,983,070	31,924,037	69,513,452	31,924,037	37,589,415	72.3%	100.0%
2043	86,861,957	51,214,003	35,647,954	73,872,202	35,647,954	38,224,248	74.6%	100.0%
2044	89,925,314	50,324,930	39,600,384	78,612,526	39,600,384	39,012,142	77.5%	100.0%
2045	93,111,357	49,348,083	43,763,274	83,782,376	43,763,274	40,019,102	81.1%	100.0%
2046	96,425,982	48,293,070	48,132,912	89,409,762	48,132,912	41,276,850	85.5%	100.0%
2047	99,888,104	47,171,557	52,716,547	95,535,817	52,716,547	42,819,270	90.8%	100.0%
2048	103,510,401	46,007,380	57,503,021	102,216,538	57,503,021	44,713,517	97.2%	100.0%
2049	107,288,805	44,808,327	62,480,478	107,288,805	62,480,478	44,808,327	100.0%	100.0%
2050	111,224,943	43,580,902	67,644,041	111,224,943	67,644,041	43,580,902	100.0%	100.0%
2051	115,321,658	42,331,299	72,990,359	115,321,658	72,990,359	42,331,299	100.0%	100.0%
2052	119,585,895	41,063,592	78,522,303	119,585,895	78,522,303	41,063,592	100.0%	100.0%
2053	124,016,547	39,781,051	84,235,496	124,016,547	84,235,496	39,781,051	100.0%	100.0%
2054	128,619,302	38,486,470	90,132,832	128,619,302	90,132,832	38,486,470	100.0%	100.0%
2055	133,401,150	37,182,099	96,219,051	133,401,150	96,219,051	37,182,099	100.0%	100.0%
2056	138,349,393	35,868,734	102,480,659	138,349,393	102,480,659	35,868,734	100.0%	100.0%
2057	143,466,667	34,546,950	108,919,717	143,466,667	108,919,717	34,546,950	100.0%	100.0%

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.

GASB Statement Nos. 67 and 68 - Alternative Funding Policy
Current member projection of assets and assignment of employer contributions

Plan Year End 6/30	Closed Group Assets (boy)	Member Contirbutions	Administrative Expenses	Benefit Payments	Assigned Employer/State Contribution	Income on Cash Flow	Income on Assigned Contribution	Total Investment Income	Assets (eoy)
2017	$ 20,031,672	$ 204,974	$ 24	$ 1,531,586	$ 967,969	$ 1,409,529	$ 0	$ 1,409,529	$ 21,082,534
2018	21,082,534	205,850	10,554	1,578,247	1,026,829	1,223,464	30,805	1,254,268	21,980,680
2019	21,980,680	206,804	10,606	1,636,334	1,048,608	1,275,637	31,458	1,307,095	22,896,247
2020	22,896,247	208,032	10,688	1,688,131	1,074,689	1,329,051	32,241	1,361,292	23,841,440
2021	23,841,440	207,767	10,568	1,746,910	1,091,392	1,383,995	32,742	1,416,737	24,799,858
2022	24,799,858	205,743	10,677	1,828,313	1,110,688	1,438,994	33,321	1,472,315	25,749,613
2023	25,749,613	204,028	10,813	1,927,256	1,132,496	1,492,956	33,975	1,526,930	26,674,999
2024	26,674,999	199,179	10,963	2,029,383	1,154,124	1,545,265	34,624	1,579,889	27,567,843
2025	27,567,843	192,467	10,999	2,153,074	1,168,941	1,594,922	35,068	1,629,991	28,395,169
2026	28,395,169	189,448	11,162	2,249,081	1,190,379	1,641,586	35,711	1,677,298	29,192,051
2027	29,192,051	190,299	11,336	2,300,515	1,224,099	1,687,876	36,723	1,724,599	30,019,197
2028	30,019,197	188,020	11,522	2,395,428	1,264,489	1,734,584	37,935	1,772,519	30,837,274
2029	30,837,274	182,598	11,716	2,518,101	1,295,390	1,779,820	38,862	1,818,682	31,604,127
2030	31,604,127	178,333	11,918	2,620,379	1,329,137	1,822,629	39,874	1,862,503	32,341,802
2031	32,341,802	171,792	12,122	2,739,256	1,366,883	1,863,121	41,006	1,904,127	33,033,226
2032	33,033,226	163,278	12,325	2,873,947	1,404,949	1,900,304	42,148	1,942,452	33,657,634
2033	33,657,634	147,926	12,528	3,029,649	1,446,975	1,932,631	43,409	1,976,040	34,186,399
2034	34,186,399	135,328	12,730	3,146,040	1,486,019	1,960,481	44,581	2,005,061	34,654,037
2035	34,654,037	128,264	12,929	3,235,601	1,542,983	1,985,634	46,289	2,031,924	35,108,678
2036	35,108,678	108,790	13,122	3,402,544	1,593,641	2,007,314	47,809	2,055,124	35,450,567
2037	35,450,567	89,241	13,312	3,553,298	1,637,093	2,022,713	49,113	2,071,826	35,682,118
2038	35,682,118	80,790	13,496	3,617,199	1,712,686	2,034,430	51,381	2,085,810	35,930,708
2039	35,930,708	73,988	13,669	3,666,255	1,813,825	2,047,664	54,415	2,102,079	36,240,676
2040	36,240,676	65,668	13,829	3,720,486	1,916,920	2,064,381	57,508	2,121,889	36,610,838
2041	36,610,838	56,882	13,976	3,774,493	2,031,887	2,084,703	60,957	2,145,659	37,056,798
2042	37,056,798	46,716	14,108	3,834,310	2,160,157	2,109,357	64,805	2,174,162	37,589,415
2043	37,589,415	36,220	14,224	3,893,101	2,297,773	2,139,232	68,933	2,208,165	38,224,248
2044	38,224,248	27,050	14,326	3,935,026	2,460,591	2,175,786	73,818	2,249,604	39,012,142
2045	39,012,142	20,397	14,411	3,946,330	2,645,422	2,222,518	79,363	2,301,881	40,019,102
2046	40,019,102	14,651	14,479	3,946,541	2,836,275	2,282,755	85,088	2,367,843	41,276,850
2047	41,276,850	9,866	14,532	3,934,510	3,032,194	2,358,436	90,966	2,449,402	42,819,270
2048	42,819,270	7,009	14,569	3,901,632	3,253,941	2,451,880	97,618	2,549,499	44,713,517
2049	44,713,517	4,810	14,591	3,860,701	1,357,860	2,566,697	40,736	2,607,432	44,808,327
2050	44,808,327	3,147	14,599	3,813,092	22,675	2,573,763	680	2,574,444	43,580,902
2051	43,580,902	1,990	14,594	3,759,478	20,183	2,501,692	605	2,502,297	42,331,299
2052	42,331,299	1,160	14,578	3,701,650	18,383	2,428,426	551	2,428,977	41,063,592
2053	41,063,592	596	14,552	3,640,499	17,216	2,354,182	516	2,354,698	39,781,051
2054	39,781,051	270	14,517	3,576,509	16,538	2,279,140	496	2,279,637	38,486,470
2055	38,486,470	138	14,474	3,510,183	16,208	2,203,453	486	2,203,939	37,182,099
2056	37,182,099	56	14,424	3,442,677	15,985	2,127,215	480	2,127,694	35,868,734
2057	35,868,734	-	14,367	3,374,157	15,798	2,050,468	474	2,050,942	34,546,950

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.

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

Plan Year End 6/30	Benefit Payments	Discount Rate	Discounted Benefit Payments	Single Discount Rate	Discounted Benefit Payments
2018	$1,578,247	6.00%	$1,533,245	6.0000%	$1,533,245
2019	1,636,334	6.00%	1,499,694	6.0000%	1,499,694
2020	1,688,131	6.00%	1,459,591	6.0000%	1,459,591
2021	1,746,910	6.00%	1,424,917	6.0000%	1,424,917
2022	1,828,313	6.00%	1,406,902	6.0000%	1,406,902
2023	1,927,256	6.00%	1,399,094	6.0000%	1,399,094
2024	2,029,383	6.00%	1,389,842	6.0000%	1,389,842
2025	2,153,074	6.00%	1,391,088	6.0000%	1,391,088
2026	2,249,081	6.00%	1,370,866	6.0000%	1,370,866
2027	2,300,515	6.00%	1,322,845	6.0000%	1,322,845
2028	2,395,428	6.00%	1,299,455	6.0000%	1,299,455
2029	2,518,101	6.00%	1,288,681	6.0000%	1,288,681
2030	2,620,379	6.00%	1,265,116	6.0000%	1,265,116
2031	2,739,256	6.00%	1,247,651	6.0000%	1,247,651
2032	2,873,947	6.00%	1,234,904	6.0000%	1,234,904
2033	3,029,649	6.00%	1,228,121	6.0000%	1,228,121
2034	3,146,040	6.00%	1,203,115	6.0000%	1,203,115
2035	3,235,601	6.00%	1,167,325	6.0000%	1,167,325
2036	3,402,544	6.00%	1,158,070	6.0000%	1,158,070
2037	3,553,298	6.00%	1,140,924	6.0000%	1,140,924
2038	3,617,199	6.00%	1,095,700	6.0000%	1,095,700
2039	3,666,255	6.00%	1,047,698	6.0000%	1,047,698
2040	3,720,486	6.00%	1,003,015	6.0000%	1,003,015
2041	3,774,493	6.00%	959,976	6.0000%	959,976
2042	3,834,310	6.00%	919,990	6.0000%	919,990
2043	3,893,101	6.00%	881,223	6.0000%	881,223
2044	3,935,026	6.00%	840,295	6.0000%	840,295
2045	3,946,330	6.00%	795,008	6.0000%	795,008
2046	3,946,541	6.00%	750,048	6.0000%	750,048
2047	3,934,510	6.00%	705,435	6.0000%	705,435
2048	3,901,632	6.00%	659,944	6.0000%	659,944
2049	3,860,701	6.00%	616,057	6.0000%	616,057
2050	3,813,092	6.00%	574,019	6.0000%	574,019
2051	3,759,478	6.00%	533,913	6.0000%	533,913
2052	3,701,650	6.00%	495,944	6.0000%	495,944
2053	3,640,499	6.00%	460,142	6.0000%	460,142
2054	3,576,509	6.00%	426,466	6.0000%	426,466
2055	3,510,183	6.00%	394,866	6.0000%	394,866
2056	3,442,677	6.00%	365,351	6.0000%	365,351
2057	3,374,157	6.00%	337,811	6.0000%	337,811
2058	3,304,345	6.00%	312,095	6.0000%	312,095
2059	3,233,512	6.00%	288,118	6.0000%	288,118
2069	2,400,138	6.00%	119,419	6.0000%	119,419
2079	1,328,017	6.00%	36,896	6.0000%	36,896
2109	1,516	6.00%	7	6.0000%	7
Total Present Value			**$43,644,100**		**$43,644,100**

SECTION I

GLOSSARY OF TERMS

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.

Glossary of Terms

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.

Glossary of Terms

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.

Glossary of Terms

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 Expense	The 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) 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

Glossary of Terms

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.