CONSULTING, ADMINISTRATION AND ACTUARIAL SERVICES FOR QUALIFIED RETIREMENT PLANS

August 31, 2016



Mr. Matt Wojcik Town Administrator 343 Highland Road Tiverton, Rhode Island 02878

Dear Matt:

An actuarial valuation of the Town of Tiverton Police Department Pension Plan (Plan) was performed as of July 1, 2016. The purpose of the valuation is to:

- Compare the current value of Trust assets with accrued liabilities to assess the funded condition of the Pension Plan,
- Compute the Town's recommended contribution rate for the Fiscal Year ending June 30, 2017, and
- Provide information which may be required by the Town's auditors under GASB 67/68.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. The employee data and Plan asset data was provided by the plan administrator. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. Employee data is snapshot data as of the valuation date.

The valuation was based on the provisions of the Plan as amended through the beginning of the Plan Year. Each actuarial assumption used in this valuation is reasonably related to the past experience of the Plan and represents reasonable expectations of future experience under the Plan. The Plan trustees with advice and approval of the actuary set the assumptions and methods for the valuation.

This report is only valid when presented in its entirety and is intended for use by the Trustees. It must not be reproduced without permission or used for any purpose other than as stated herein. This report is only valid when presented in its entirety. It must not be reproduced without permission.

Neither the signing actuary nor the firm of McCloud & Associates has a conflict of interest that would impair the objectivity of our work. The undersigned meets the Qualification Standards for Prescribed Statements of Actuarial Opinion promulgated by the American Academy of Actuaries.

Respectfully submitted,

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Traci M. Christian, EA, MAAA Enrollment Number: 14-06694 McCloud & Associates, Inc.

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Jeffrey A. Brown JD, LLM, QPA, ERPA Compensation Planning

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Glossary of Terms

Section One:

Valuation Summary

Liabilities and Funded Condition of Pension Plan

	<u>July 1, 2016</u>	<u>July 1, 2015</u>
Actuarial Accrued Liability	\$15,266,488	\$14,604,337
Actuarial Value of Assets	\$9,556,569	\$9,778,266
Funded Status of the Plan	62.6%	67.0%

Actuarial Value of Assets

The market value of assets including accrued contributions was used for the July 1, 2016 valuation.

Town's Computed Contribution Rate

The Town's recommended contribution rate was computed as a percentage of active member payroll and assumed to be payable at the end of the year.

	<u>July 1, 2016</u>	July 1, 2015
Normal Cost	17.9%	18.8%
Amortization of Unfunded Liability	23.0%	18.5%
Interest	2.3%	2.0%
Total Computed Contribution	43.2%	39.3%
Member portion	10.0%	10.0%
Net Computed Contribution Rate	33.2%	29.3%

Pension Fund Experience

Overall experience during the year ended June 30, 2016, was less favorable than expected. The plan assets earned a rate of return of approximately -3.3%, compared to an expected return of 7.5%, resulting in an investment loss of almost \$1.1 million. Small liability losses resulted in a total actuarial loss for the year ended June 30, 2016 of \$1,106,671.

Benefit Provision Changes

There were no changes to the Plan provisions.

Assumption and Method Changes

There were no changes to the assumptions or methods.

Participant Data

	July 1, 2016	July 1, 2015
Active Members Active Member Payroll Average Member Payroll	29 \$1,686,288 58,148	30 \$1,716,424 57,214
Retirees and Beneficiaries Annual Pensions	26 \$724,296	26 \$711,723
Financial Data		
Market Value of Assets	\$9,556,569	\$9,778,266

Conclusion and Comments

The unfunded accrued liabilities are amortized over a closed amortization period scheduled to end June 30, 2037.

The long term viability of this plan is dependent on adherence to funding the actuarial recommended contribution each year, including the Funding Improvement Plan, which stipulates that the town will contribute at least \$700,000 to the Plan each year, at least through the year ended June 30, 2020. Actual contributions in the last few years have been greater than the recommended contribution rate and are expected to remain so for at least another 4 years in accordance with the Funding Improvement Plan.

Section Two:

Actuarial Calculations – Funding

Unfunded Actuarial Accrued Liability

	<u>July 1, 2016</u>	<u>July 1, 2015</u>
Actuarial Accrued Liability	\$15,266,488	\$14,604,337
Actuarial Value of Assets	<u>\$9,556,569</u>	<u>\$9,778,266</u>
Unfunded Actuarial Accrued liability	\$5,709,919	\$4,826,071
Funded Status of the Plan	62.6%	67.0%

Computed Contribution Rates

The contribution rates shown below are expressed as percentages of active member payroll.

The normal cost can be viewed as the long-term ongoing cost of the Pension Plan.

Accrued liabilities exceeded accrued assets as of July 1, 2016. The excess is amortized over a closed amortization period to end June 30, 2037, which is 21 years from the current valuation date. This amortization charge was applied to the recommended contribution.

Contribution Recommendation for Fiscal Year Beginning July 1, 2016:

	Dollar Amount	<u>As a Percent</u> <u>Of Current Payroll</u>
Total Normal Cost	\$302,324	17.9%
Amortization of Unfunded Liability	386,993	22.6%
Interest to End of Fiscal Year	39,052	2.3%
Total Computed Contribution Expected Member portion	728,369 (168,629)	43.2% (10.0)%
Town's Net Computed Contribution Rate	\$559,740	33.2%

Town of Tiverton Police Department Pension Plan

Projection of Funded Status and Recommended Contributions

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Year	Employer	Amortization	Recommended	Expected	-	as a %	Benefit		Accrued	Unfunded	Funded
Beginning	Normal Cost	of Unfunded	Contribution	Contribution	Payroll	of Payroll	Payments	Assets	Liability	Liability	Ratio
2016	133,695	386,993	559,740	700,000	1,716,424	40.8%	809,522	9,556,569	15,266,488	5,709,919	62.6%
2017	138,375	389,333	567,286	700,000	1,776,499	39.4%	908,047	10,337,762	15,899,833	5,562,072	65.0%
2018	143,218	391,923	575,276	700,000	1,838,676	38.1%	932,867	11,081,557	16,489,948	5,408,392	67.2%
2019	148,230	394,803	583,761	700,000	1,903,030	36.8%	970,110	11,861,837	17,110,462	5,248,625	69.3%
2020	153,418	398,021	592,798	592,798	1,969,636	30.1%	1,041,631	12,668,675	17,751,180	5,082,506	71.4%
2021	158,788	410,738	612,240	612,240	2,038,573	30.0%	1,166,538	13,357,510	18,378,487	5,020,977	72.7%
2022	164,346	423,800	632,256	632,256	2,109,923	30.0%	1,227,462	13,995,741	18,936,434	4,940,693	73.9%
2023	170,098	437,206	652,851	652,851	2,183,771	29.9%	1,269,426	14,646,801	19,486,663	4,839,863	75.2%
2024	176,051	450,950	674,026	674,026	2,260,203	29.8%	1,301,751	15,332,180	20,048,744	4,716,564	76.5%
2025	182,213	465,024	695,779	695,779	2,339,310	29.7%	1,446,684	16,065,326	20,634,060	4,568,734	77.9%
2026	188,590	479,410	718,100	718,100	2,421,186	29.7%	1,458,819	16,733,865	21,128,034	4,394,169	79.2%
2027	195,191	494,085	740,971	740,971	2,505,927	29.6%	1,470,895	17,471,607	21,662,124	4,190,517	80.7%
2028	202,023	509,011	764,361	764,361	2,593,635	29.5%	1,493,677	18,284,671	22,239,947	3,955,276	82.2%
2029	209,093	524,133	788,219	788,219	2,684,412	29.4%	1,514,341	19,168,446	22,854,243	3,685,797	83.9%
2030	216,412	539,367	812,462	812,462	2,778,366	29.2%	1,537,765	20,131,236	23,510,533	3,379,297	85.6%
2031	223,986	554,579	836,957	836,957	2,875,609	29.1%	1,540,776	21,176,832	24,209,708	3,032,876	87.5%
2032	231,826	569,551	861,479	861,479	2,976,255	28.9%	1,543,465	22,333,228	24,976,794	2,643,567	89.4%
2033	239,940	583,894	885,621	885,621	3,080,424	28.7%	1,552,692	23,609,446	25,817,869	2,208,423	91.4%
2034	248,337	596,835	908,561	908,561	3,188,239	28.5%	1,551,464	25,007,663	26,732,372	1,724,709	93.5%
2035	257,029	606,457	928,248	928,248	3,299,827	28.1%	1,535,392	26,547,005	27,737,354	1,190,349	95.7%
2036	266,025	605,249	936,619	936,619	3,415,321	27.4%	1,531,500	28,250,476	28,855,724	605,249	97.9%
2037	275,336		295,986	295,986	3,534,858	8.4%	1,576,270	30,106,412	30,084,097	(22,316)	100.1%
2038	284,973		306,346	306,346	3,658,578	8.4%	1,595,384	31,402,840	31,381,007	(21,833)	100.1%
2039	294,947		317,068	317,068	3,786,628	8.4%	1,620,861	32,800,254	32,779,015	(21,239)	100.1%
2040	305,270		328,165	328,165	3,919,160	8.4%	1,602,657	34,300,450	34,279,928	(20,522)	100.1%
2041	315,955		339,651	339,651	4,056,330	8.4%	1,588,420	35,957,312	35,937,641	(19,671)	100.1%

The results presented here are ESTIMATES. They are based on the data, assumptions, methods and plan provisions outlined in this report unless otherwise noted. These results are for **discussion purposes only** and should not be relied upon for pupposes of making cash contributions to the Plan nor for any other purposes.

Year		% of Payroll
Ended	Computed	Contribution
June 30	Contribution	Rates
2008	597,226	44.6
2009	711,225	47.0
2010	1,023,362	59.6
2011	1,067,884	60.6
2012	682,092	43.0
2013	590,573	40.1
2014	544,334	37.6
2015	536,634	36.9
2016	503,576	29.3
2017	559,740	33.2

Recommended Town Contributions

History of Assets and Accrued Liabilities

Valuation Date	Valuation	Actuarial Accrued	Funded	Unfunded Actuarial Accrued
July 1	Assets	Liabilities	Ratio	Liabilities
2006	6,093,822	10,704,892	56.9	4,611,070
2007	7,182,410	11,322,225	63.4	4,139,815
2008	6,925,601	12,155,294	57.0	5,229,693
2009	5,732,961	14,242,648	40.3	8,509,687
2010	5,632,552	14,529,430	38.8	8,896,878
2011	6,959,498	12,858,385	54.1	5,898,887
2012	6,694,416	13,228,181	50.6	6,533,765
2013	7,465,375	13,616,401	54.8	6,151,026
2014	8,848,568	14,002,853	63.2	5,154,285
2015	9,778,266	14,604,337	67.0	4,826,071
2016	9,556,569	15,266,488	62.6	5,709,919

Section Three:

Retirement Plan Benefit Provisions

Benefit Provision Summary

Effective Date

July 1, 1978

Eligibility

All employees are eligible after completing their probationary service.

Monthly Compensation

Compensation includes regular base pay including longevity and incentive earnings.

Credited Service

Service measured from the date of employment (or one year prior to completing probationary service, if later.)

Final Average Earnings

Average of the highest three consecutive years of total Monthly Compensation in a ten year period prior to retirement or termination of employment.

Normal Retirement Benefit

For retirements on or after June 1, 2000, a monthly benefit equal to 2.5% of Final Average Earnings multiplied by Credited Service for the first 20 years of Service, Plus 2% of Final Average Earnings multiplied by Credited Service in excess of 20 years subject to a maximum benefit of 75% of Final Average Earnings.

Normal Form

The Normal Form of payment is a Life Annuity.

Normal Retirement Date

All Members hired after June 30, 2007 must have at least 10 years of Credited Service or be at least 65 with 5 years of Credited Service in order to be able to retire Members who satisfy the previous sentence or who were hired before July 1, 2007 may retire in accordance with the following rules:

A Member hired prior to July 1, 2012 may retire, with full benefits, on the earlier of his 55th birthday or upon completion of 20 years of Credited Service.

A Member hired on or after July 1, 2012 may retire, with full benefits, upon the earlier of his 55th birthday or upon completion of 25 years of Credited Service.

Disability Retirement

If the disability was duty-related, the benefit is 66 2/3% of Final Average Compensation. The non-duty-related Disability Benefit is 50% of final Compensation.

Pre-Retirement Death Benefit

The Beneficiary of a Participant who dies shall receive a benefit of \$400 for each year of service, subject to a minimum of \$2000 and a maximum of \$8,000. After retirement, the benefit is reduced by 25% per year but not less than \$2,000.

Vesting

100% after 10 years.

Pre-Retirement Death Benefit

50% of Accrued Benefit at time of death payable to spouse until death or remarriage with additional benefits payable to surviving children under age 18 if no spouse survives.

Employee Contributions

10% of compensation

Post-Retirement COLA

Base Benefit increased 1% of the compensation each year for the position from which they retired. These increases are cumulative, not compounded.

Section Four:

Actuarial Assumptions And Methods

Actuarial Assumptions

Economic Assumptions (i) Interest Rate	7.5% (net of administration expenses paid by the Trust)
(ii) Salary Increases	3.5%
Demographic Assumptions	
(i) Mortality	RP 2000 Mortality Table for males and females.
(ii) Disability	Sample disability rates are as follows:
	Annual Rates of Disability
	Age Males Females
	25 .03% .05%
	30 .04 .06
	40 .07 .10
	50 .18 .26
	55 .36 .49
	60 .90 1.21
(iii) Turnover	None Assumed
(iv) Retirement	The rate is 50% at first eligibility, then the rate is 10% per year thereafter with 100% at age 55 (or first eligible if later.)
(v) Marital Status	80% of participants are assumed to be married with males 3 years older than their female spouses.
(vi) COLA adjustments	1.3% increase each year.
(vii) Asset Value	Assets are valued at market plus receivables.

Actuarial Method Used for the Valuation

Normal Cost

Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry age actuarial cost method having the following characteristics:

- The annual normal costs for each individual active member, payable from date of hire to date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;
- Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

Financing of Unfunded Actuarial Accrued Liability

The excess of actuarial accrued liabilities over accrued assets was amortized as a level percent-ofpayroll and applied as a charge to the computed normal cost.

Active member payroll was assumed to increase at the salary increase rate for the purpose of determining the level percent-of-payroll full funding credit.

Uncertainty and risks with respect to the results, assumptions, methods, etc.

The results presented in this report are based upon actuarial assumptions and methods, such as expected salary increases and expected plan asset returns that represent the expected experience for the Plan. If the actual experience of the Plan is different from what is assumed in the valuation, this can create volatility in the results including but not limited to the funded status of the Plan and the contribution recommendations.

Section Five: Valuation Data

Summary of Asset Information Submitted for the Valuation

Statement of Assets

As of June 30, 2016, the net market value of Pension Plan assets was reported to be \$9,566,569.

Market Value of Assets as of July 1, 2015	\$9,778,266
 a. Revenues (i) Member Contributions (ii) Employer Contributions (iii) Investment Income (Net of investment fees) 	\$172,701 700,000 (332,601)
b. Disbursements(i) Benefits Paid	\$761,797
Market Value of Assets as of July 1, 2016	\$9,556,569

Actuarial Value of Assets

The market value of assets was used for the July 1, 2016 valuation.

Participant Summary

Retirees Included in the Valuation

There were 26 retirees included in the valuation, with annual pensions totaling \$724,296. The breakdown by age division is as follows:

Age	Number	Average Annual Pensions
Under 40		
40-44	1	\$11,518
45-49	2	30,598
50-54	5	27,685
55-59	2	42,999
60-64	2	22,878
65-69	5	24,031
70-74	4	36,560
75-79	1	20,020
Over 80	4	23,746
Total	26	\$27,858

Retirees

h	Service									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	Over 30	Total		
20 - 24	1							1		
25 - 29	4							4		
30 - 34	1	2						3		
35 - 39	1		2	1				4		
40 - 44			1	3				4		
45 - 49	1			2	4	1		8		
50 - 54			1		1	1		3		
55 - 59				1				1		
60 - 64										
65+			1					1		
Total	8	2	5	7	5	2	0	29		

Active Members – Age and Service Distribution

Total Active Participant Information

	2014	2015	2016
Active Members	29	30	29
Valuation Payroll	1,454,719	1,716,424	1,686,288
Average Compensation	50,163	57,214	58,148
Average Age (yrs.)	39.5	40.5	41.8
Average Service (yrs.)	11.5	12.0	13.3

Reconciliation With Prior Year

Actives	Retirees
20	26
50	20
1	
(2)	
20	
29	26
	30

Section Six:

Accounting Disclosures

GASB Statement Nos. 67 and 68 Supplementary Information

The information presented 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 as well as the previous 10 years (as available) follows:

Valuation Date June 30	Total Pension Liability	Plan Assets	Net Pension Liability	Percent Funded	Annual Covered Payroll	NPL As a % Of Covered Payroll
2006	10.705	6.094	4.611	56.9	1.275	361.5
2007	11.322	7.182	4.140	63.4	1.338	309.4
2008	12.155	6.926	5.230	57.0	1.512	345.9
2009	14.243	5.733	8.510	40.3	1.716	495.9
2010	14.529	5.633	8.897	38.8	1.762	504.9
2011	12.858	6.959	5.899	54.1	1.587	371.6
2012	13.228	6.694	6.534	50.6	1.473	443.5
2013	13.616	7.465	6.151	54.8	1.448	424.8
2014	14.003	8.849	5.154	63.2	1.455	354.3
2015	14.604	9.778	4.826	67.0	1.716	281.2
2016	15.266	9.556	5.710	62.6	1.686	338.6

Dollar amounts in millions.

Schedule of Employer Contributions

Year Ended June 30	Annual Recommended Contribution	Percent Contributed
2007	647,343	100%
2008	597,226	100%
2009	711,225	100%
2010	1,023,362	0%
2011	1,067,884	42%
2012	682,092	81%
2013	590,573	119%
2014	544,334	152%
2015	536,634	149%
2016	503,576	139%

Schedule of Changes in Net Pension Liability

Year End June 30	Beginning of Year Net Pension Liability	Service Cost	Interest Cost	Expected Return On Assets	Employer Contrib.	Employee Contrib.	Plan Changes	Assumption Changes	(Gain)/ Loss	End of Year Net Pension Liability	Benefits Paid
2013	6,533,765	318,749	989,770	(507,331)	(700,000)	(143,389)			(340,538)	6,151,026	733,907
2014	6,151,026	285,815	1,016,416	(595,528)	(825,000)	(166,440)	-	_	(712,004)	5,154,285	765,309
2015	5,154,285	315,103	1,047,597	(699,268)	(800,000)	(179,257)	_	_	(12,389)	4,826,071	748,242
2016	4,826,071	322,696	1,091,027	(763,745)	(700,000)	(172,701)	-	-	1,106,571	5,709,919	761,797

Schedule of Contributions

	Contributions			Contributions
in Relation			as a	
	to the			Percentage of
Actuarially	Actuarially	Contribution	Covered	Covered
Determined	Determined	Deficiency	Employee	Employee
Contribution	Contribution	(Excess)	Payroll	Payroll
647,343	647,343		1,275,405	50.76%
597,226	597,226		1,338,190	44.63%
711,225	711,225		1,511,997	47.04%
1,023,362		1,023,362	1,716,156	0.00%
1,067,884	452,407	615,477	1,762,244	25.67%
682,092	550,000	132,092	1,587,328	34.65%
590,573	700,000	(109,427)	1,473,196	47.52%
544,334	825,000	(280,666)	1,448,086	56.97%
536,634	800,000	(263,366)	1,454,719	54.99%
503,576	700,000	(196,424)	1,716,424	40.78%
	Determined <u>Contribution</u> 647,343 597,226 711,225 1,023,362 1,067,884 682,092 590,573 544,334 536,634	in Relation to the Actuarially Determined Contribution 647,343 597,226 711,225 1,023,362 1,067,884 452,407 682,092 550,000 590,573 700,000 544,334 825,000 536,634 800,000	in Relation to the Actuarially Actuarially Contribution Determined Determined Deficiency <u>Contribution Contribution (Excess)</u> 647,343 647,343 597,226 597,226 711,225 711,225 1,023,362 1,023,362 1,067,884 452,407 615,477 682,092 550,000 132,092 590,573 700,000 (109,427) 544,334 825,000 (280,666) 536,634 800,000 (263,366)	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

Pension Expense for Year Ended June 30, 2016

Service cost	\$ 322,696	
Interest on the total pension liability	1,091,027	
Employee contributions	(172,701)	
Projected earnings on pension plan investments	(763,745)	
Pension plan administrative expense	0*	
Outflows / (inflows) of resources recognized in the current year due to		
Difference between expected and actual experience	(442)	
Changes of assumptions	0	
Difference between projected and actual earnings on plan investments	219,386	
Pension expense	\$ 696,221	

*Investment-related expenses are netted out of investment returns. No other expenses were reported as paid by the plan trust, but rather by the Town.

Long-term Expected Real Rates of Return

The long-term expected rate of return on pension plan investments was determined using a method in which the best-estimate ranges of expected future real rates of return (expected returns, net of investment expenses and inflation) are developed for each major asset class. These are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage as shown in the following table, and then adding expected inflation, which is 2.5%. The target allocation and

best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

		Long-Term Expected Real
Asset Class	Target Allocation	Rate of Return
Equities	80%	6.0%
Fixed Income	17%	2.5%
Cash and Equivalents	3%	0.0%

Changes in the Net Pension Liability

		Increase (Decrease)	
	Total Pension	Plan Fiduciary	Net Pension
	Liability	Net Position	Liability
	(a)	(b)	(a) – (b)
Balances at 6/30/14	\$ 14,604,337	\$ 9,778,266	\$ 4,826,071
Changes for the year			
Service cost	322,696		322,696
Interest	1,091,027		1,091,027
Difference between expected and			
actual experience	10,225		10,225
Contributions - employer		700,000	(700,000)
Contributions - employee		172,701	(172,701)
Net investment income		(332,601)	332,601
Benefit payments	(761,797)	(761,797)	
Administrative expense			
Other changes			
Net changes	662,151	(221,697)	883,848
Balances at 6/30/15	\$ 15,266,488	\$ 9,556,569	\$ 5,709,919

Statement of Outflows and Inflows Arising During the Current Period

1. Difference between expected and actual experience of the TPL (gains) / losses	\$10,225
2. Assumption Changes (gains) / losses	
3. Recognition period: Average of the expected remaining service lives of all plan	
participants (in years)	6.23
4. Difference between expected and actual return on plan investments	\$1,096,346
5. Outflow (Inflow) of Resources to be recognized in the current pension expense:	
a. for the difference between expected and actual experience of the TPL, $(1)/(3)$	\$ 1,641
b. for assumption changes, $(2)/(3)$	
c. for the difference between expected and actual return on investments, (4) $/ 5$	\$ 219,269

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

		Current Single	
		Discount Rate	
	1% Decrease	Assumption	1% Increase
	6.5%	7.5%	8.5%
Total Pension Liability	\$17,005,863	\$ 15,266,488	\$ 13,801,771
Plan Fiduciary Net Position	9,556,569	9,556,569	9,556,569
Net Pension Liability / (Asset)	\$ 7,449,294	\$ 5,709,919	\$ 4,245,202

Deferred Outflows and Deferred Inflows of Resources to be Recognized in Future Years

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual		
experience	\$ 8,584	\$ 8,808
Changes in Assumptions		
Net difference between projected and actual		
earnings on pension plan investments	877,428	
Total	\$ 886,012	\$ 8,808

Year Ending June 30	Net Deferred Outflows of Resources
2017	\$ 218,944
2018	218,944
2019	218,944
2020	218,828
2021	1,165
Thereafter	379
Total	\$ 877,204

Section Seven: Glossary of Terms

Glossary of Terms

Accrued Benefit

The benefit earned by a participant payable in the form of a monthly benefit commencing at normal retirement age.

Actuarial Accrued Liability

The actuarial present value of benefits earned as of the valuation date.

Actuarial Gain or Loss

The difference between the plan's actual experience and expected experience based on the actuarial assumptions used in the valuation.

Actuarial Value of Assets

The value of assets as determined by the actuary for the purpose of the valuation. This may or may not include a method of smoothing investment gains and losses over time.

Amortization

The spreading of liabilities or costs over a period of years. A plan's unfunded actuarial accrued liability is amortized over a period of years.

Entry Age Normal Actuarial Cost Method

An actuarial method for determining the annual normal cost and the actuarial accrued liability of a pension plan. Under this method, the annual normal cost is the level amount that would have to be contributed each year from the time each employee entered employment so that his pension will be fully funded by his assumed retirement age.

Normal Cost

That portion of the actuarial present value of plan benefits and expenses allocated to the valuation year.

Present Value

The value of a benefit payment or series of benefit payments determined as of the valuation date by the application of a particular set of actuarial assumptions. It is the single sum which reflects the time value of money (through discounts for investment yield) and the probabilities of payment (taking into account death, disability. withdrawal and age at retirement).

Unfunded Actuarial Accrued Liability

The excess of the actuarial accrued liability over the actuarial value of assets.

Vested Benefit

A benefit that is not forfeited if the participant leaves employment.