

September 18, 2017

Mr. Paul McGreevy  
Town Administrator  
343 Highland Road  
Tiverton, Rhode Island 02878



Dear Paul:

An actuarial valuation of the Town of Tiverton Police Department Pension Plan (Plan) was performed as of July 1, 2017. 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, 2018, 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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Enrollment Number: 17-06694  
McCloud & Associates, Inc.

Jeffrey A. Brown  
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Compensation Planning



## ***Table of Contents***

### **Section One: Valuation Summary**

Valuation Summary.....	1
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### **Section Two: Actuarial Calculations – Funding**

Unfunded Actuarial Accrued Liability.....	3
Computed Contribution Rates and Recommendation .....	3
Projection of Funded Status and Recommended Contributions .....	4
History of Contributions, Assets and Liabilities .....	5

### **Section Three: Retirement Plan Benefit Provisions**

Benefit Provision Summary .....	6
---------------------------------	---

### **Section Four: Actuarial Assumptions and Methods**

Actuarial Assumptions .....	8
Actuarial Methods .....	9

### **Section Five: Valuation Data**

Asset Summary.....	10
Participant Summary .....	11

### **Section Six: Accounting Disclosures**

Information for GASB Statements No. 67 and No. 68.....	14
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### **Section Seven: Glossary of Terms**

Glossary of Terms .....	19
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***Section One:***

***Valuation Summary***

**Liabilities and Funded Condition of Pension Plan**

	<u>July 1, 2016</u>	<u>July 1, 2017</u>
Actuarial Accrued Liability	\$15,266,488	\$16,938,557
Actuarial Value of Assets	\$9,556,569	\$11,051,030
Funded Status of the Plan	62.6%	65.2%

**Actuarial Value of Assets**

The market value of assets including accrued contributions was used for the July 1, 2017 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>	<u>July 1, 2017</u>
Normal Cost	17.9%	17.0%
Amortization of Unfunded Liability	23.0%	23.8%
Interest	2.3%	3.1%
Total Computed Contribution	43.2%	43.9%
Member portion	10.0%	10.0%
Net Computed Contribution Rate	33.2%	33.9%

**Pension Fund Experience**

Overall experience during the year ended June 30, 2017, was more favorable than expected. The plan assets earned a rate of return of approximately 14.9%, compared to an expected return of 7.5%, resulting in an investment gain of about \$730,000. Small liability losses offset the asset gains somewhat, resulting in a total actuarial gain for the year ended June 30, 2017 of \$512,585.

**Benefit Provision Changes**

There were no changes to the Plan provisions.

**Assumption and Method Changes**

Mortality was changed from the RP-2000 table to the most-recently issued MP-2016 tables. This change resulted in an increase of \$677,967 in actuarial liability. The method of amortizing the unfunded liability was changed from a single, closed-period amortization to add layers of amortization bases for assumption changes, method changes, actuarial gains and losses, etc.

**Participant Data**

	<u>July 1, 2016</u>	<u>July 1, 2017</u>
Active Members	29	32
Active Member Payroll	\$1,686,288	\$1,700,026
Average Member Payroll	58,148	53,126
Retirees and Beneficiaries	26	30
Annual Pensions	\$724,296	\$885,899

**Financial Data**

Market Value of Assets	\$9,556,569	\$11,051,030
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**Conclusion and Comments**

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 past year have been less \$700,000 although greater than the recommended contribution rate and are expected to remain so for at least another 3 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, 2017</u>
Actuarial Accrued Liability	\$15,266,488	\$16,938,557
Actuarial Value of Assets	<u>\$9,556,569</u>	<u>\$11,051,030</u>
Unfunded Actuarial Accrued liability	\$5,709,919	\$5,887,527
Funded Status of the Plan	62.6%	65.2%

**Computed Contribution Rates**

The normal cost represents the benefits earned in the current year.

Accrued liabilities exceeded accumulated assets as of July 1, 2012. The excess is being amortized as a level percent of payroll over 25 years (until June 30, 2037). Beginning with this July 1, 2017 valuation, annual changes to the unfunded liability due to assumption changes, actuarial gains and losses, etc. will be amortized as a level percent of pay over fixed periods. The sum of the annual amortization charges and credits is a component of the recommended contribution. The following table sets forth the schedule of amortizations as of the current valuation date:

Date Estab.	Description	Rem. Years	Outstanding Balance	2017-18 Payment
7/1/12	Unfunded Actuarial Liability	20	\$5,722,145	\$400,538
7/1/17	Change Mortality Table	20	677,967	47,456
7/1/17	Actuarial (Gain)/Loss	15	(512,585)	(43,968)
Total			\$5,887,527	\$404,026

**Contribution Recommendation for Fiscal Year Beginning July 1, 2017:**

	<u>Dollar Amount</u>	<u>As a Percent Of Current Payroll</u>
Total Normal Cost	\$289,431	17.0%
Amortization of Unfunded Liability	404,026	23.8%
Interest to End of Fiscal Year	52,009	3.1%
Total Computed Contribution	745,466	43.9%
Expected Member portion	(170,003)	(10.0)%
<b>Town’s Net Computed Contribution Rate</b>	<b>\$575,463</b>	<b>33.9%</b>

**Town of Tiverton Police Department Pension Plan  
Projection of Funded Status and Recommended Contributions**

Year	Total Normal Cost	Amortization of Unfunded	Recommended Contribution	Member Contribution	City Contribution	City Contribution as a % of Payroll	Benefit Payments	Accrued Assets	Accrued Liability	Unfunded Liability	Funded Ratio
Beginning											
2017	289,431	404,026	745,466	170,003	650,000	38.2%	999,683	11,051,030	16,938,557	5,887,527	65.2%
2018	299,561	418,167	771,558	175,953	650,000	36.9%	1,019,297	11,693,439	17,482,916	5,789,477	66.9%
2019	310,046	432,802	798,561	182,111	650,000	35.7%	1,044,755	12,369,852	18,058,642	5,688,790	68.5%
2020	320,897	447,949	826,510	188,485	638,025	33.9%	1,102,134	13,076,973	18,662,406	5,585,433	70.1%
2021	332,129	463,628	855,438	195,082	660,357	33.9%	1,229,618	13,771,786	19,263,587	5,491,802	71.5%
2022	343,753	479,855	885,379	201,910	683,469	33.9%	1,254,470	14,416,458	19,789,666	5,373,208	72.8%
2023	355,785	496,650	916,367	208,977	707,391	33.9%	1,294,902	15,114,761	20,341,913	5,227,152	74.3%
2024	368,237	514,033	948,440	216,291	732,150	33.9%	1,325,601	15,855,638	20,906,564	5,050,926	75.8%
2025	381,125	532,024	981,636	223,861	757,775	33.9%	1,442,095	16,653,506	21,495,100	4,841,594	77.5%
2026	394,465	550,645	1,015,993	231,696	784,297	33.9%	1,456,423	17,424,793	22,020,769	4,595,976	79.1%
2027	408,271	569,918	1,051,553	239,805	811,748	33.9%	1,470,829	18,274,706	22,585,337	4,310,631	80.9%
2028	422,560	589,865	1,088,357	248,199	840,159	33.9%	1,484,539	19,210,310	23,192,144	3,981,834	82.8%
2029	437,350	610,510	1,126,450	256,886	869,564	33.9%	1,509,401	20,240,045	23,845,598	3,605,553	84.9%
2030	452,657	631,878	1,165,876	265,877	899,999	33.9%	1,538,169	21,360,737	24,538,166	3,177,429	87.1%
2031	468,500	653,994	1,206,681	275,182	931,499	33.9%	1,546,645	22,576,537	25,269,285	2,692,747	89.3%
2032	484,898	750,547	1,328,103	284,814	1,043,290	36.6%	1,555,326	23,917,065	26,063,475	2,146,409	91.8%
2033	501,869	776,816	1,374,587	294,782	1,079,805	36.6%	1,571,784	25,475,102	26,925,850	1,450,748	94.6%
2034	519,435	804,004	1,422,697	305,100	1,117,597	36.6%	1,577,681	27,181,142	27,854,072	672,930	97.6%
2035	537,615	832,144	1,472,491	315,778	1,156,713	36.6%	1,568,991	29,058,932	28,864,676	(194,256)	100.7%
2036	556,431	861,269	1,524,028	326,830	1,197,198	36.6%	1,573,434	31,138,233	29,979,634	(1,158,598)	103.9%
2037	575,907	-	619,100	338,269	280,830	8.3%	1,628,171	33,422,341	31,193,833	(2,228,508)	107.1%
2038	596,063	-	640,768	350,109	290,659	8.3%	1,657,557	34,882,105	32,463,243	(2,418,863)	107.5%
2039	616,926	-	663,195	362,363	300,832	8.3%	1,693,990	36,443,345	33,819,039	(2,624,306)	107.8%
2040	638,518	-	686,407	375,045	311,362	8.3%	1,686,414	38,107,146	35,261,147	(2,845,999)	108.1%
2041	660,866	-	710,431	388,172	322,259	8.3%	1,733,863	39,927,674	36,842,485	(3,085,189)	108.4%
2042	683,996	-	735,296	401,758	333,538	8.3%	1,817,063	41,860,439	38,517,220	(3,343,219)	108.7%

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 purposes of making contributions to the Plan nor for any other purposes.



**Recommended Town Contributions**

<b>Year Ended June 30</b>	<b>Computed Contribution</b>	<b>% of Payroll Contribution Rates</b>
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
<b>2018</b>	<b>575,463</b>	<b>33.9</b>

**History of Assets and Accrued Liabilities**

<b>Valuation Date July 1</b>	<b>Valuation Assets</b>	<b>Actuarial Accrued Liabilities</b>	<b>Funded Ratio</b>	<b>Unfunded Actuarial Accrued Liabilities</b>
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
<b>2017</b>	<b>11,051,030</b>	<b>16,938,557*</b>	<b>65.2</b>	<b>5,887,527</b>

\*Mortality was changed from RP-2000 to MP-2016 generational tables.



***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 administrative and investment expenses paid by the Trust)
- (ii) Salary Increases 3.5%

**Demographic Assumptions**

- (i) Mortality MP-2016 Blue Collar generational tables (separate for employees (m/f), retirees (m/f), and disabled retirees (m/f)) (formerly RP 2000 Mortality tables for males and females, with ages set forward ten years for disabled retirees).

- (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 is amortized as a level percent-of-payroll in layers, with the original unfunded accrued liability being amortized over the remaining period that was previously established (ending June 30, 2037). New layers of amortization are established for changes in method, changes of assumptions, changes to the plan, and actuarial gains and losses. The annual net amount of amortization is added to the normal cost and increased with interest to compute the recommended contribution amount.

#### **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, 2017, the net market value of Pension Plan assets was reported to be \$11,051,030.

Market Value of Assets as of July 1, 2016	\$9,556,569
a. Revenues	
(i) Member Contributions	\$186,677
(ii) Employer Contributions	650,000
(iii) Investment Income (Net of investment fees)	1,471,204
b. Disbursements	
(i) Benefits Paid	\$779,901
(ii) Administrative expenses	33,519
Market Value of Assets as of July 1, 2017	\$11,051,030

**Actuarial Value of Assets**

The market value of assets was used for the July 1, 2017 valuation.

## Participant Summary

### Retirees Included in the Valuation

There were 30 retirees included in the valuation, with annual pensions totaling \$885,899. The breakdown by age division is as follows:

#### Retirees

Age	Number	Average Annual Pensions
Under 40		
40-44	2	\$11,518
45-49	2	30,598
50-54	6	27,685
55-59	4	42,999
60-64	2	22,878
65-69	2	24,031
70-74	6	36,560
75-79	2	20,020
Over 80	4	23,746
<b>Total</b>	<b>30</b>	<b>\$29,530</b>

**Active Members – Age and Service Distribution**

Age	Service							Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	Over 30	
20 - 24	4							4
25 - 29	7	1						8
30 - 34								0
35 - 39	2	1	3	1				7
40 - 44			1	2				3
45 - 49	1			2	2			5
50 - 54			1			2		3
55 - 59				1				1
60 - 64								0
65+			1					1
<b>Total</b>	14	2	6	6	2	2	0	32

**Total Active Participant Information**

	2015	2016	2017
Active Members	30	29	32
Valuation Payroll	1,716,424	1,686,288	1,700,026
Average Compensation	57,214	58,148	53,126
Average Age (yrs.)	40.5	41.8	38.0
Average Service (yrs.)	12.0	13.3	10.3

**Reconciliation With Prior Year**

	Actives	Retirees
July 1, 2016 Participants	29	26
Corrections		
New Participants	7	
Returned to Active		
Retirements	(4)	4
Deaths		
New Beneficiaries		
Benefits Expire		
Terminations		
- Vested		
- Non-Vested		
- Lump-Sums	_____	_____
July 1, 2017 Participants	32	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:

<b>Valuation Date June 30</b>	<b>Total Pension Liability</b>	<b>Plan Assets</b>	<b>Net Pension Liability</b>	<b>Percent Funded</b>	<b>Annual Covered Payroll</b>	<b>NPL As a % Of Covered Payroll</b>
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
<b>2017</b>	<b>16.939</b>	<b>11.051</b>	<b>5.888</b>	<b>65.2</b>	<b>1.700</b>	<b>346.3</b>

Dollar amounts in millions.

**Schedule of Employer Contributions**

<b>Year Ended June 30</b>	<b>Annual Recommended Contribution</b>	<b>Percent Contributed</b>
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%
2017	559,740	116%

## 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
2017	5,709,919	302,324	1,138,411	(741,343)	(650,000)	(186,677)	-	677,967	314,893	5,887,527	779,901

**Schedule of Contributions**

Year Ending June 30	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
2008	597,226	597,226	--	1,338,190	44.63%
2009	711,225	711,225	--	1,511,997	47.04%
2010	1,023,362	--	1,023,362	1,716,156	0.00%
2011	1,067,884	452,407	615,477	1,762,244	25.67%
2012	682,092	550,000	132,092	1,587,328	34.65%
2013	590,573	700,000	(109,427)	1,473,196	47.52%
2014	544,334	825,000	(280,666)	1,448,086	56.97%
2015	536,634	800,000	(263,366)	1,454,719	54.99%
2016	503,576	700,000	(196,424)	1,716,424	40.78%
2017	559,740	650,000	(90,620)	1,686,288	38.55%

**Pension Expense for Year Ended June 30, 2017**

Service cost	\$ 302,324
Interest on the total pension liability	1,138,411
Employee contributions	(186,677)
Projected earnings on pension plan investments	(741,343)
Pension plan administrative expense	33,519
Outflows / (inflows) of resources recognized in the current year due to	
Difference between expected and actual experience	59,823
Changes of assumptions	122,598
Difference between projected and actual earnings on plan investments	73,414
Pension expense	<u>\$ 802,069</u>

**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:

Asset Class	Target Allocation	Long-Term Expected Real 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 Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) – (b)
Balances at 6/30/16	\$ 15,266,488	\$ 9,556,569	\$ 5,709,919
Changes for the year			
Service cost	302,324		302,324
Interest	1,138,411		1,138,411
Difference between expected and actual experience	333,268		333,268
Contributions - employer		650,000	(650,000)
Contributions - employee		186,677	(186,677)
Net investment income		1,471,204	(1,471,204)
Changes of Assumptions	677,967		677,967
Benefit payments	(779,901)	(779,901)	--
Administrative expense		(33,519)	(33,519)
Other changes		--	--
Net changes	1,672,069	1,494,461	177,608
Balances at 6/30/17	\$ 16,938,557	\$ 11,051,030	\$ 5,887,527

### Statement of Outflows and Inflows Arising During the Current Period

1. Difference between expected and actual experience of the TPL (gains) / losses	\$333,268
2. Assumption Changes (gains) / losses	677,967
3. Recognition period: Average of the expected remaining service lives of all plan participants (in years)	5.53
4. Difference between expected and actual return on plan investments	\$(729,861)
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)	\$ 60,265
b. for assumption changes, (2) / (3)	122,598
c. for the difference between expected and actual return on investments, (4) / 5	(145,972)

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

	1% Decrease 6.5%	Current Single Discount Rate Assumption 7.5%	1% Increase 8.5%
Total Pension Liability	\$18,975,982	\$ 16,938,557	\$ 15,250,803
Plan Fiduciary Net Position	11,051,030	11,051,030	11,051,030
Net Pension Liability / (Asset)	\$ 7,924,952	\$ 5,887,527	\$ 4,199,773

**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	\$ 279,946	\$ 6,725
Changes in Assumptions	555,369	--
Net difference between projected and actual earnings on pension plan investments	74,153	--
Total	\$ 909,468	\$ 6,725

Year Ending June 30	Net Deferred Outflows of Resources
2018	\$ 255,835
2019	255,835
2020	255,719
2021	38,055
2022	97,299
Thereafter	--
Total	\$ 902,743



***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.