



The Town of Middletown Pension Plan

GASB 67 and 68 Information

Fiscal Year Ending June 30, 2020

December 2020



420 Lexington Ave.
Suite 2220
New York, NY 10170

December 2020

Mr. Marc W. Tanguay
Finance Director
Town Hall
Town of Middletown
350 East Main Road
Middletown, Rhode Island 02842

Dear Mr. Tanguay:

Buck was retained to issue a report presenting the disclosure requirements under Statement Nos. 67 and 68 of the Governmental Accounting Standards Board. This report presents the results for the Town of Middletown Pension Plan for the fiscal year ending June 30, 2020.

Purpose of this Report

The plan sponsor may use this report to prepare the plan's and the plan sponsor's audited financial statements.

Use of this report for any other purpose or by anyone other than the plan sponsor or the auditor may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Buck recommends requesting it to perform an advance review of any statement, document, or filing based on information contained in this report. Buck will accept no liability for any such statement, document or filing made without prior review by Buck.

Where presented, references to "net pension liability" and "fiduciary net position as a percentage of the total pension liability" may be appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the Fund if the Fund were to settle (i.e., purchase annuities to cover) a portion or all of its liabilities.

Future actuarial measurements

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, changes expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions, applicable law or regulations. Buck performed no analysis of the potential range of such future differences other than the sensitivity to possible changes in the discount rate, as an analysis of the potential range of such future differences is beyond the scope of this valuation.

Data Used

Buck performed the calculations using participant data as of July 1, 2019, and financial data as of July 1, 2020 both supplied by the Town and John Hancock as of June 30, 2020. Buck did not audit the data, although they were reviewed for reasonableness and consistency with the prior year data. The accuracy of the results of the valuation is dependent on the accuracy of the data.

Use of Models

Actuarial Standard of Practice No. 56 ("ASOP 56") provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Buck uses third-party software in the performance of annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the accounting rules specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies applicable accounting rules to the liabilities derived and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report. Buck has an extensive review process whereby the results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other outputs and the internal model are similarly reviewed in detail and at a high level for accuracy, reasonability and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. The review is performed by experts within the company who are familiar with applicable accounting rules as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked and reviewed by multiple experts within the company who are familiar with the details of the required changes.

Actuarial Certification

The plan sponsor selected the assumptions used for the accounting results and funding policy calculations in the report with our advice and these reflect the experience study performed in 2018. All assumptions represent an estimate of future experience. We believe that these assumptions are reasonable and comply with the requirements of GASB 67 and 68. We prepared this report's accounting exhibits in accordance with the requirements of these standards.

Based on the individually reasonable assumptions used in the preparation of this report, and on the data furnished us, we certify that projection of the costs under this plan has been made using generally accepted actuarial principles and practices.

This report presents a statement of actuarial opinion by the undersigned actuaries. We are Members of the American Academy of Actuaries. We meet the Academy's Qualification Standards to render the actuarial opinions contained herein. All the undersigned actuaries have reviewed the overall reasonableness and consistency of these results. The report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions concerning it.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,

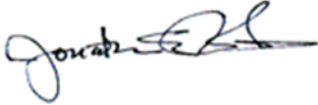
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Middletown GASB 67 68 Template 10.20.20

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Section 1 – GASB 67 and 68 Information

Summary of Significant Accounting Policies

Method used to value investments

Investments are reported at fair value.

Actuarial cost method

Entry Age Normal—Level Percent of Pay.

Plan Description

Plan administration

The Town of Middletown (Town) administers the Town of Middletown Pension Plan (Plan), a defined benefit pension plan that provides pensions for all full-time employees of the Town. Employees hired after July 1, 2001 become members of the State plan and do not participate in this plan. Plan administrators are the Town Administrator, the Finance Director and the Deputy Finance Director. The Town has the exclusive authority to amend the plan.

Plan membership

This valuation is a roll forward valuation in that the liabilities have been prepared based on census data as of June 30, 2019 and projected to June 30, 2020 according to the valuation’s demographic assumptions. As of June 30, 2019, pension plan membership consisted of the following:

Membership Status	Count	Total Expected Future Working Lifetime	Average Expected Future Working Lifetime
Inactive plan members or beneficiaries currently receiving	131	0.00	
Inactive plan members entitled to but not yet receiving	4	0.00	
Active plan members	7	18.86	
Total	142	18.86	0.13

Benefits provided

Please see Section 4 of the report for a summary of plan provisions.

Contributions

The Town establishes contributions based on an actuarially determined contribution recommended by an independent actuary. The actuarially determined contribution is the estimated amount necessary to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded accrued liability. For the year ended June 30, 2020, the Town contributed \$214,704 to the Plan.

Investments

Rate of return

For the year ended June 30, 2020, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 2.63%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Section 1 – GASB 67 and 68 Information (continued)

Receivables

No receivable contributions were included in plan assets.

Net Pension Liability

The components of the net pension liability at June 30, 2020 were as follows:

Components of Net Pension Liability	
Total pension liability	\$ 59,228,708
Plan fiduciary net position	<u>(57,320,205)</u>
Town's net pension liability	1,908,503
Plan fiduciary net position as a percentage of the total pension liability	96.78%

Pension Expense as of June 30, 2020

Pension Expense	Fiscal Year Ending June 30, 2020
Service Cost	\$ 116,062
Interest Cost on Total Pension Liability	4,184,877
Differences between Expected and Actual Experience	(157,525)
Changes of Assumptions	1,885,166
Contributions-Member	(45,532)
Projected Earnings on Plan Investments	(4,366,407)
Differences between Projected and Actual Earnings	881,429
Administrative Expenses	160,181
Other	<u>0</u>
Total Pension Expense	\$ 2,658,251

The difference between projected and actual investment earnings is recognized over five years, in accordance with the provisions of GASB 68. The differences between expected and actual experience and the effect of changes in assumptions are recognized over the average expected remaining service of all participants, which is 0.13 years. This means that the differences between expected and actual experience and the effect of changes in assumptions are effectively recognized immediately.

Actuarial assumptions

The June 30, 2020 total pension liability was determined by using the following actuarial assumptions, applied to all periods included in the measurement:

Actuarial Assumptions	
Inflation	2.50%
Salary increases	3.00%
Investment rate of return	7.50%, net of pension plan investment expenses. This is based on an average inflation rate of 2.50% and a real rate of return of 5.00%.

Census data was collected as of June 30, 2019 and projected to June 30, 2020 according to the valuation's demographic assumptions.

Section 1 – GASB 67 and 68 Information (continued)

RIGL 45-65-6 directs that locally administered plans must submit an experience study at least every three years. The size of this plan does not constitute statistically credible experience; thus, we have considered the experience study prepared for the Employees’ Retirement System of Rhode Island, which covers similar employees. In the case of the mortality assumption, we have reflected the most recently available information relevant to public sector plans.

Mortality rates were taken from *Pub-2010 Public Retirement Plans Mortality Tables Report* from the Society of Actuaries dated January 2019. These rates are applied as follows:

Participant Group	Non-disabled	Disabled
Fire/Police	PubS-2010 Healthy	PubS-2010 Disabled
Public Works, Town Hall, Schools	PubG-2010 Healthy	PubG-2010 Disabled
Contingent survivors	Contingent survivors table (total dataset)	
		N/A

All rates are amount-weighted and projected generationally from 2010 with Scale MP-2019. Separate annuitant and non-annuitant rate tables were used.

The valuation rate was modified as a result of the discontinuance of the John Hancock contract. Benefits guaranteed by John Hancock are valued at an interest rate equal to a rate representative of the current annuity market, plus 40 basis points to reflect the eligibility for future dividends. The resulting liability is limited to the contract value as of the measurement date. This methodology was determined based on the spread between the implied effective interest rates in the pricing under the discontinuance option of the John Hancock contract and average benchmark Buck immediate annuity purchase rates for the same period rounded to 10 basis points. For the June 30, 2020 measurement, this rate is 1.90%.

The impact of the changes in the assumptions are detailed on page 15 of the report.

The valuation interest rate was determined through a forecast of the expected return of the plan’s assets over the next 30 years. Forecast values were generated using the GEMS Economic Scenario Generator, which Buck leases from Conning and Company. The GEMS model is a multifactor economic model that uses basic macroeconomic variables (GDP growth, employment levels, expected and actual inflation) to generate simulations of the economy over the period. A total of 1,000 stochastic forecast paths were generated, and the simulated geometric mean portfolio return (based on the plan’s current asset allocation) over 30 years was computed on each path. The valuation interest rate is based on the average return computed on these 1,000 paths, rounded to the nearest half percent.

The interquartile range (75th and 25th percentiles) of annual rate of return forecasts over 30 years are 8.31% and 5.34%, respectively. Similarly, the range of annual rate of return forecasts over 20 years are 7.84% and 4.34%, respectively. While these rates are lower than our previous June 30, 2017 analysis they still support the current rate of return assumption of 7.50% per year.

The above analysis was based on the following asset allocation for the Plan as of July 2020:

Asset Class	Allocation
Equity	59.3%
Fixed Income	36.5%
Money Market	4.2%
Total	100.0%

The interquartile range (75th and 25th percentiles) of inflation forecasts over 30 years are 3.25% and 1.75%, respectively, which supports the underlying inflation assumption of 2.50% per year.

Section 1 – GASB 67 and 68 Information (continued)

Discount rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that Town contributions will continue to follow the current funding policy. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Had there been a point where assets were projected to be depleted, a municipal bond rate of 2.66% would have been used in the development of the blended GASB discount rate after that point. The 2.66% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index.

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

The following presents the net pension liability, calculated using the discount rate of 7.50%, as well as what the Town's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net Pension Liability	\$ 7,064,755	\$ 1,908,503	\$ (2,767,747)

Section 1 – GASB 67 and 68 Information (continued)

Schedules of Required Supplementary Information

Schedule of Changes in Town’s Net Pension Liability and Related Ratios

	2020
Total pension liability	
Service cost	\$ 116,062
Interest	4,184,877
Changes of benefit terms	0
Differences between expected and actual experience	(157,525)
Changes of assumptions	1,885,166
Benefit payments	<u>(4,876,179)</u>
Net change in total pension liability	\$ 1,152,401
Total pension liability-beginning	\$ 58,076,307
Total pension liability-ending (a)	\$ 59,228,708
Plan fiduciary net pension	
Contributions-employer	\$ 214,704
Contributions-employee	45,532
Net investment income	1,532,680
Benefit payments, including refunds of employee contributions	(4,876,179)
Administrative expense	(160,181)
Other	<u>0</u>
Net change in plan fiduciary net position	\$ (3,243,444)
Plan fiduciary net position-beginning	\$ 60,563,649
Plan fiduciary net position-ending (b)	\$ 57,320,205
Town’s net pension liability-ending (a)-(b)	\$ 1,908,503
Plan fiduciary net position as a percentage of the total pension liability	96.78%
Covered payroll ¹	\$ 629,841
Net pension liability as a percentage of covered payroll	303.01%

Notes to Schedule:

Benefit changes

None.

Changes of assumptions

The Mortality Improvement Scale was changed from MP-2018 to MP-2019. The salary scale was changed from 5.00% to 3.00%. The valuation rate was modified as a result of the discontinuance of the John Hancock contract.

¹The covered payroll shown here is based off census data provided for the July 1, 2019 actuarial valuation. According to GASB Statement Nos. 67 and 68, as amended by GASB Statement No. 82, this should be payroll on which contributions are based for the measurement period. Therefore, this number may need to be updated for inclusion in financial statements.

Section 1 – GASB 67 and 68 Information (continued)

Schedules of Required Supplementary Information (continued)

Schedule of Town Contributions

	2020
Actuarially determined contribution	\$ 86,861
Contributions related to the actuarially determined contribution	<u>(214,704)</u>
Contribution deficiency (excess)	\$ (127,843)

Notes to Schedule:

Valuation date

Actuarially determined contribution rates are calculated as of July 1, in the fiscal year in which contributions are reported. That is, the contribution calculated as of July 1, 2020 will be made during the fiscal year ended June 30, 2021.

Methods and assumptions used to determine contribution rates:

Actuarial cost method:

Entry Age Normal, Level Percent of Payroll

Amortization method

Level dollar

Amortization period

Closed six-year period beginning with the July 1, 2012 valuation. As of the July 1, 2018 valuation, any unfunded accrued liability will be fully recognized in the recommended contribution amount.

Asset valuation method

Actuarial Value of Assets based on 5-year phase-in of investment gains and losses.

Inflation

2.50%

Salary increases

3.00%

Investment rate of return

7.50%, net of pension plan investment expenses. This is based on an average inflation rate of 2.50% and a real rate of return of 5.00%.

Retirement age

Assumptions related to age, service, and department are used for participants not yet receiving payments.

Mortality

Pub-2010 Mortality Tables projected generationally with Mortality Improvement Scale MP-2019. See Section 3 for a more detailed description.

Other information

Please see Section 3 of the report.

Schedule of Investment Returns

	2019	2020
Annual money-weighted rate of return, net of investment expenses	6.14%	2.63%

Section 2 – Plan Participant Data

Reconciliation of Participant Data

	Actives	Terminated Vesteds	Retirees and Beneficiaries	Disabled Participants	Total
Participants as of July 1, 2018	10	3	128	5	146
New entrants	0	0	0	0	0
Rehires	0	0	0	0	0
Vested terminations	(1)	1	0	0	0
Disabilities	(1)	0	0	1	0
Lump sum distributions	0	0	0	0	0
Retirements	(1)	0	1	0	0
Deaths	0	0	(7)	0	(7)
New beneficiaries	0	0	3	0	3
Benefits expired	0	0	0	0	0
Data corrections	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Participants as of July 1, 2019	7	4	125	6	142

Inactive Participant Statistics – Average Annual Benefits

	July 1, 2018	July 1, 2019
Terminated Vested Participants	\$ 6,825	\$ 19,584
Retirees	\$ 40,392	\$ 41,904
Beneficiaries	\$ 13,440	\$ 13,632
Disabled Participants	\$ 32,372	\$ 35,304

Section 3 – Actuarial Assumptions and Methods

Funding valuation interest rate

7.50% per annum

Valuation of guaranteed benefits

Benefits guaranteed by John Hancock are valued at an interest rate equal to a rate representative of the current annuity market, plus 40 basis points to reflect the eligibility for future dividends. The resulting liability is limited to the contract value as of the measurement date. As of June 30, 2020, this rate is 1.90%.

Interest rate for accounting

7.50% per year, compounded annually. Projected benefit payments that are expected to be paid from available plan assets are discounted at the valuation interest rate of 7.50%. After the point where plan assets are not available to pay benefits, projected benefit payments are discounted at the municipal bond rate. The valuation rate for accounting purposes is the effective rate resulting from this process. For this plan, all projected benefit payments are expected to be paid from available plan assets.

Municipal bond rate

2.66%. This rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index.

Compensation increase rate

3.00% per annum

Retirement age:

Police and Fire Department

Rates according to the following table:

Years of Service	Percent Retiring
Less than 20	0%
20	25%
21 – 24	50%
25 or more	100%

100% upon the attainment of age 58 regardless of service.

All Others

100% at the age at which unreduced benefits are first available.

Mortality

Plan liabilities as of June 30, 2020 were valued using rates taken from *Pub-2010 Public Retirement Plans Mortality Tables Report* from the Society of Actuaries dated January 2019. These rates are applied as follows:

Participant Group	Non-disabled	Disabled
Fire/Police	PubS-2010 Healthy	PubS-2010 Disabled
Public Works, Town Hall, Schools	PubG-2010 Healthy	PubG-2010 Disabled
Contingent survivors	Contingent survivors table (total dataset)	N/A

All rates are amount-weighted and projected generationally from 2010 with Scale MP-2019. Separate annuitant and non-annuitant rate tables were used.

Section 3 – Actuarial Assumptions and Methods (continued)

Actuarial Funding Assumptions (continued)

Disability Incidence

United Auto Workers 1955 Table

Turnover

Sarason Table T-1 Table

Marriage Assumption

90% of males and 75% of females are married, with males four years older than their female spouse.

Expenses

For funding purposes, anticipated expenses included as a component of the actuarially determined contribution amount are set equal to the prior year's expenses, rounded to the nearest thousand dollars.

Participant Data

Retiree census data was supplied by the employer and John Hancock. All other employee data used in these calculations was supplied by the employer.

The experience study performed in 2018 represents the most recent comprehensive review of the actuarial assumptions noted above.

Section 3 – Actuarial Assumptions and Methods (continued)

Funding Methods

Actuarial Cost Method

Entry age normal. The actuarial present value of projected benefits of each individual is allocated on a level basis over the covered salary of the individual between date of hire and assumed date they cease active employment. The portion of this actuarial present value not provided for at the valuation date by the actuarial present value of future entry age normal cost is called the accrued liability.

Assets

Funding

General Account assets are determined at book value. Separate Account assets are determined at market value. The Actuarial Value of assets is determined using a method that spreads over a period of five years the difference between the actual investment income and the expected income (based on the valuation interest rate applied to the prior year's market value of assets). Resulting value constrained to be within corridor from 80% to 120% of market value.

Accounting

Market value of assets

Amortization Period

The unfunded accrued liability is amortized over a closed six-year period beginning with the July 1, 2012 valuation. As of the July 1, 2018 valuation, any unfunded accrued liability will be fully recognized in the recommended contribution amount.

Changes since the Prior Valuation

The Mortality Improvement Scale was changed from MP-2018 to MP-2019.

The salary scale was changed from 5.00% to 3.00%.

The valuation interest rate was modified to reflect the discontinuance of the John Hancock contract.

The impact of these changes in assumptions is shown on page 5.

Section 4 – Summary of Plan Provisions

	Fire Department	Police Department	School Custodial, Town Hall, and School Clerical	Public Works
Eligibility	The later of the date the employee elects to make contributions to the plan, or the first day of the month coincident with or following the date of hire. Elected employees and Certified employees of the School Department are not eligible to participate.			
	Employees hired after July 1, 2001 become members of the State plan and do not participate in this plan.			
Average Annual Compensation (AAC)	Average earnings during the three-consecutive year period in which the average is the highest.			
Normal Retirement Date	20 years of service.	20 years of service.	Age 65 with five years of service.	Earlier of age 65 or 30 years of service.
Normal Retirement Benefit	2.75% of AAC multiplied by the number of completed years and months of service. Maximum benefit is 75% of AAC.	3.00% (2.50% if less than 20 years of service) of AAC multiplied by the number of completed years and months of service. Maximum benefit for employees hired after 7/1/1986 is 70% of AAC.	2.00% of AAC multiplied by the number of completed years and months of service. Maximum benefit for employees hired after 7/1/1986 is 70% of AAC.	2.50% of AAC multiplied by the number of completed years and months of service. Maximum benefit for employees hired after 7/1/1986 is 70% of AAC.
Normal Form of Annuity	67½% Contingent Annuity, payable to the later of the date the spouse dies, or if she remarries, to the participant's dependent children until they attain age 18.	67½% Contingent Annuity, payable to the later of the date the spouse dies, or if she remarries, to the participant's dependent children until they attain age 18.	Modified Cash Refund	Modified Cash Refund
Employee Contributions	9% of Compensation	7% of Compensation	4% of Compensation	6% of Compensation
Interest on Employee Contributions	5% per year	5% per year	5% per year	5% per year

Section 4 – Summary of Plan Provisions (continued)

	Fire Department	Police Department	School Custodial, Town Hall, and School Clerical	Public Works
Early Retirement Date	None.	None.	Within five years of normal retirement date and completion of ten years of service.	Within five years of normal retirement date and completion of ten years of service.
Early Retirement Benefit	None.	None.	Accrued annuity reduced by 0.5% for each month by which the Early Retirement Date precedes the Normal Retirement Date.	Accrued annuity reduced by 0.5% for each month by which the Early Retirement Date precedes the Normal Retirement Date.
Disability Eligibility	Totally disabled for six months and eligible to receive disability payments under Social Security after completion of 10 years of service.	Totally disabled for six months and eligible to receive disability payments under Social Security after completion of 10 years of service.	Totally disabled for six months and eligible to receive disability payments under Social Security after completion of 10 years of service.	Totally disabled for six months and eligible to receive disability payments under Social Security after completion of 10 years of service.
Disability Benefit	Accrued benefit at date of disability, payable immediately, unreduced for early commencement. If disability incurred in the line of duty, the benefit is $\frac{2}{3}$ of final compensation.	Accrued benefit at date of disability, payable immediately, unreduced for early commencement.	Accrued benefit at date of disability, payable immediately, unreduced for early commencement.	Accrued benefit at date of disability, payable immediately, unreduced for early commencement.

Section 4 – Summary of Plan Provisions (continued)

	Fire Department	Police Department	School Custodial, Town Hall, and School Clerical	Public Works
Pre-Retirement Spouse's Benefit Eligibility (In-Service Death While Married)	Completion of 20 years of service.	Completion of 20 years of service.	Within five years of Normal Retirement Date after completion of 10 years of service.	Within five years of Normal Retirement Date after completion of 10 years of service.
Pre-Retirement Spouse's Benefit	67½% of accrued benefit, payable to the later of the date the spouse dies, or if she remarries, to the participant's dependent children until they attain age 18.	67½% of accrued benefit, payable to the later of the date the spouse dies, or if she remarries, to the participant's dependent children until they attain age 18.	50% of accrued benefit reduced for early commencement and adjusted for payment over spouse's lifetime.	50% of accrued benefit reduced for early commencement and adjusted for payment over spouse's lifetime.
Death Benefit (Not Eligible for Spouse's Benefit)	Refund of accumulated employee contributions.	Refund of accumulated employee contributions.	Refund of accumulated employee contributions.	Refund of accumulated employee contributions.
Vesting Provisions	Participant is fully vested in accumulated employee contributions. Participant is 100% vested in Employer provided portion of the benefit after completion of 10 years of service.	Participant is fully vested in accumulated employee contributions. Participant is 100% vested in Employer provided portion of the benefit after completion of 10 years of service.	Participant is fully vested in accumulated employee contributions. Participant is 100% vested in Employer provided portion of the benefit after completion of 10 years of service.	Participant is fully vested in accumulated employee contributions. Participant is 100% vested in Employer provided portion of the benefit after completion of 10 years of service.

Section 5 – Deferred Outflows/Inflows

Table 1: Amortization of Differences between Expected and Actual Liability Experience

Measurement Date 6/30	2016	2017	2018	2019	2020	Outflows	Inflows	Total
Amount Established	152,749	0	1,444,275	(648,949)	\$ (157,525)			
Recognition Period	0.32	0.32	0.26	0.22	0.13			
Amount Recognized in FY:								
2016	\$ 152,749	\$ -	\$ -	\$ -	\$ -	\$ 152,749	\$ -	\$ 152,749
2017	-	-	-	-	-	-	-	-
2018	-	-	1,444,275	-	-	1,444,275	-	1,444,275
2019	-	-	-	(648,949)	-	-	(648,949)	(648,949)
2020	-	-	-	-	(157,525)	-	(157,525)	(157,525)
2021	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-

Measurement Date 6/30	2016	2017	2018	2019	2020	Outflows	Inflows	Total
Deferred Balance at 6/30:								
2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-

Section 5 – Deferred Outflows/Inflows (continued)

Table 2: Amortization of Changes in Assumptions

Measurement Date 6/30	2016	2017	2018	2019	2020	Outflows	Inflows	Total
Amount Established	0	0	0	959,070	\$ 1,885,166			
Recognition Period	0.32	0.32	0.00	0.22	0.13			
Amount Recognized in FY:								
2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-
2019	-	-	-	959,070	-	959,070	-	959,070
2020	-	-	-	-	1,885,166	1,885,166	-	1,885,166
2021	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-

Measurement Date 6/30	2016	2017	2018	2019	2020	Outflows	Inflows	Total
Deferred Balance at 6/30:								
2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-

Section 5 – Deferred Outflows/Inflows (continued)

Table 3: Amortization of Differences between Projected and Actual Earnings

Measurement Date 6/30	2016	2017	2018	2019	2020	Outflows	Inflows	Total
Amount Established	3,130,717	(1,742,919)	(620,587)	806,220	\$ 2,833,727			
Recognition Period	5.00	5.00	5.00	5.00	5.00			
Amount Recognized in FY:								
2016	\$ 626,144	\$ -	\$ -	\$ -	\$ -	\$ 626,144	\$ -	\$ 626,144
2017	626,144	(348,584)	-	-	-	626,144	(348,584)	277,560
2018	626,144	(348,584)	(124,118)	-	-	626,144	(472,702)	153,442
2019	626,144	(348,584)	(124,118)	161,244	-	787,388	(472,702)	314,686
2020	626,141	(348,584)	(124,118)	161,244	566,746	1,354,131	(472,702)	881,429
2021	-	(348,583)	(124,118)	161,244	566,746	727,990	(472,701)	255,289
2022	-	-	(124,115)	161,244	566,746	727,990	(124,115)	603,875
2023	-	-	-	161,244	566,746	727,990	-	727,990
2024	-	-	-	-	566,743	566,743	-	566,743
2025	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-
2028	-	-	-	-	-	-	-	-

Measurement Date 6/30	2016	2017	2018	2019	2020	Outflows	Inflows	Total
Deferred Balance at 6/30:								
2016	\$ 2,504,573	\$ -	\$ -	\$ -	\$ -	\$ 2,504,573	\$ -	\$ 2,504,573
2017	1,878,429	(1,394,335)	-	-	-	1,878,429	(1,394,335)	484,094
2018	1,252,285	(1,045,751)	(496,469)	-	-	1,252,285	(1,542,220)	(289,935)
2019	626,141	(697,167)	(372,351)	644,976	-	1,271,117	(1,069,518)	201,599
2020	-	(348,583)	(248,233)	483,732	2,266,981	2,750,713	(596,816)	2,153,897
2021	-	-	(124,115)	322,488	1,700,235	2,022,723	(124,115)	1,898,608
2022	-	-	-	161,244	1,133,489	1,294,733	-	1,294,733
2023	-	-	-	-	566,743	566,743	-	566,743
2024	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-