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27W457 Warrenville Road
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Actuarial Valuation
as of May 1, 2016



ALSIP FIREFIGHTERS'
PENSION FUND

GASB 67/68 Reporting

LAUTERBACH & AMEN, LLP

Actuarial GASB Disclosures Statements 67 and 68



Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

GASB 67: ALSIP FIREFIGHTERS' PENSION FUND

Fiscal Year Ending: April 30, 2016

Actuarial Valuation Date: May 1, 2016

Measurement Date: **April 30, 2016**

GASB 68: VILLAGE OF ALSIP, ILLINOIS

Fiscal Year Ending: April 30, 2016

Actuarial Valuation Date: May 1, 2016

Measurement Date: **April 30, 2016**

Submitted by:

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October 30, 2016

LAUTERBACH & AMEN, LLP



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ACTUARIAL CERTIFICATION

This certification provides supplemental information as required by the Governmental Accounting Standards Board. The enclosed schedules were prepared by the undersigned to provide general information to assist in the preparation of the Annual Financial Report. The assumptions and methods used in the preparation of this disclosure meet the parameters set for the disclosures presented in the financial section as required by the Governmental Accounting Standards Board. Additional information is also provided solely to assist the auditors in preparation of the required footnote disclosures.

The results in this report are based on information and data submitted by the Alsip Firefighters' Pension Fund. We did not prepare the actuarial valuations for the years prior to May 1, 2015. Those Valuations were prepared by other actuaries whose reports have been furnished to us, and our disclosures are based upon those reports. An audit of the information was not performed, but high-level reviews were performed for general reasonableness as appropriate based on the purpose of the valuation. The accuracy of the results is dependent upon the accuracy and completeness of the underlying information. The results of the actuarial valuation and these supplemental disclosures rely on the information provided.

The valuation results summarized involve actuarial calculations that require assumptions about future events. The Alsip Firefighters' Pension Fund selected certain assumptions, while others were the result of guidance and/or judgment. We believe that the assumptions used in the valuation are reasonable and appropriate for the purposes for which they have been used.

To the best of our knowledge, all calculations are in accordance with the applicable funding requirements, and the procedures followed and presentation of results conform to generally accepted actuarial principles and practices. The undersigned consultant of Lauterbach & Amen, LLP with actuarial credentials meets the Qualification Standards of the American Academy of Actuaries to render this Actuarial Certification. There is no relationship between the Alsip Firefighters' Pension Fund and Lauterbach & Amen, LLP that impairs our objectivity.

Respectfully Submitted,
LAUTERBACH & AMEN, LLP

A handwritten signature in black ink that reads "Todd A. Schroeder".

Todd A. Schroeder, EA



PENSION FUND NET POSITION

Statement of Net Position
Statement of Changes in Net Position



STATEMENT OF FIDUCIARY NET POSITION

	<u>2016</u>	<u>2015</u>
Assets		
Cash and Cash Equivalents	\$ 298,467	\$ 1,068,105
Total cash	<u>298,467</u>	<u>1,068,105</u>
Receivables:		
Due from Treasury	11,179	34,876
Investment Income - Accrued Interest	<u>63,238</u>	<u>57,551</u>
Total Receivables	<u>74,417</u>	<u>92,427</u>
Investments:		
U.S. Govt and Agency Obligations	10,213,277	10,352,251
Mutual Funds	<u>12,734,869</u>	<u>12,697,683</u>
Total Investments	<u>22,948,146</u>	<u>23,049,935</u>
Total Assets	<u>23,321,030</u>	<u>24,210,466</u>
Liabilities		
Payables:		
Expenses Due/Unpaid	9,305	-
Other	<u>81,401</u>	<u>844,302</u>
Total Liabilities	<u>90,706</u>	<u>844,302</u>
Net Position Restricted for Pensions	<u>\$ 23,230,324</u>	<u>\$ 23,366,164</u>

The Fiduciary Net Position of the Fund shown above is intended to be in accordance with GAAP and Government Accounting Standards Board rules. The Fair Market Value of Investments has been provided by the reporting entity, and the results are being audited by an independent auditor. The level of the assets has been reviewed for reasonableness, but we make no representation as to the accuracy of the measurement of the fair market value of the investments. The assets for 2016 are based on audited financials.



STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

	<u>2016</u>
Additions	
Contributions	
Employer	\$ 1,541,749
Member	313,228
Total Contributions	<u>1,854,977</u>
Investment Income	
Net Appreciation in Fair Value of Investments	(289,966)
Interest and Dividends	295,461
Less Investment Expense	(98,690)
Net Investment Income	<u>(93,196)</u>
Other	15
Total Additions	<u>1,761,796</u>
Deductions	
Benefit payments and Refunds of Member Contributions	1,872,896
Administrative Expense	24,740
Total Deductions	<u>1,897,636</u>
Net Increase in Net Position	<u>(135,840)</u>
Net Position Restricted for Pensions	
Beginning of Year	<u>23,366,164</u>
End of Year	<u>\$ 23,230,324</u>

The Changes in Fiduciary Net Position of the Fund shown above is intended to be in accordance with GAAP and Government Accounting Standards Board rules. The changes have been provided by the reporting entity, and the results are being audited by an independent auditor. The changes have been reviewed for reasonableness, but we make no representation as to the accuracy of the measurement of the fair market value of the investments. The assets for 2016 are based on audited financials.



ACTUARIAL PENSION LIABILITY INFORMATION

Statement of Total Pension Liability
Statement of Changes in Total Pension Liability
Statement of Changes in Net Pension Liability
Deferred Outflows and Inflows of Resources



STATEMENT OF TOTAL PENSION LIABILITY

	<u>2016</u>	<u>2015</u>
Active Employees	<u>\$ 16,201,497</u>	<u>\$ 17,655,974</u>
Inactive Employees		
Terminated Employees - Vested	-	-
Retired Employees	18,144,867	15,125,619
Disabled Employees	9,002,359	7,921,697
Other Beneficiaries	<u>1,609,543</u>	<u>1,411,715</u>
Total Inactive Employees	<u>28,756,769</u>	<u>24,459,031</u>
Total Pension Liability	<u>\$ 44,958,266</u>	<u>\$ 42,115,005</u>

The Total Pension Liability (TPL) shown is dependent on several factors such as plan provisions and actuarial assumptions used in the report. In addition, the calculation of the TPL may be dependent on the Fiduciary Net Position shown on the prior page. Changes in the Fiduciary Net Position due to any factor including adjustment on final audit could change the TPL. The dependence of the TPL on the Net Position is due to the role of the Net Position (and projected Net Position) on the determination of the discount rate used for the TPL.

The TPL has been determined for GASB 67/68 reporting purposes only. The resulting TPL is intended to be used in the financial statement reporting of the fund and/or the Employer. The resulting liability is not intended to be a representation of the fund liability for other purposes, including but not limited to determination of cash funding requirements and recommendations. The TPL is based on data as of the Data Date shown in this report. The TPL has been determined as of the Actuarial Valuation Date and based on the assumptions shown in this report, and adjusted to the Measurement Date as needed.



STATEMENT OF CHANGES IN TOTAL PENSION LIABILITY

	<u>2016</u>
Changes in Total Pension Liability	
Service Cost	\$ 659,594
Interest	2,882,499
Changes of Benefit Terms	-
Differences Between Expected and Actual Experience	191,044
Changes in Assumptions	983,020
Benefit Payments and Refunds	(1,872,896)
Net Change in Total Pension Liability	2,843,261
Total Pension Liability - Beginning	42,115,005
Total Pension Liability - Ending (a)	<u>\$ 44,958,266</u>
 Plan Fiduciary Net Position - Ending (b)	 <u>\$ 23,230,324</u>
 Employer's Net Pension Liability - Ending (a) - (b)	 <u>\$ 21,727,942</u>
 Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	 52%
 Covered-Employee Payroll	 \$ 2,971,004
Employer's Net Pension Liability as a Percentage of Employee Payroll	731%

The plan Fiduciary Net Position was detailed in the prior section of this report. The employer's Net Pension Liability is the excess of the Total Pension Liability over the plan Fiduciary Net Position.

Total Pension Liability may be dependent on the Net Position of the fund. Changes in the Net Position could change the determination of the Total Pension Liability. Any changes in Net Position including adjustments on final audit can have an impact on Net Pension Liability that extends beyond the dollar-for-dollar change in Net Position.

Covered employee payroll is based on total pensionable pay for the fund members during the fiscal year.



STATEMENT OF CHANGES IN NET PENSION LIABILITY

The table below illustrates the change in the Net Pension Liability (NPL) from the prior Measurement Date to the current Measurement Date. Under Statement 68, the difference between the NPL from the prior measurement date to the current measurement date should be recognized as an expense, unless permitted to be recognized as a deferred outflow or inflow of resources.

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a) - (b)
Balances Beginning at 05/01/15	<u>\$ 42,115,005</u>	<u>\$ 23,366,164</u>	<u>\$ 18,748,841</u>
Changes for the year:			
Service Cost	659,594	-	659,594
Interest	2,882,499	-	2,882,499
Actuarial Experience	191,044	-	191,044
Assumptions Changes	983,020	-	983,020
Plan Changes	-	-	-
Contributions - Employer	-	1,541,749	(1,541,749)
Contributions - Employee	-	313,228	(313,228)
Other Income	-	15	(15)
Net Investment Income	-	(93,196)	93,196
Benefit payments, including refunds	(1,872,896)	(1,872,896)	-
Administrative Expense	-	(24,740)	24,740
Net Changes	<u>2,843,261</u>	<u>(135,841)</u>	<u>2,979,102</u>
Balances Beginning at 04/30/16	<u><u>\$ 44,958,266</u></u>	<u><u>\$ 23,230,324</u></u>	<u><u>\$ 21,727,942</u></u>

The changes in total pension liability above are described on the prior page. The plan fiduciary net position was detailed in the prior section of this report. The employer's Net Pension Liability is the excess of the Total Pension Liability over the plan fiduciary net position.



DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The table below shows the cumulative amounts to be shown as deferred outflows and inflows of resources. Changes in total pension liability related to the difference in actual and expected experience, or changes in assumptions regarding future events, are recognized in pension expense over the expected remaining service life of all employees (active and retired) in the pension fund. Differences in projected and actual earnings over the measurement period are recognized over a 5-year period. Amounts not yet recognized are summarized below:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences Between Expected and Actual Experience	\$ 163,907	\$ -
Changes of Assumptions	843,386	-
Net Difference Between Projected and Actual Earnings on Pension Plan Investments	1,381,868	-
Contributions Subsequent to the Measurement Date*	-	-
Total	<u>\$ 2,389,161</u>	<u>\$ -</u>

* Contributions subsequent to the measurement date may be recognized as a reduction to the NPL. The amount is not known as of the date of this report. Subsequent to the measurement date, the following amounts will be recognized in pension expense in the upcoming years:

Year ended April, 30:

2017	\$ 512,238
2018	512,238
2019	512,238
2020	512,238
2021	166,771
Thereafter	173,438



DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES - DETAILS

The table below shows the annual detail amounts that have been summarized on the prior page. Under Statement 68, the level of detail shown on the prior page is sufficient for financial statement reporting. The detail shown below is primarily for tracking purposes.

Pension Expense Source	Date Established	Initial Period	Initial Balance	Remaining Period	4/30/2016	4/30/2016
					Expense Recognized	Deferred Balance
Asset (Gain)/Loss	4/30/2016	5.00	\$ 1,727,335	5.00	\$ 345,467	\$ 1,381,868
Change in Assumptions (Gain)/Loss	4/30/2016	7.04	983,020	7.04	139,634	843,386
Actuarial (Gain)/Loss	4/30/2016	7.04	191,044	7.04	27,137	163,907
Total			\$ 2,901,399		\$ 512,238	\$ 2,389,161

Each detail item in the chart above was established as of the Fiscal Year End shown and the full amount deferred has been determined as of that time. Any events that occur in subsequent fiscal years do not have an impact on the prior fiscal year. The bases are established independently each year.



PENSION EXPENSE DEVELOPMENT

The table below displays the pension expense development for the current year. The pension expense includes items that change the Net Pension Liability from one year to the next, netted out for amounts that are deferred under GASB pronouncement, plus any amounts that are being recognized that were deferred previously.

See below for development of the pension expense:

	2016
Pension Expense/(Income) Under GASB 68	
Service Cost	\$ 659,594
Interest	2,882,499
Plan Changes	-
Contributions - Employee	(313,228)
Contributions - Other	(15)
Expected Investment Income	(1,634,138)
Administrative Expense	24,740
Other Changes	-
Initial Pension Expense/(Income)	1,619,452
Recognition of Outflow/(Inflow) of Resources due to Liabilities	166,771
Recognition of Outflow/(Inflow) of Resources due to Assets	345,467
Total Pension Expense/(Income)	\$ 2,131,690



ACTUARIAL ASSUMPTION INFORMATION

Statement of Significant Actuarial Assumptions
Notes on Actuarial Assumptions
Development of the Discount Rate
Sensitivity of the Discount Rate



STATEMENT OF SIGNIFICANT ACTUARIAL ASSUMPTIONS

Actuarial Assumptions (Economic)

Discount Rate used for the Total Pension Liability	7.00%
Long-Term Expected Rate of Return on Plan Assets	7.00%
High Quality 20 Year Tax-Exempt G.O. Bond Rate	3.32%
Projected Individual Salary Increases	3.81% - 18.58%
Projected Increase in Total Payroll	3.25%
Consumer Price Index (Urban)	2.50%
Inflation Rate Included	2.50%

Actuarial Assumptions (Demographic)

Mortality Table	L&A 2016 Illinois Firefighters Mortality Rates
Retirement Rates	L&A 2016 Illinois Firefighters Retirement Rates Capped at age 65
Disability Rates	L&A 2016 Illinois Firefighters Disability Rates
Termination Rates	L&A 2016 Illinois Firefighters Termination Rates
Percent Married	80.0%

All rates shown in the economic assumptions are assumed to be annual rates, compounded on an annual basis. For more information on the selection of the actuarial assumptions, please see the assumption document prepared for the Fund.

ASSUMPTION CHANGES

The Assumptions were changed from the prior year.

The assumed rate on High Quality 20 Year Tax-Exempt G.O. Bonds was changed from 3.62% to 3.32% for the current year. The underlying index used is The Bond Buyer 20-Bond GO Index as discussed in more detail later in this section. The choice of index is unchanged from the prior year. The rate has



been updated to the current fiscal year end based on changes in market conditions as reflected in the Index. The change was made to reflect our understanding of the requirements of GASB under Statement 67 and Statement 68.

The discount rate used in the determination of the Total Pension Liability remained constant at 7.00%. The discount rate is impacted by a couple of metrics. Any change in the underlying High Quality 20 Year Tax Exempt G.O. Bond Rate will impact the blended discount rate.

In addition, changes made that impact the projection of the Net Position of the fund. For example, changes in the formal or informal funding policy can impact the discount rate. Actual changes in the net position from one year to the next can impact the projections as well.

The demographic assumptions were changed to the tables shown on the prior page. The changes were made based on a study of Firefighters and fire pension funds in Illinois. The changes are described in the assumption document for the pension fund. The changes were made to better reflect the future anticipated experience of the fund. The assumptions impacted include:

- Mortality Rates
- Mortality Improvement Rates
- Retirement Rates
- Disability Rates
- Termination Rates



NOTES ON ACTUARIAL ASSUMPTIONS

Individual Pay Increases

Individual pay increases include provisions for annual cost of living increases, plus any additional increases in pensionable pay provided (step increases, longevity increases, promotions, educations, etc). Sample rates are as follows:

Service	Rate	Service	Rate
0	18.58%	8	4.00%
1	13.71%	9	4.00%
2	14.97%	10	4.00%
3	3.81%	15	4.00%
4	4.45%	20	4.00%
5	6.64%	25	4.00%
6	4.00%	30	4.00%
7	4.00%		

Demographic Assumptions

Mortality rates are based on the assumption study prepared by Lauterbach & Amen, LLP in 2016. The table combines observed experience of Illinois Firefighters with the RP-2014 mortality table for blue collar workers. Mortality improvements have been made to 5 years past the valuation date.

Other demographic assumption rates are based on a review of assumptions in the L&A 2016 study for Illinois Firefighters.

POSTEMPLOYMENT BENEFIT CHANGES

Eligibility for postemployment benefit increases is determined based on the Illinois Pension code. Tier 1 Firefighter retirees are provided with an annual 3.0% increase in retirement benefits by statute when eligible. Tier 2 Firefighter retirees are provided postemployment benefit increases based on one-half of the Consumer Price Index (Utilities) for the prior September.

The CPI-U for September, 1985 was 108.3. The CPI-U for September, 2015 was 237.9. The average increase in the CPI-U for September, 1985 through September, 2015 was 2.66% (on a compounded basis).



EXPECTED RETURN ON PENSION PLAN INVESTMENTS

The long-term expected rate of return on assets is intended to represent the best estimate of future real rates of return and is shown for each of the major asset classes in the investment policy. The expected rates of return on assets shown here is from the State of Illinois Department of Insurance Actuarial Experience Study dated September 26, 2012. Long-term Real Rates of Return are shown as the Expected Rate of Return, net of the assumed inflation rate.

There are multiple approaches seen to providing these rates. Typically, the information is either based on capital market projections, or historical rates seen for the asset classes. We do not provide an opinion on the reasonableness of the returns provided nor the reasonableness of the approach used in the determination of the rates provided. The information provided is shown below for convenience.

The rates provided in the table below are based on an arithmetic average. The Investment Policy Statement will provide more detail regarding the Fund's policies on asset allocation targets and acceptable ranges.

Asset Class	Long-Term Expected Rate of Return	Long-Term Inflation Expectations	Long-Term Expected Real Rate of Return
US Large Cap Equity	8.30%	2.50%	5.80%
US Mid Cap Equity	9.30%	2.50%	6.80%
US Small Cap Equity	9.30%	2.50%	6.80%
Non-US Developed Large Cap Equity Unhedged	8.40%	2.50%	5.90%
Emerging Markets Equity Unhedged	10.50%	2.50%	8.00%
US Corporate Bonds	4.20%	2.50%	1.70%
US Government Fixed Income	3.20%	2.50%	0.70%
US Cash	3.00%	2.50%	0.50%
Global Real Estate - REITS	8.30%	2.50%	5.80%
Commodities - Long Only	4.90%	2.50%	2.40%

Long-term expected real returns under GASB are expected to reflect the period of time that begins when a plan member begins to provide service to the employer and ends at the point when all benefits to the plan member have been paid. The rates provided above are intended to estimate those figures.



The expected inflation rate is 2.50% and is included in the total long-term rate of return on investments. The inflation rate is from the same source as the long-term real rates of return, and is not necessarily reflective of the inflation measures used for other purposes in the report.

Geometric rates of return are equal to arithmetic rates of return when the annual returns exhibit no volatility over time. When arithmetic returns are volatile on a year-to-year basis, the actual realized geometric returns over time will be lower. The higher the volatility, the greater the difference.



MUNICIPAL BOND RATE

The municipal bond rate assumption is based on The Bond Buyer 20-Bond GO Index. The rate shown earlier in the Actuarial Assumption section is the April 28, 2016 rate. The 20-Bond GO Index is based on an average of certain general obligation municipal bonds maturing in 20 years and having an average rating equivalent of Moody's Aa2 and Standard & Poor's AA.

The 20-Bond Index consists of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.

The indexes represent theoretical yields rather than actual price or yield quotations. Municipal bond traders are asked to estimate what a current-coupon bond for each issuer in the indexes would yield if the bond was sold at par value. The indexes are simple averages of the average estimated yields of the bonds.

DISCOUNT RATE

The discount rate used in the determination of the Total Pension Liability is based on a combination of the expected long-term rate of return on plan investments and the municipal bond rate.

Cash flow projections were used to determine the extent which the plan's future net position will be able to cover future benefit payments. To the extent future benefit payments are covered by the plan's projected net position, the expected rate of return on plan investments is used to determine the portion of the net pension liability associated with those payments. To the extent future benefit payments are not covered by the plan's projected net position, the municipal bond rate is used to determine the portion of the net pension liability associated with those payments.

Projected benefit payments are determined during the actuarial process based on the assumptions. More details on the assumptions are in the prior section. The expected contributions are based on the funding policy of the plan. The funding policy is discussed in more detail in a later section.



SENSITIVITY OF THE DISCOUNT RATE

The Net Pension Liability has been determined using the discount rate listed in the assumption section. Below is a table illustrating the sensitivity of the Net Pension Liability to the discount rate assumption.

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Employer Net Pension Liability	\$28,246,372	\$21,727,942	\$16,402,832

The sensitivity of the Net Pension Liability to the discount rate is based primarily on two factors:

1. The duration of the plan's expected benefit payments. Younger plans with benefit payments further in the future will be more sensitive to changes in the discount rate.
2. The funded percentage of the plan (ratio of the net position to the total pension liability). The higher the funded percentage, the higher the sensitivity to the discount rate.



PARTICIPANT DATA

Participant Demographic Data
Expected Future Working Lifetime



PARTICIPANT DEMOGRAPHIC DATA

The chart below summarizes the employee count and payroll as of the Actuarial Valuation Date:

	<u>2016</u>	<u>2015</u>
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	36	33
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	0	0
Active Plan Members	<u>35</u>	<u>35</u>
Total	<u>71</u>	<u>68</u>
Payroll of Active Plan Members	<u>\$2,971,004</u>	<u>\$ 3,011,302</u>

Participant count is shown as of the Actuarial Valuation Date. Pay is the active pensionable pay as of the Actuarial Valuation Date.

EXPECTED FUTURE WORKING LIFETIME

The chart below summarizes the expected future working lifetime of fund members:

	<u>2016</u>	<u>2015</u>
Average Future Working Career (In Years)		
Active Plan Members	14.29	12.89
Inactive Plan Members	0.00	0.00
Total	7.04	6.64

The expected future working lifetime is measured as of the Actuarial Valuation Date and is based on the demographic assumptions used in the preparation of the Actuary's report.



FUNDING POLICY

Formal Funding Policy
Informal Funding Policy



COMPONENTS OF THE ACTUARIALLY DETERMINED CONTRIBUTION

The Actuarially Determined Contribution (ADC) includes the determination of the Normal Cost contribution for active plan members, as well as provision for the payment of unfunded liability.

The actuarial funding method used in the determination of the normal cost and the actuarial liability is the Entry Age Normal Cost method (level percent of pay). The method allocates normal cost contributions by employee over the working career of the employee as a level percent of their pay.

Unfunded liability is the excess of the actuarial liability over the actuarial value of assets. The actuarially determined contribution includes a payment towards unfunded liability existing at the actuarial valuation date. The payment towards unfunded liability is set up as a level percent of payroll payment that is expected to increase during the payment period. The period of repayment as of the Actuarial Valuation Date is 17 years.

The Actuarial Value of Assets smooths gains and losses on the market value of assets over a 5-year period.

Under no circumstances will the Actuarially Determined Contribution be less than the amount determined as the Statutory Minimum Contribution under Illinois statutes.

FORMAL FUNDING POLICY

There is no Formal Funding Policy that exists between the Pension Board and the Village at this time.

INFORMAL FUNDING POLICY

In determining the most appropriate informal funding policy, GASB provides the following guidance in the Statement:

Application of professional judgment should consider the most recent five-year contribution history of the employers and nonemployer contributing entities as a key indicator of future contributions from those sources and should reflect all other known events and conditions.... the amount of projected cash flows for contributions from employers and nonemployer contributing entities should be limited to an average of contributions from those sources over the most recent five-year period and may be modified based on consideration of subsequent events. For this purpose, the basis for the average (for example, percentage of covered payroll contributed or percentage of actuarially determined contributions made) should be a matter of professional judgment.



In our review of informal funding policy, the following factors are considered and described herein:

1. The five-year contribution history of the Employer (with a focus on the average contributions from those sources.)
2. All other known events and conditions
3. Consideration of subsequent events.

Five-Year Contribution History of the Employer

Employer contributions (under the informal policy) should be limited to the average over the most recent five years. In determining the basis for the average we reviewed three possibilities: (a) The average dollar contribution; (b) the average percent of pensionable pay; and (c) The average percent of the actuarial determined contribution. Please see the table below for a summary of these values:

Fiscal Year End	Employer Contributions	Most Applicable ADC	% of ADC	Covered Payroll	% of Payroll
4/30/2016	\$1,541,749	\$1,538,355	100%	\$2,971,004	51.89%
4/30/2015	\$1,538,881	\$1,480,436	104%	\$3,011,302	51.10%
4/30/2014	\$1,301,138	\$1,214,470	107%	\$2,847,052	45.70%
4/30/2013	\$1,222,157	\$1,155,339	106%	\$2,770,376	44.12%
4/30/2012	\$1,272,947	\$1,229,708	104%	\$2,653,763	47.97%

When compared to the other policies reviewed, history suggests that a contribution as a percent of the Actuarially Determined Contribution is the least volatile, and as a result, the most stable contribution method under an informal funding policy.

Other Known Events and Conditions

GASB has a provision for consideration of any other known events or conditions in the most recent five-year history in applying judgement for the informal funding policy. There are no events or conditions that have been considered in the development of the informal funding policy.

Consideration of Subsequent Events

GASB has a provision for modification based on consideration of subsequent events in development of the informal funding policy. This report gives consideration to the fact that the current contributions are greater than 100% of the Actuarially Determined Contribution on an Informal Funding Policy basis. We have projected the impact on the unfunded liability and limited payments towards the unfunded liability to \$0 when the fund is projected to be 100% funded. The limitation on the number of years of payment of unfunded liability may cause the projected payments to unfunded liability to cease prior to the time



stated in the underlying Actuarially Determined Contribution determination. The limitation on the number of years of payments does not impact the determination of the discount rate.

Informal Funding Policy – Selected

The informal funding policy that has been determined for future contributions is 104.12% of the Actuarially Determined Contribution. This represents the full future contributions expected to be made.

FUNDING POLICY – OTHER CONSIDERATIONS

Under GASB, the future contribution amount is not intended to include dollars contributed on behalf of future employees. Contributions are only intended to cover contributions towards the Normal Cost of existing employees as of the Actuarial Valuation Date as well as payment of unfunded liability on behalf of the current existing employees. Contributions under the funding policy have been adjusted as necessary to exclude dollars that would be anticipated to be contributed on behalf of future employees hired after the actuarial valuation date.

The contribution level may not pay off the unfunded liability during the active working lifetimes of current employees. In that case contributions will persist beyond the working lifetimes of current employees. To the extent a portion of the above total contribution is anticipated to pay contributions for future employee normal cost, the amount has been netted out. The remaining amount is anticipated to be paid towards the unfunded liability existing for current employees.

The actuarial determined contribution is determined annually based on the parameters previously discussed. The funding methods and procedures are assumed to continue into the future. The tax levy in the next December is assumed to be the actuarially determined contribution. Funding is assumed to go into the fund during the next full fiscal year.



SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the Net Pension Liability
Schedule of Total Pension Liability and Related Ratios
Schedule of the Actuarially Determined Contribution



SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Pension Liability										
Service Cost	\$ 659,594	\$ 725,003								
Interest	2,882,499	2,763,171								
Changes of Benefit Terms	-	-								
Differences Between Expected and Actual Experience	191,044	-								
Changes in Assumptions	983,020	-								
Benefit Payments and Refunds	(1,872,896)	(1,694,070)								
Net Change In Total Pension Liability	2,843,261	1,794,104								
Total Pension Liability - Beginning	42,115,005	40,320,901								
Total Pension Liability - Ending (A)	\$ 44,958,266	\$ 42,115,005								
Plan Fiduciary Net Position										
Contributions - Employer	\$ 1,541,749	\$ 1,538,881								
Contributions - Member	313,228	286,786								
Net Investment Income	(93,196)	1,654,617								
Other Income	15	-								
Benefit Payments and Refunds	(1,872,896)	(1,694,070)								
Administrative Expense	(24,740)	(16,982)								
Net Change in Plan Fiduciary Net Position	(135,840)	1,769,232								
Plan Fiduciary Net Position - Beginning	23,366,164	21,596,932								
Plan Fiduciary Net Position - Ending (b)	\$ 23,230,324	\$ 23,366,164								
Employer Net Pension Liability - Ending (a) - (b)	\$ 21,727,942	\$ 18,748,841								

The current year information was developed in the completion of this report.



SCHEDULE OF TOTAL PENSION LIABILITY AND RELATED RATIO

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Pension Liability - Ending (a)	<u>\$ 44,958,266</u>	<u>\$ 42,115,005</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 23,230,324</u>	<u>\$ 23,366,164</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
Employer Net Pension Liability - Ending (a) - (b)	<u>\$ 21,727,942</u>	<u>\$ 18,748,841</u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	51.67%	55.48%								
Covered-Employee Payroll	\$ 2,971,004	\$ 3,011,302								
Employer Net Pension Liability as a Percentage of Covered-Employee Payroll	731.33%	622.62%								

Covered employee payroll shown is the pensionable pay for the fiscal year for all fund members.



SCHEDULE OF CONTRIBUTIONS

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Actuarially Determined Contribution	\$ 1,538,355	\$ 1,480,436								
Contributions in Relation to the Actuarially										
Determined Contribution	<u>1,541,749</u>	<u>1,538,881</u>								
Contribution Deficiency (excess)	<u>\$ (3,394)</u>	<u>\$ (58,445)</u>								
Covered-Employee Payroll	<u>\$ 2,971,004</u>	<u>\$ 3,011,302</u>								
Contributions as a Percentage of Covered-Employee Payroll	51.9%	51.1%								

NOTES TO SCHEDULE OF CONTRIBUTIONS

The actuarially determined contribution shown for the current year is from the May 1, 2014 actuary's report completed by Timothy W. Sharpe, Enrolled Actuary, for the tax levy recommendation for the December, 2014 tax levy.



GASB METHODS AND PROCEDURES

GASB Methods and Procedures
Methodology for Deferred Outflows and Inflows



GASB METHODS AND PROCEDURES

	Statement 67	Statement 68
	<u>Pension Fund Financials</u>	<u>Employer Financials</u>
Fiscal Year End for Reporting	April 30, 2016	April 30, 2016
Measurement Date	April 30, 2016	April 30, 2016
Actuarial Valuation Date	May 1, 2016	May 1, 2016
Actuarial Valuation - Data Date	April 30, 2016	April 30, 2016
Asset Valuation Method	Market Value	Market Value
Actuarial Cost Method	Entry Age Normal (Level %)	Entry Age Normal (Level %)

Methodology Used in the Determination of Deferred Inflows and Outflows of Resources

Amortization Method	Straight Line	Straight Line
Amortization Period		
Actuarial Experience (TPL)	7.04 Years	7.04 Years
Changes in Assumptions	7.04 Years	7.04 Years
Asset Experience	5.00 Years	5.00 Years



SUPPLEMENTARY TABLES

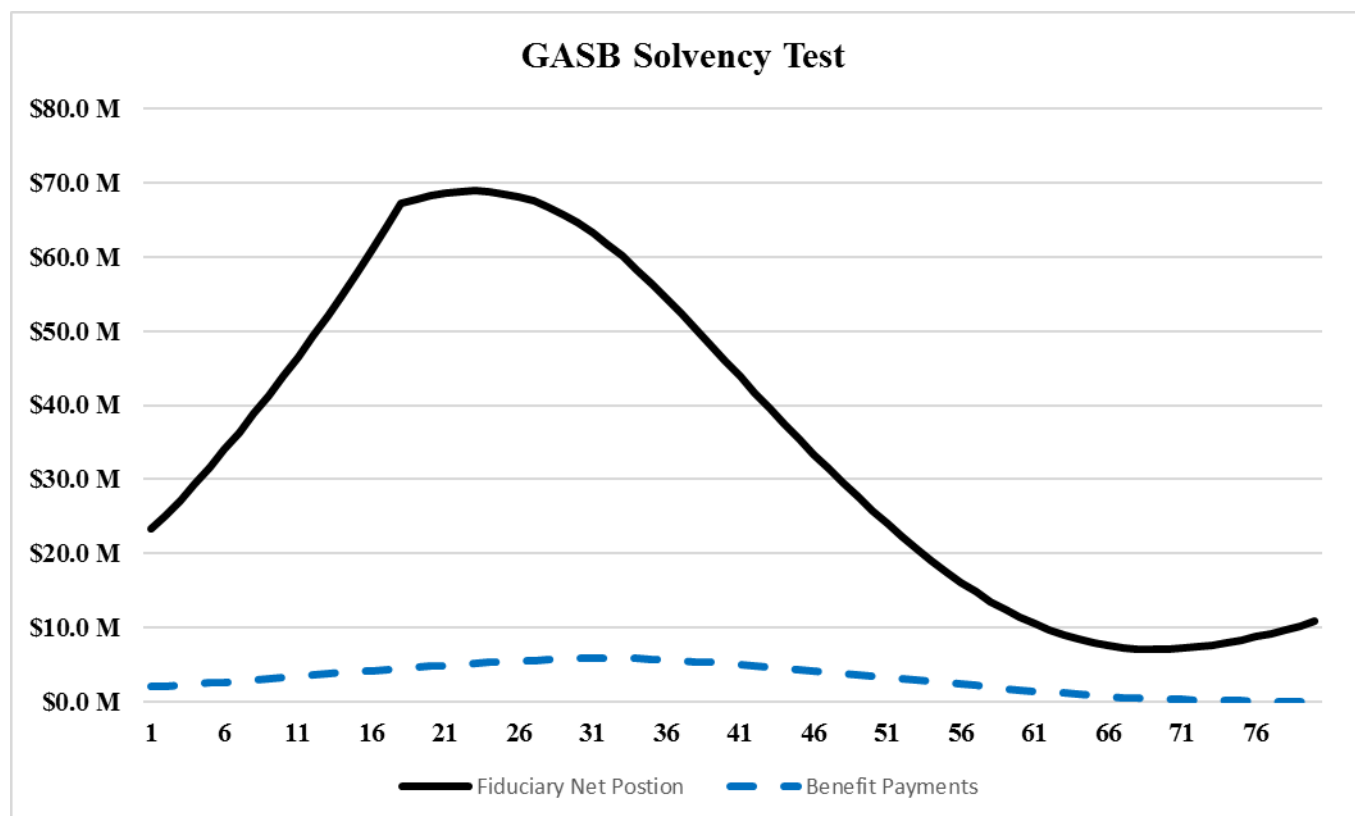
Projection of Contributions
Projection of the Pension Fund's Fiduciary Net Position
Actuarial Present Value of Projected Benefit Payments



GASB PROJECTIONS – SUMMARY AND PROCEDURE

GASB requires a solvency test to use in the determination of the discount rate each year. The Fiduciary Net Position of the fund is projected forward. To the extent the Net Position of the Fund is anticipated to be greater than \$0, benefit payments during that time period are discounted based on the expected rate of return on plan assets.

If the Fiduciary Net Position of the fund is anticipated to go to \$0 prior to the payment of future benefit payments for employees who are in the fund as of the Actuarial Valuation Date, then remaining expected future benefit payments are discounted using a high quality Municipal Bond rate as described in the assumption section of the report. Below is a chart with a high level summary of the projections:



The plan's projected net position is expected to cover future benefit payments in full for the current employees.



GASB PROJECTIONS – LIMITATIONS

Projections of any type require assumptions about future events. The projections required for GASB reporting are deterministic in nature. That means that values are projected forward under one set of assumptions which can be thought of as the average result. Actual results could vary, and projections of one deterministic assumption set do not necessarily provide a framework for making risk management or funding policy decisions. Projections that deal with risk management are outside the scope of this report.

In addition, GASB requirements create results that are specific only to financial statement reporting, and should not be used or interpreted for other purposes. For example, GASB cash flow projections do not entail the total expected cash flows of the pension fund, but rather a subset of cash flows specific to members who are in the pension fund as of the Actuarial Valuation date. While the likely expectation may be that new employees are hired to replace the old, cash flows attributable to their benefits are not considered. Under GASB, when the Net Position goes to \$0, that represents only the Net Position for the assets attributable to the current fund members.

GASB also mandates certain assumptions that are made in the projection process. Most notably, future contributions under an informal funding policy. In proposing an informal funding policy, GASB suggests a focus be placed on the average contribution rate over the past 5 years. Assumed contributions noted in this section may be based on the five-year average, unless a formal funding policy is in place.

Contributions reflecting informal funding policy are applied under GASB, whether or not the future results dictate a need for more or less contributions. This would not be the case with other uses for projections. Any events that are taken into account (past or future) in the informal funding policy are discussed in the “Funding Policy” section of this report.

The further you look forward with projections, the more sensitive the results are to assumptions. With projections that run out close to 80 years, a small change in an assumption will have a dramatic impact in the look of the projections on the following pages. If there is no change to the solvency of the fund as determined by GASB, big swings in the projection results may not necessarily lead to big swings in the determination of the Total Pension Liability.

We recommend the projections are not used for any other purposes, other than providing backup information for purposes of the financial statement report.

The following pages provide the detail behind the charts shown on the chart in this section.



PROJECTION OF CONTRIBUTIONS – YEARS 1 TO 30

Year	Projected Covered-Employee Payroll			Projected Contributions			
	Current Employees (a)	Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Pay of Future Employees (f) - Notes	Total Contributions (d) + (e) + (f)
1	\$ 2,971,006	\$ -	\$ 2,971,006	\$ 280,909	\$ 2,045,610	\$ -	\$ 2,326,518
2	3,025,845	41,719	3,067,564	286,094	2,206,912	-	2,493,006
3	3,052,576	114,684	3,167,260	288,621	2,275,626	-	2,564,247
4	3,042,295	227,900	3,270,195	287,649	2,341,998	-	2,629,647
5	2,978,366	398,111	3,376,477	281,605	2,404,561	-	2,686,166
6	2,910,783	575,429	3,486,212	275,215	2,458,940	-	2,734,154
7	2,844,933	754,581	3,599,514	268,988	2,515,182	-	2,784,170
8	2,775,112	941,386	3,716,498	262,387	2,574,154	-	2,836,541
9	2,701,595	1,135,690	3,837,285	255,436	2,634,572	-	2,890,007
10	2,624,356	1,337,640	3,961,996	248,133	2,696,170	-	2,944,302
11	2,531,136	1,559,625	4,090,761	239,319	2,759,901	-	2,999,220
12	2,443,612	1,780,099	4,223,711	231,044	2,823,162	-	3,054,206
13	2,375,551	1,985,431	4,360,982	224,608	2,890,885	-	3,115,493
14	2,290,641	2,212,072	4,502,713	216,580	2,964,660	-	3,181,240
15	2,209,699	2,439,353	4,649,052	208,927	3,039,552	-	3,248,479
16	2,151,880	2,648,266	4,800,146	203,460	3,117,328	-	3,320,788
17	2,095,257	2,860,894	4,956,151	198,107	2,860,526	-	3,058,633
18	2,042,306	3,074,919	5,117,225	193,100	309,834	-	502,934
19	1,977,744	3,305,791	5,283,535	186,996	304,488	-	491,484
20	1,910,172	3,545,078	5,455,250	180,607	296,760	-	477,367
21	1,792,346	3,840,200	5,632,546	169,466	288,997	-	458,463
22	1,685,797	4,129,807	5,815,604	159,392	271,306	-	430,698
23	1,571,726	4,432,885	6,004,611	148,607	255,938	-	404,545
24	1,442,344	4,757,417	6,199,761	136,374	239,513	-	375,887
25	1,307,737	5,093,516	6,401,253	123,647	218,753	-	342,400
26	1,180,537	5,428,756	6,609,293	111,620	195,928	-	307,548
27	1,053,516	5,770,580	6,824,096	99,610	174,200	-	273,810
28	896,937	6,148,942	7,045,879	84,805	154,588	-	239,393
29	765,994	6,508,876	7,274,870	72,425	131,875	-	204,300
30	617,993	6,893,310	7,511,303	58,431	111,816	-	170,247

Column d – Contributions from employees to the pension fund (employees as of the valuation date)

Column e – Employer contributions to the fund excluding contributions for employees hired after the actuarial valuation date

Column f – Contributions from future employees to the extent they are anticipated to be greater than required to pay their total normal cost



PROJECTION OF CONTRIBUTIONS – YEARS 31 TO 60

Year	Projected Covered-Employee Payroll			Projected Contributions			
	Current Employees (a)	Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Pay of Future Employees (f) - Notes	Total Contributions (d) + (e) + (f)
31	\$ 503,059	\$ 7,252,361	\$ 7,755,420	\$ 47,564	\$ 88,135	\$ -	\$ 135,699
32	385,694	7,621,777	8,007,471	36,467	71,072	-	107,539
33	275,848	7,991,866	8,267,714	26,081	54,098	-	80,179
34	182,125	8,354,290	8,536,415	17,220	36,974	-	54,194
35	134,033	8,679,815	8,813,848	12,673	23,769	-	36,442
36	85,047	9,015,252	9,100,299	8,041	17,672	-	25,713
37	33,866	9,362,192	9,396,058	3,202	11,942	-	15,144
38	25,272	9,676,158	9,701,430	2,389	5,459	-	7,848
39	18,839	9,997,888	10,016,727	1,781	4,074	-	5,855
40	-	10,342,270	10,342,270	-	3,037	-	3,037
41	-	10,678,394	10,678,394	-	-	-	-
42	-	11,025,442	11,025,442	-	-	-	-
43	-	11,383,769	11,383,769	-	-	-	-
44	-	11,753,741	11,753,741	-	-	-	-
45	-	12,135,738	12,135,738	-	-	-	-
46	-	12,530,149	12,530,149	-	-	-	-
47	-	12,937,379	12,937,379	-	-	-	-
48	-	13,357,844	13,357,844	-	-	-	-
49	-	13,791,974	13,791,974	-	-	-	-
50	-	14,240,213	14,240,213	-	-	-	-
51	-	14,703,020	14,703,020	-	-	-	-
52	-	15,180,868	15,180,868	-	-	-	-
53	-	15,674,246	15,674,246	-	-	-	-
54	-	16,183,659	16,183,659	-	-	-	-
55	-	16,709,628	16,709,628	-	-	-	-
56	-	17,252,691	17,252,691	-	-	-	-
57	-	17,813,404	17,813,404	-	-	-	-
58	-	18,392,339	18,392,339	-	-	-	-
59	-	18,990,090	18,990,090	-	-	-	-
60	-	19,607,268	19,607,268	-	-	-	-

Column d – Contributions from employees to the pension fund (employees as of the valuation date)

Column e – Employer contributions to the fund excluding contributions for employees hired after the actuarial valuation date

Column f – Contributions from future employees to the extent they are anticipated to be greater than required to pay their total normal cost



PROJECTION OF CONTRIBUTIONS – YEARS 61 TO 80

Year	Projected Covered-Employee Payroll			Projected Contributions			
	Current Employees (a)	Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Pay of Future Employees (f) - Notes	Total Contributions (d) + (e) + (f)
61	\$ -	\$ 20,244,504	\$ 20,244,504	\$ -	\$ -	\$ -	\$ -
62	-	20,902,451	20,902,451	-	-	-	-
63	-	21,581,780	21,581,780	-	-	-	-
64	-	22,283,188	22,283,188	-	-	-	-
65	-	23,007,392	23,007,392	-	-	-	-
66	-	23,755,132	23,755,132	-	-	-	-
67	-	24,527,174	24,527,174	-	-	-	-
68	-	25,324,307	25,324,307	-	-	-	-
69	-	26,147,347	26,147,347	-	-	-	-
70	-	26,997,136	26,997,136	-	-	-	-
71	-	27,874,543	27,874,543	-	-	-	-
72	-	28,780,465	28,780,465	-	-	-	-
73	-	29,715,831	29,715,831	-	-	-	-
74	-	30,681,595	30,681,595	-	-	-	-
75	-	31,678,747	31,678,747	-	-	-	-
76	-	32,708,306	32,708,306	-	-	-	-
77	-	33,771,326	33,771,326	-	-	-	-
78	-	34,868,894	34,868,894	-	-	-	-
79	-	36,002,133	36,002,133	-	-	-	-
80	-	37,172,203	37,172,203	-	-	-	-

NOTES TO PROJECTION OF CONTRIBUTIONS

Total payroll is assumed to increase annually at the assumed payroll increase rate shown in the assumption section of this report. Payroll for current employees (employees active as of the actuarial valuation date) has been projected on an employee by employee basis, using expected pay increases and probability of remaining in active employment for future periods.

Employer contributions are related to current employees in the fund as of the Actuarial Valuation Date. To the extent future contributions under the Employer funding policy are made to cover the Normal Cost of providing benefits for future employees, those contributions have been excluded out for purposes of these projections and this report.

Contributions are based on the Funding Policy described in an earlier section of this report. The contributions do not factor in changes in funding policy based on an assumed Employer decision if the projections were to play out in this fashion. The only future events that have been considered were outlined in the funding policy section of the report. Contributions from future employees have not been included. It is assumed that contributions made by future employees will not exceed the Normal Cost of their participation in the Fund. In addition, contributions by the employer on behalf of service for future employees have not been included per the GASB parameters.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION – YEARS 1 TO 30

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (a)+(b)-(c)-(d)+(e)
1	\$ 23,230,324	\$ 2,326,518	\$ 2,021,465	\$ 13,516	\$ 1,579,327	\$ 25,101,188
2	25,101,188	2,493,006	2,101,901	13,854	1,709,208	27,187,648
3	27,187,648	2,564,247	2,214,247	14,200	1,852,064	29,375,512
4	29,375,512	2,629,647	2,347,206	14,555	2,001,236	31,644,634
5	31,644,634	2,686,166	2,504,827	14,919	2,155,138	33,966,192
6	33,966,192	2,734,154	2,648,192	15,292	2,313,120	36,349,983
7	36,349,983	2,784,170	2,797,135	15,674	2,475,284	38,796,628
8	38,796,628	2,836,541	2,946,579	16,066	2,641,855	41,312,379
9	41,312,379	2,890,007	3,118,565	16,468	2,812,485	43,879,839
10	43,879,839	2,944,302	3,287,654	16,879	2,986,845	46,506,454
11	46,506,454	2,999,220	3,452,749	17,301	3,165,492	49,201,115
12	49,201,115	3,054,206	3,604,323	17,734	3,349,375	51,982,640
13	51,982,640	3,115,493	3,767,683	18,177	3,538,992	54,851,265
14	54,851,265	3,181,240	3,928,948	18,631	3,734,826	57,819,751
15	57,819,751	3,248,479	4,069,771	19,097	3,938,381	60,917,744
16	60,917,744	3,320,788	4,206,942	19,575	4,151,182	64,163,197
17	64,163,197	3,058,633	4,333,864	20,064	4,371,152	67,239,054
18	67,239,054	502,934	4,465,279	20,566	4,555,010	67,811,153
19	67,811,153	491,484	4,590,153	21,080	4,590,548	68,281,952
20	68,281,952	477,367	4,732,512	21,607	4,618,355	68,623,555
21	68,623,555	458,463	4,861,406	22,147	4,637,538	68,836,004
22	68,836,004	430,698	4,995,676	22,701	4,647,399	68,895,725
23	68,895,725	404,545	5,127,440	23,268	4,646,674	68,796,235
24	68,796,235	375,887	5,248,722	23,850	4,635,143	68,534,693
25	68,534,693	342,400	5,364,636	24,446	4,612,406	68,100,416
26	68,100,416	307,548	5,457,987	25,057	4,578,352	67,503,272
27	67,503,272	273,810	5,570,219	25,684	4,532,247	66,713,426
28	66,713,426	239,393	5,655,621	26,326	4,473,585	65,744,458
29	65,744,458	204,300	5,747,864	26,984	4,402,138	64,576,047
30	64,576,047	170,247	5,794,814	27,659	4,318,324	63,242,147

Column b – Contributions on behalf of current employees only as of the Actuarial Valuation Date.

Column d – Based on average administrative expenses in recent years and projected to increase going forward.

Column e – Based on the current expected return on assets. Does not factor in allocation changes.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION – YEARS 31 TO 60

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (a)+(b)-(c)-(d)+(e)
31	\$ 63,242,147	\$ 135,699	\$ 5,833,464	\$ 28,350	\$ 4,223,212	\$ 61,739,243
32	61,739,243	107,539	5,863,015	29,059	4,116,654	60,071,363
33	60,071,363	80,179	5,851,466	29,785	3,999,993	58,270,284
34	58,270,284	54,194	5,796,285	30,530	3,875,550	56,373,214
35	56,373,214	36,442	5,737,809	31,293	3,744,589	54,385,143
36	54,385,143	25,713	5,660,571	32,075	3,607,987	52,326,197
37	52,326,197	15,144	5,544,952	32,877	3,467,769	50,231,280
38	50,231,280	7,848	5,417,837	33,699	3,325,468	48,113,061
39	48,113,061	5,855	5,289,926	34,542	3,181,619	45,976,068
40	45,976,068	3,037	5,142,034	35,405	3,037,146	43,838,812
41	43,838,812	-	4,987,100	36,290	2,892,898	41,708,319
42	41,708,319	-	4,826,282	37,198	2,749,361	39,594,200
43	39,594,200	-	4,660,439	38,128	2,607,144	37,502,778
44	37,502,778	-	4,490,389	39,081	2,466,663	35,439,971
45	35,439,971	-	4,316,877	40,058	2,328,305	33,411,342
46	33,411,342	-	4,140,642	41,059	2,192,434	31,422,075
47	31,422,075	-	3,962,299	42,086	2,059,392	29,477,082
48	29,477,082	-	3,782,368	43,138	1,929,503	27,581,079
49	27,581,079	-	3,601,182	44,216	1,803,087	25,738,767
50	25,738,767	-	3,418,992	45,322	1,680,463	23,954,916
51	23,954,916	-	3,235,971	46,455	1,561,959	22,234,450
52	22,234,450	-	3,052,285	47,616	1,447,915	20,582,464
53	20,582,464	-	2,868,146	48,807	1,338,679	19,004,190
54	19,004,190	-	2,683,815	50,027	1,234,609	17,504,958
55	17,504,958	-	2,499,638	51,277	1,136,065	16,090,107
56	16,090,107	-	2,316,015	52,559	1,043,407	14,764,940
57	14,764,940	-	2,133,457	53,873	956,989	13,534,599
58	13,534,599	-	1,952,533	55,220	877,151	12,403,997
59	12,403,997	-	1,773,978	56,601	804,210	11,377,628
60	11,377,628	-	1,598,694	58,016	738,449	10,459,367

Column b – Contributions on behalf of current employees only as of the Actuarial Valuation Date.

Column d – Based on average administrative expenses in recent years and projected to increase going forward.

Column e – Based on the current expected return on assets. Does not factor in allocation changes.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION – YEARS 61 TO 80

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (a)+(b)-(c)-(d)+(e)
61	\$ 10,459,367	\$ -	\$ 1,427,891	\$ 59,466	\$ 680,098	\$ 9,652,108
62	9,652,108	-	1,262,920	60,953	629,312	8,957,548
63	8,957,548	-	1,105,264	62,476	586,157	8,375,965
64	8,375,965	-	956,436	64,038	550,601	7,906,091
65	7,906,091	-	817,800	65,639	522,506	7,545,158
66	7,545,158	-	690,467	67,280	501,640	7,289,050
67	7,289,050	-	575,229	68,962	487,687	7,132,546
68	7,132,546	-	472,537	70,686	480,265	7,069,588
69	7,069,588	-	382,443	72,454	478,950	7,093,641
70	7,093,641	-	304,719	74,265	483,290	7,197,947
71	7,197,947	-	238,836	76,122	492,833	7,375,823
72	7,375,823	-	184,012	78,025	507,136	7,620,922
73	7,620,922	-	139,275	79,975	525,791	7,927,463
74	7,927,463	-	103,493	81,975	548,431	8,290,426
75	8,290,426	-	75,457	84,024	574,748	8,705,694
76	8,705,694	-	53,947	86,125	604,496	9,170,118
77	9,170,118	-	37,794	88,278	637,496	9,681,542
78	9,681,542	-	25,931	90,485	673,633	10,238,760
79	10,238,760	-	17,414	92,747	712,858	10,841,457
80	10,841,457	-	11,440	95,065	755,174	11,490,126

NOTES TO PROJECTION OF FIDUCIARY NET POSITION

Total contributions are Employee and Employer contributions anticipated to be made under the funding policy on behalf of employees in the fund as of the Actuarial Valuation Date. The amounts shown were detailed earlier in this section.

Projected benefit payments shown represent only employees active as of the Actuarial Valuation Date. The fund will also be paying benefit payments in the future on behalf of employees hired after the Actuarial Valuation Date, but those have not been estimated for this purpose.

Projected investment earnings are based on the current expected rate of return on plan assets. Administrative expenses are not typically charged on a per employee basis. Administrative expenses shown have not been adjusted to distinguish between current employees and future employees.

The projected Net Position represents assets held or projected to be held on behalf of current employees as of the Actuarial Valuation Date. The fund will also hold assets in the future on behalf of new employees that are not shown here.



ACTUARIAL PRESENT VALUES OF PROJECTED BENEFIT PAYMENTS – YEARS 1 TO 30

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Present Value (PV) of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	PV of "Funded" Portion of Benefit Payments (7.00%)	PV of "Unfunded" Portion of Benefit Payments (3.32%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
1	\$ 23,230,324	\$ 2,021,465	\$ 2,021,465	\$ -	\$ 1,954,224	\$ -	\$ 1,954,224
2	25,101,188	2,101,901	2,101,901	-	1,899,051	-	1,899,051
3	27,187,648	2,214,247	2,214,247	-	1,869,677	-	1,869,677
4	29,375,512	2,347,206	2,347,206	-	1,852,286	-	1,852,286
5	31,644,634	2,504,827	2,504,827	-	1,847,357	-	1,847,357
6	33,966,192	2,648,192	2,648,192	-	1,825,319	-	1,825,319
7	36,349,983	2,797,135	2,797,135	-	1,801,851	-	1,801,851
8	38,796,628	2,946,579	2,946,579	-	1,773,943	-	1,773,943
9	41,312,379	3,118,565	3,118,565	-	1,754,659	-	1,754,659
10	43,879,839	3,287,654	3,287,654	-	1,728,782	-	1,728,782
11	46,506,454	3,452,749	3,452,749	-	1,696,818	-	1,696,818
12	49,201,115	3,604,323	3,604,323	-	1,655,428	-	1,655,428
13	51,982,640	3,767,683	3,767,683	-	1,617,250	-	1,617,250
14	54,851,265	3,928,948	3,928,948	-	1,576,142	-	1,576,142
15	57,819,751	4,069,771	4,069,771	-	1,525,827	-	1,525,827
16	60,917,744	4,206,942	4,206,942	-	1,474,070	-	1,474,070
17	64,163,197	4,333,864	4,333,864	-	1,419,198	-	1,419,198
18	67,239,054	4,465,279	4,465,279	-	1,366,572	-	1,366,572
19	67,811,153	4,590,153	4,590,153	-	1,312,887	-	1,312,887
20	68,281,952	4,732,512	4,732,512	-	1,265,051	-	1,265,051
21	68,623,555	4,861,406	4,861,406	-	1,214,491	-	1,214,491
22	68,836,004	4,995,676	4,995,676	-	1,166,388	-	1,166,388
23	68,895,725	5,127,440	5,127,440	-	1,118,834	-	1,118,834
24	68,796,235	5,248,722	5,248,722	-	1,070,372	-	1,070,372
25	68,534,693	5,364,636	5,364,636	-	1,022,440	-	1,022,440
26	68,100,416	5,457,987	5,457,987	-	972,179	-	972,179
27	67,503,272	5,570,219	5,570,219	-	927,261	-	927,261
28	66,713,426	5,655,621	5,655,621	-	879,886	-	879,886
29	65,744,458	5,747,864	5,747,864	-	835,735	-	835,735
30	64,576,047	5,794,814	5,794,814	-	787,441	-	787,441

The projected Fiduciary Net Position and the Projected Benefit Payments are based only on the current employee group as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position was shown in more detail earlier in this section.



ACTUARIAL PRESENT VALUES OF PROJECTED BENEFIT PAYMENTS – YEARS 31 TO 60

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Present Value (PV) of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	PV of "Funded" Portion of Benefit Payments (7.00%)	PV of "Unfunded" Portion of Benefit Payments (3.32%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
31	\$ 63,242,147	\$ 5,833,464	\$ 5,833,464	\$ -	\$ 740,835	\$ -	\$ 740,835
32	61,739,243	5,863,015	5,863,015	-	695,876	-	695,876
33	60,071,363	5,851,466	5,851,466	-	649,071	-	649,071
34	58,270,284	5,796,285	5,796,285	-	600,888	-	600,888
35	56,373,214	5,737,809	5,737,809	-	555,912	-	555,912
36	54,385,143	5,660,571	5,660,571	-	512,550	-	512,550
37	52,326,197	5,544,952	5,544,952	-	469,234	-	469,234
38	50,231,280	5,417,837	5,417,837	-	428,484	-	428,484
39	48,113,061	5,289,926	5,289,926	-	390,998	-	390,998
40	45,976,068	5,142,034	5,142,034	-	355,202	-	355,202
41	43,838,812	4,987,100	4,987,100	-	321,962	-	321,962
42	41,708,319	4,826,282	4,826,282	-	291,196	-	291,196
43	39,594,200	4,660,439	4,660,439	-	262,795	-	262,795
44	37,502,778	4,490,389	4,490,389	-	236,641	-	236,641
45	35,439,971	4,316,877	4,316,877	-	212,614	-	212,614
46	33,411,342	4,140,642	4,140,642	-	190,592	-	190,592
47	31,422,075	3,962,299	3,962,299	-	170,452	-	170,452
48	29,477,082	3,782,368	3,782,368	-	152,067	-	152,067
49	27,581,079	3,601,182	3,601,182	-	135,311	-	135,311
50	25,738,767	3,418,992	3,418,992	-	120,061	-	120,061
51	23,954,916	3,235,971	3,235,971	-	106,200	-	106,200
52	22,234,450	3,052,285	3,052,285	-	93,618	-	93,618
53	20,582,464	2,868,146	2,868,146	-	82,215	-	82,215
54	19,004,190	2,683,815	2,683,815	-	71,899	-	71,899
55	17,504,958	2,499,638	2,499,638	-	62,584	-	62,584
56	16,090,107	2,316,015	2,316,015	-	54,193	-	54,193
57	14,764,940	2,133,457	2,133,457	-	46,655	-	46,655
58	13,534,599	1,952,533	1,952,533	-	39,905	-	39,905
59	12,403,997	1,773,978	1,773,978	-	33,884	-	33,884
60	11,377,628	1,598,694	1,598,694	-	28,538	-	28,538

The projected Fiduciary Net Position and the Projected Benefit Payments are based only on the current employee group as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position was shown in more detail earlier in this section.



ACTUARIAL PRESENT VALUES OF PROJECTED BENEFIT PAYMENTS – YEARS 61 TO 80

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Present Value (PV) of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	PV of "Funded" Portion of Benefit Payments (7.00%)	PV of "Unfunded" Portion of Benefit Payments (3.32%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
61	\$ 10,459,367	\$ 1,427,891	\$ 1,427,891	\$ -	\$ 23,822	\$ -	\$ 23,822
62	9,652,108	1,262,920	1,262,920	-	19,691	-	19,691
63	8,957,548	1,105,264	1,105,264	-	16,106	-	16,106
64	8,375,965	956,436	956,436	-	13,025	-	13,025
65	7,906,091	817,800	817,800	-	10,409	-	10,409
66	7,545,158	690,467	690,467	-	8,213	-	8,213
67	7,289,050	575,229	575,229	-	6,395	-	6,395
68	7,132,546	472,537	472,537	-	4,909	-	4,909
69	7,069,588	382,443	382,443	-	3,713	-	3,713
70	7,093,641	304,719	304,719	-	2,765	-	2,765
71	7,197,947	238,836	238,836	-	2,026	-	2,026
72	7,375,823	184,012	184,012	-	1,458	-	1,458
73	7,620,922	139,275	139,275	-	1,032	-	1,032
74	7,927,463	103,493	103,493	-	716	-	716
75	8,290,426	75,457	75,457	-	488	-	488
76	8,705,694	53,947	53,947	-	326	-	326
77	9,170,118	37,794	37,794	-	214	-	214
78	9,681,542	25,931	25,931	-	137	-	137
79	10,238,760	17,414	17,414	-	86	-	86
80	10,841,457	11,440	11,440	-	53	-	53

NOTES TO THE ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS

The projected Fiduciary Net Position and the Projected Benefit Payments are based only on the current employee group as of the Actuarial Valuation Date. The development of the Net Position was shown in more detail earlier in this section.

The Funded and Unfunded portion of the Benefit Payments is split based on the time that the Fiduciary Net Position is projected to go to \$0 (based on assets for current fund members).

The Present Value of the Funded portion and Unfunded portion of the benefit payments has been determined separately. The PV of the funded portion of the benefit payments uses the assumption for the expected rate of return on plan assets. The PV of the unfunded portion of the benefit payments has been determined using the high quality Municipal Bond Rate as of the Measurement Date as described in the Actuarial Assumption section of the report.

The discount rate used for GASB purposes is the rate that is when applied to the total Projected Benefit payments results in a present value that equals the sum of the present value of the funded and unfunded payments. The discount rate has been rounded to four decimal places. Therefore, the resulting present value comparisons might show a slight difference due to rounding.