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Actuarial Valuation
as of June 1, 2016



ADDISON FIRE PROTECTION
DISTRICT 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: ADDISON FIRE PROTECTION DISTRICT FIREFIGHTERS' PENSION FUND

Fiscal Year Ending: May 31, 2016
Actuarial Valuation Date: June 1, 2016
Measurement Date: **May 31, 2016**

GASB 68: ADDISON FIRE PROTECTION DISTRICT, ILLINOIS

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Actuarial Valuation Date: June 1, 2016
Measurement Date: **May 31, 2016**

Submitted by:

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LAUTERBACH & AMEN, LLP



TABLE OF CONTENTS

ACTUARIAL CERTIFICATION	1
PENSION FUND NET POSITION	2
Statement of Fiduciary Net Position	3
Statement of Changes in Fiduciary Net Position.....	4
ACTUARIAL PENSION LIABILITY INFORMATION	5
Statement of Total Pension Liability.....	6
Statement of Changes in Total Pension Liability	7
Statement of Changes in Net Pension Liability.....	8
Deferred Outflows and Inflows of Resources	9
Deferred Outflows and Inflows of Resources - Details.....	10
Pension Expense Development.....	11
ACTUARIAL ASSUMPTION INFORMATION	12
Statement of Significant Actuarial Assumptions.....	13
Assumption Changes.....	13
Notes on Actuarial Assumptions.....	15
Postemployment Benefit Changes.....	15
Expected Return on Pension Plan Investments	16
Municipal Bond Rate	17
Discount Rate.....	17
Sensitivity of the Discount Rate.....	18
PARTICIPANT DATA	19
Participant Demographic Data	20
Expected Future Working Lifetime.....	20
FUNDING POLICY	21
Components of the Actuarially Determined Contribution.....	22
Formal Funding Policy.....	22
Informal Funding Policy	22
Funding Policy – Other Considerations	24
SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION	25
Schedule of Changes in the Net Pension Liability	26
Schedule of Total Pension Liability and Related Ratio	27
Schedule of Contributions.....	28
Notes to Schedule of Contributions	28
GASB METHODS AND PROCEDURES	29
GASB Methods and Procedures	30
SUPPLEMENTARY TABLES	31



TABLE OF CONTENTS

GASB Projections – Summary and Procedure.....	32
GASB Projections – Limitations.....	33
Projection of Contributions – Years 1 to 30	34
Projection of Contributions – Years 31 to 60	35
Projection of Contributions – Years 61 to 80	36
Notes to Projection of Contributions	36
Projection of the Pension Plan’s Fiduciary Net Position – Years 1 to 30	37
Projection of the Pension Plan’s Fiduciary Net Position – Years 31 to 60	38
Projection of the Pension Plan’s Fiduciary Net Position – Years 61 to 80	39
Notes to Projection of Fiduciary Net Position	39
Actuarial Present Values of Projected Benefit Payments – Years 1 to 30	40
Actuarial Present Values of Projected Benefit Payments – Years 31 to 60	41
Actuarial Present Values of Projected Benefit Payments – Years 61 to 80	42
Notes to the Actuarial Present Value of Projected Benefit Payments.....	42



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 Addison Fire Protection District Firefighters' Pension Fund. We did not prepare the actuarial valuations for the years prior to June 1, 2013. 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 Addison Fire Protection District 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 Addison Fire Protection District and Lauterbach & Amen, LLP that impairs our objectivity.

Respectfully Submitted,

LAUTERBACH & AMEN, LLP

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	\$ 468,046	\$ 1,055,133
Total cash	<u>468,046</u>	<u>1,055,133</u>
Receivables:		
Investment Income - Accrued Interest	210,051	413,628
Other	1,690	452
Total Receivables	<u>501,455</u>	<u>414,080</u>
Investments:		
Fixed Income	19,013,799	21,949,652
Mutual Funds	22,365,157	17,306,862
Common Stock	-	2,705,532
Total Investments	<u>41,378,956</u>	<u>41,962,046</u>
Total Assets	<u>42,348,457</u>	<u>43,431,259</u>
Liabilities		
Payables:		
Expenses Due/Unpaid	<u>10,375</u>	<u>16,161</u>
Total Liabilities	<u>10,375</u>	<u>16,161</u>
Net Position Restricted for Pensions	<u>\$ 42,338,082</u>	<u>\$ 43,415,098</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	\$ 1,971,893
Member	452,947
Total Contributions	<u>2,424,840</u>
Investment Income	
Net Appreciation in Fair Value of Investments	(1,668,471)
Interest and Dividends	1,802,251
Less Investment Expense	(45,796)
Net Investment Income	<u>87,984</u>
Total Additions	<u>2,512,824</u>
Deductions	
Benefit payments and Refunds of Member Contributions	3,518,147
Administrative Expense	71,692
Total Deductions	<u>3,589,839</u>
Net Increase in Net Position	(1,077,015)
Net Position Restricted for Pensions	
Beginning of Year	<u>43,415,098</u>
End of Year	<u>\$ 42,338,082</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	\$ 22,092,270	\$ 21,445,545
Inactive Employees		
Terminated Employees - Vested	-	-
Retired Employees	42,137,103	37,697,487
Disabled Employees	6,121,139	6,033,890
Other Beneficiaries	<u>1,920,824</u>	<u>1,810,757</u>
Total Inactive Employees	<u>50,179,066</u>	<u>45,542,134</u>
Total Pension Liability	<u>\$ 72,271,336</u>	<u>\$ 66,987,679</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	\$ 1,079,139
Interest	4,566,002
Changes of Benefit Terms	-
Differences Between Expected and Actual Experience	19,232
Changes in Assumptions	3,137,430
Benefit Payments and Refunds	<u>(3,518,147)</u>
Net Change in Total Pension Liability	5,283,657
Total Pension Liability - Beginning	<u>66,987,679</u>
Total Pension Liability - Ending (a)	<u>\$ 72,271,336</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 42,338,082</u>
Employer's Net Pension Liability - Ending (a) - (b)	<u>\$ 29,933,254</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	59%
Covered-Employee Payroll	\$ 4,665,296
Employer's Net Pension Liability as a Percentage of Employee Payroll	642%

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 06/01/15	<u>\$ 66,987,679</u>	<u>\$ 43,415,098</u>	<u>\$ 23,572,581</u>
Changes for the year:			
Service Cost	1,079,139	-	1,079,139
Interest	4,566,002	-	4,566,002
Actuarial Experience	19,232	-	19,232
Assumptions Changes	3,137,430	-	3,137,430
Plan Changes	-	-	-
Contributions - Employer	-	1,971,893	(1,971,893)
Contributions - Employee	-	452,947	(452,947)
Contributions - Other	-	-	-
Net Investment Income	-	87,984	(87,984)
Benefit payments, including refunds	(3,518,147)	(3,518,147)	-
Administrative Expense	-	(71,692)	71,692
Net Changes	<u>5,283,657</u>	<u>(1,077,015)</u>	<u>6,360,672</u>
Balances Beginning at 05/31/16	<u><u>\$ 72,271,336</u></u>	<u><u>\$ 42,338,082</u></u>	<u><u>\$ 29,933,254</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:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences Between Expected and Actual Experience	\$ 16,352	\$ -
Changes of Assumptions	2,667,754	-
Net Difference Between Projected and Actual Earnings on Pension Plan Investments	2,328,238	-
Contributions Subsequent to the Measurement Date*	-	-
Total	<u>\$ 5,012,344</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 May, 31:

2017	\$ 1,054,616
2018	1,054,616
2019	1,054,616
2020	1,054,614
2021	472,556
Thereafter	321,326



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	5/31/2016 Expense Recognized	5/31/2016 Deferred Balance
Asset (Gain)/Loss	5/31/2016	5.00	\$ 2,910,298	5.00	\$ 582,060	\$ 2,328,238
Change in Assumptions (Gain)/Loss	5/31/2016	6.68	3,137,430	6.68	469,676	2,667,754
Actuarial (Gain)/Loss	5/31/2016	6.68	19,232	6.68	2,880	16,352
Total			\$ 6,066,960		\$ 1,054,616	\$ 5,012,344

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:

	<u>2016</u>
Pension Expense/(Income) Under GASB 68	
Service Cost	\$ 1,079,139
Interest	4,566,002
Plan Changes	-
Contributions - Employee	(452,947)
Contributions - Other	-
Expected Investment Income	(2,998,282)
Administrative Expense	71,692
Other Changes	-
Initial Pension Expense/(Income)	<u>2,265,605</u>
Recognition of Outflow/(Inflow) of Resources due to Liabilities	472,556
Recognition of Outflow/(Inflow) of Resources due to Assets	<u>582,060</u>
Total Pension Expense/(Income)	<u><u>\$ 3,320,221</u></u>



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	3.26%
Projected Individual Salary Increases	3.50% - 14.60%
Projected Increase in Total Payroll	3.50%
Consumer Price Index (Utilities)	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 62
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 3.73% to 3.26% 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	10.28%	8	4.00%
1	14.60%	9	4.00%
2	10.22%	10	4.00%
3	10.16%	15	4.00%
4	7.88%	20	4.00%
5	4.00%	25	3.50%
6	4.00%	30	3.50%
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 shown below have been provided by the investment professionals that work with the Pension Fund. 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.

<u>Asset Class</u>	<u>Long-Term Expected Rate of Return</u>	<u>Long-Term Inflation Expectations</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Target Allocation</u>
Large Cap Domestic Equity	9.60%	3.01%	6.59%	35.00%
Small Cap Domestic Equity	11.60%	3.01%	8.59%	10.00%
International Equity	9.90%	3.01%	6.89%	5.00%
Fixed Income	4.40%	3.01%	1.39%	50.00%

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 3.01% 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 May 26, 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	\$40,162,405	\$29,933,254	\$21,525,838

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	54	53
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	0	0
Active Plan Members	<u>49</u>	<u>53</u>
Total	<u>103</u>	<u>106</u>
Payroll of Active Plan Members	<u>\$4,665,296</u>	<u>\$ 4,785,045</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	14.04	14.17
Inactive Plan Members	0.00	0.00
Total	6.68	7.09

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 24 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 District 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
5/31/2016	\$1,971,893	\$1,940,455	102%	\$4,665,296	42.27%
5/31/2015	\$1,681,984	\$1,855,680	91%	\$4,785,045	35.15%
5/31/2014	\$1,501,848	\$1,231,347	122%	\$4,565,901	32.89%
5/31/2013	\$1,335,824	\$1,081,020	124%	\$4,508,422	29.63%
5/31/2012	\$1,372,031	\$1,325,178	104%	\$4,427,778	30.99%

When compared to the other policies reviewed, history suggests that a contribution as 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 108.27% 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	\$ 1,079,139	\$ 1,134,726								
Interest	4,566,002	4,416,114								
Changes of Benefit Terms	-	-								
Differences Between Expected and Actual Experience	19,232	-								
Changes in Assumptions	3,137,430	-								
Benefit Payments and Refunds	(3,518,147)	(3,301,009)								
Net Change In Total Pension Liability	5,283,657	2,249,831								
Total Pension Liability - Beginning	66,987,679	64,737,848								
Total Pension Liability - Ending (A)	\$ 72,271,336	\$ 66,987,679								
Plan Fiduciary Net Position										
Contributions - Employer	\$ 1,971,893	\$ 1,681,984								
Contributions - Member	452,947	435,154								
Net Investment Income	87,984	2,239,373								
Benefit Payments and Refunds	(3,518,147)	(3,301,009)								
Administrative Expense	(71,692)	(41,969)								
Other	-	-								
Net Change in Plan Fiduciary Net Position	(1,077,015)	1,013,532								
Plan Fiduciary Net Position - Beginning	43,415,098	42,401,566								
Plan Fiduciary Net Position - Ending (b)	\$ 42,338,082	\$ 43,415,098								
Employer Net Pension Liability - Ending (a) - (b)	\$ 29,933,254	\$ 23,572,581								

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>\$ 72,271,336</u>	<u>\$ 66,987,679</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 42,338,082</u>	<u>\$ 43,415,098</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>\$ 29,933,254</u>	<u>\$ 23,572,581</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	58.58%	64.81%								
Covered-Employee Payroll	\$ 4,665,296	\$ 4,785,045								
Employer Net Pension Liability as a Percentage of Covered-Employee Payroll	641.62%	492.63%								

Covered employee payroll shown is the total 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	\$1,940,455	\$1,855,680								
Contributions in Relation to the Actuarially Determined Contribution	<u>1,971,893</u>	<u>1,681,984</u>								
Contribution Deficiency (excess)	<u>\$ (31,438)</u>	<u>\$ 173,696</u>								
Covered-Employee Payroll	<u>\$ 8,065,439</u>	<u>\$ 4,785,045</u>								
Contributions as a Percentage of Covered-Employee Payroll	24.4%	35.2%								

NOTES TO SCHEDULE OF CONTRIBUTIONS

The actuarially determined contribution shown for the current year is from the June 1, 2014 actuary's report completed by Lauterbach & Amen, LLP 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

	<u>Statement 67</u> <u>Pension Fund Financials</u>	<u>Statement 68</u> <u>Employer Financials</u>
Fiscal Year End for Reporting	May 31, 2016	May 31, 2016
Measurement Date	May 31, 2016	May 31, 2016
Actuarial Valuation Date	June 1, 2016	June 1, 2016
Actuarial Valuation - Data Date	May 31, 2016	May 31, 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)	6.68 Years	6.68 Years
Changes in Assumptions	6.68 Years	6.68 Years
Asset Experience	5.00 Years	5.00 Years



SUPPLEMENTARY TABLES

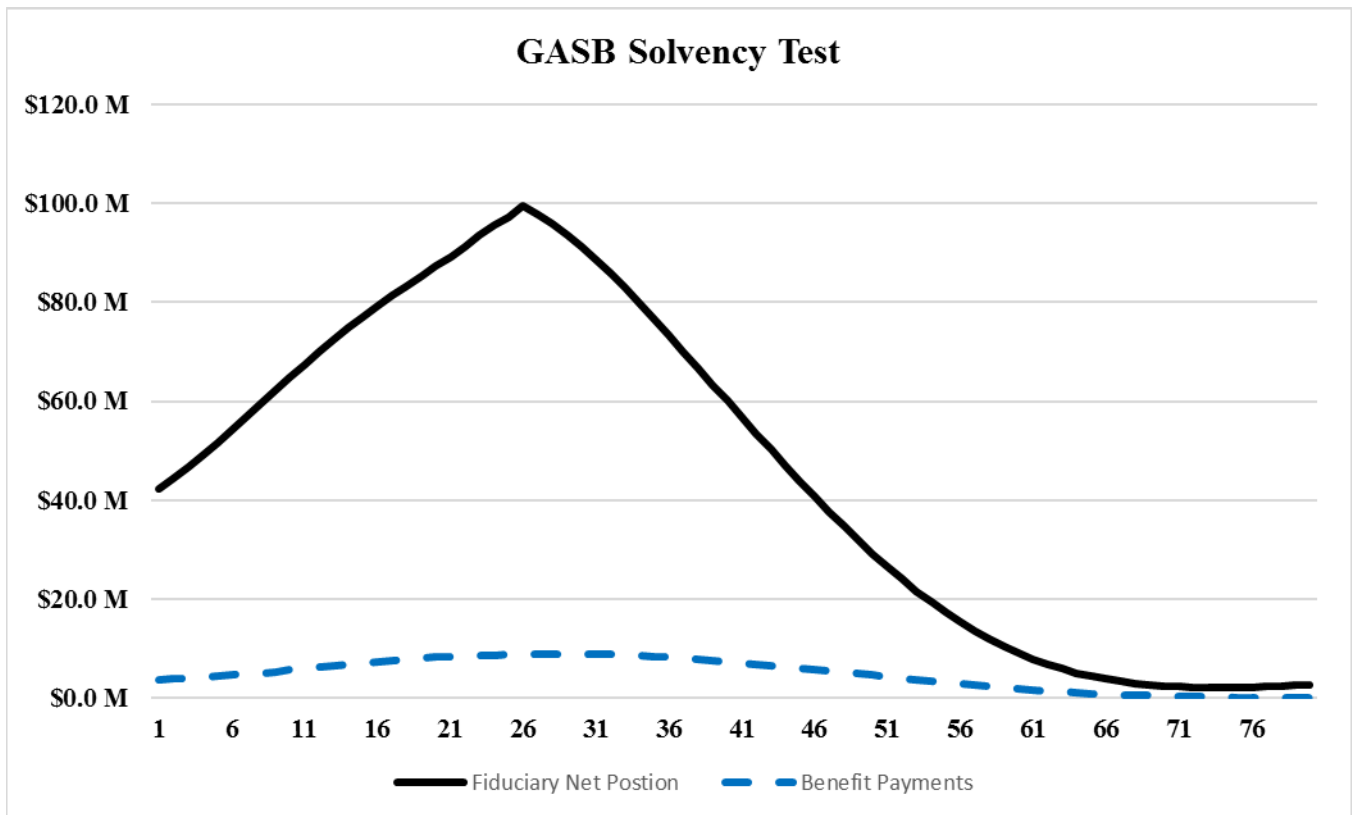
Projection of Contributions
Projection of the Pension Fund's Fiduciary Net Position
Actuarial Present Value of Projected Benefit Payments



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	\$ 4,665,297	\$ -	\$ 4,665,297	\$ 441,104	\$ 2,214,287	\$ -	\$ 2,655,391
2	4,774,272	54,310	4,828,582	451,407	2,636,184	-	3,087,592
3	4,811,268	186,315	4,997,583	454,905	2,724,304	-	3,179,209
4	4,800,729	371,769	5,172,498	453,909	2,809,120	-	3,263,029
5	4,842,516	511,020	5,353,536	457,860	2,880,826	-	3,338,686
6	4,760,148	780,761	5,540,909	450,072	2,965,811	-	3,415,883
7	4,723,717	1,011,124	5,734,841	446,627	3,032,673	-	3,479,300
8	4,656,901	1,278,660	5,935,561	440,310	3,111,109	-	3,551,418
9	4,580,740	1,562,565	6,143,305	433,109	3,187,457	-	3,620,566
10	4,424,422	1,933,899	6,358,321	418,329	3,266,555	-	3,684,884
11	4,238,091	2,342,771	6,580,862	400,712	3,335,983	-	3,736,694
12	4,056,900	2,754,292	6,811,192	383,580	3,400,441	-	3,784,021
13	3,856,542	3,193,042	7,049,584	364,636	3,468,559	-	3,833,195
14	3,478,472	3,817,848	7,296,320	328,890	3,537,071	-	3,865,960
15	3,300,449	4,251,242	7,551,691	312,057	3,564,865	-	3,876,922
16	3,068,402	4,747,598	7,816,000	290,117	3,645,735	-	3,935,852
17	2,849,406	5,240,154	8,089,560	269,411	3,721,312	-	3,990,724
18	2,670,440	5,702,254	8,372,694	252,490	3,799,255	-	4,051,745
19	2,457,572	6,208,167	8,665,739	232,363	3,887,301	-	4,119,665
20	2,247,149	6,721,891	8,969,040	212,468	3,970,231	-	4,182,699
21	2,057,496	7,225,460	9,282,956	194,536	4,055,495	-	4,250,031
22	1,958,826	7,649,033	9,607,859	185,207	4,150,757	-	4,335,964
23	1,853,509	8,090,626	9,944,135	175,249	4,264,910	-	4,440,159
24	1,671,669	8,620,510	10,292,179	158,056	3,372,760	-	3,530,817
25	1,549,153	9,103,253	10,652,406	146,472	4,351,908	-	4,498,381
26	1,354,103	9,671,137	11,025,240	128,030	213,606	-	341,636
27	1,189,492	10,221,631	11,411,123	112,466	171,267	-	283,733
28	1,009,857	10,800,655	11,810,512	95,482	146,771	-	242,253
29	876,083	11,347,797	12,223,880	82,834	122,007	-	204,841
30	700,675	11,951,041	12,651,716	66,249	105,279	-	171,528

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	\$ 563,874	\$ 12,530,652	\$ 13,094,526	\$ 53,314	\$ 83,268	\$ -	\$ 136,582
32	425,426	13,127,409	13,552,835	40,224	66,724	-	106,948
33	262,149	13,765,035	14,027,184	24,786	48,280	-	73,066
34	109,465	14,408,670	14,518,135	10,350	29,236	-	39,586
35	47,093	14,979,177	15,026,270	4,453	13,458	-	17,911
36	-	15,552,190	15,552,190	-	4,849	-	4,849
37	-	16,096,516	16,096,516	-	-	-	-
38	-	16,659,894	16,659,894	-	-	-	-
39	-	17,242,991	17,242,991	-	-	-	-
40	-	17,846,495	17,846,495	-	-	-	-
41	-	18,471,122	18,471,122	-	-	-	-
42	-	19,117,612	19,117,612	-	-	-	-
43	-	19,786,728	19,786,728	-	-	-	-
44	-	20,479,264	20,479,264	-	-	-	-
45	-	21,196,038	21,196,038	-	-	-	-
46	-	21,937,899	21,937,899	-	-	-	-
47	-	22,705,726	22,705,726	-	-	-	-
48	-	23,500,426	23,500,426	-	-	-	-
49	-	24,322,941	24,322,941	-	-	-	-
50	-	25,174,244	25,174,244	-	-	-	-
51	-	26,055,343	26,055,343	-	-	-	-
52	-	26,967,279	26,967,279	-	-	-	-
53	-	27,911,134	27,911,134	-	-	-	-
54	-	28,888,024	28,888,024	-	-	-	-
55	-	29,899,105	29,899,105	-	-	-	-
56	-	30,945,573	30,945,573	-	-	-	-
57	-	32,028,669	32,028,669	-	-	-	-
58	-	33,149,672	33,149,672	-	-	-	-
59	-	34,309,910	34,309,910	-	-	-	-
60	-	35,510,757	35,510,757	-	-	-	-

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	\$ -	\$ 36,753,634	\$ 36,753,634	\$ -	\$ -	\$ -	\$ -
62	-	38,040,011	38,040,011	-	-	-	-
63	-	39,371,411	39,371,411	-	-	-	-
64	-	40,749,411	40,749,411	-	-	-	-
65	-	42,175,640	42,175,640	-	-	-	-
66	-	43,651,788	43,651,788	-	-	-	-
67	-	45,179,600	45,179,600	-	-	-	-
68	-	46,760,886	46,760,886	-	-	-	-
69	-	48,397,517	48,397,517	-	-	-	-
70	-	50,091,430	50,091,430	-	-	-	-
71	-	51,844,630	51,844,630	-	-	-	-
72	-	53,659,192	53,659,192	-	-	-	-
73	-	55,537,264	55,537,264	-	-	-	-
74	-	57,481,068	57,481,068	-	-	-	-
75	-	59,492,906	59,492,906	-	-	-	-
76	-	61,575,157	61,575,157	-	-	-	-
77	-	63,730,288	63,730,288	-	-	-	-
78	-	65,960,848	65,960,848	-	-	-	-
79	-	68,269,478	68,269,478	-	-	-	-
80	-	70,658,909	70,658,909	-	-	-	-

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	\$ 42,338,082	\$ 2,655,391	\$ 3,623,774	\$ 57,368	\$ 2,986,992	\$ 44,299,323
2	44,299,323	3,087,592	3,799,206	58,802	3,134,952	46,663,858
3	46,663,858	3,179,209	3,976,963	60,273	3,298,937	49,104,769
4	49,104,769	3,263,029	4,129,664	61,779	3,468,903	51,645,257
5	51,645,257	3,338,686	4,343,052	63,324	3,643,460	54,221,026
6	54,221,026	3,415,883	4,537,801	64,907	3,821,231	56,855,433
7	56,855,433	3,479,300	4,764,710	66,530	4,001,528	59,505,021
8	59,505,021	3,551,418	4,986,987	68,193	4,183,399	62,184,658
9	62,184,658	3,620,566	5,258,955	69,898	4,365,568	64,841,939
10	64,841,939	3,684,884	5,540,771	71,645	4,545,697	67,460,104
11	67,460,104	3,736,694	5,819,967	73,436	4,722,774	70,026,169
12	70,026,169	3,784,021	6,111,250	75,272	4,895,665	72,519,333
13	72,519,333	3,833,195	6,478,910	77,154	5,060,890	74,857,354
14	74,857,354	3,865,960	6,744,643	79,083	5,218,282	77,117,871
15	77,117,871	3,876,922	7,033,079	81,060	5,368,722	79,249,376
16	79,249,376	3,935,852	7,297,158	83,086	5,512,744	81,317,728
17	81,317,728	3,990,724	7,534,299	85,164	5,653,192	83,342,182
18	83,342,182	4,051,745	7,774,102	87,293	5,790,744	85,323,276
19	85,323,276	4,119,665	7,992,228	89,475	5,926,317	87,287,554
20	87,287,554	4,182,699	8,183,552	91,712	6,061,529	89,256,518
21	89,256,518	4,250,031	8,294,819	94,005	6,200,078	91,317,804
22	91,317,804	4,335,964	8,403,707	96,355	6,345,893	93,499,599
23	93,499,599	4,440,159	8,540,548	98,764	6,499,873	95,800,320
24	95,800,320	3,530,817	8,625,111	101,233	6,627,883	97,232,676
25	97,232,676	4,498,381	8,731,758	103,763	6,761,400	99,656,935
26	99,656,935	341,636	8,801,587	106,358	6,782,761	97,873,388
27	97,873,388	283,733	8,853,504	109,016	6,656,595	95,851,196
28	95,851,196	242,253	8,855,421	111,742	6,516,123	93,642,409
29	93,642,409	204,841	8,865,143	114,535	6,362,528	91,230,100
30	91,230,100	171,528	8,832,757	117,399	6,196,374	88,647,846

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	\$ 88,647,846	\$ 136,582	\$ 8,792,058	\$ 120,334	\$ 6,018,625	\$ 85,890,662
32	85,890,662	106,948	8,761,473	123,342	5,828,538	82,941,332
33	82,941,332	73,066	8,693,111	126,426	5,626,244	79,821,106
34	79,821,106	39,586	8,551,750	129,586	5,414,630	76,593,985
35	76,593,985	17,911	8,378,263	132,826	5,197,156	73,297,963
36	73,297,963	4,849	8,164,314	136,147	4,976,661	69,979,013
37	69,979,013	-	7,942,338	139,550	4,755,215	66,652,339
38	66,652,339	-	7,713,976	143,039	4,533,707	63,329,032
39	63,329,032	-	7,479,963	146,615	4,312,717	60,015,171
40	60,015,171	-	7,240,672	150,280	4,092,659	56,716,877
41	56,716,877	-	6,996,116	154,037	3,873,963	53,440,687
42	53,440,687	-	6,745,964	157,888	3,657,102	50,193,936
43	50,193,936	-	6,489,732	161,836	3,442,606	46,984,975
44	46,984,975	-	6,226,914	165,881	3,231,082	43,823,262
45	43,823,262	-	5,957,162	170,029	3,023,205	40,719,276
46	40,719,276	-	5,680,366	174,279	2,819,716	37,684,347
47	37,684,347	-	5,396,846	178,636	2,621,399	34,730,263
48	34,730,263	-	5,107,300	183,102	2,429,056	31,868,918
49	31,868,918	-	4,812,879	187,680	2,243,484	29,111,843
50	29,111,843	-	4,515,060	192,372	2,065,441	26,469,852
51	26,469,852	-	4,215,642	197,181	1,895,622	23,952,651
52	23,952,651	-	3,916,544	202,110	1,734,643	21,568,640
53	21,568,640	-	3,619,661	207,163	1,583,029	19,324,845
54	19,324,845	-	3,326,982	212,342	1,441,205	17,226,726
55	17,226,726	-	3,040,410	217,651	1,309,490	15,278,154
56	15,278,154	-	2,761,763	223,092	1,188,093	13,481,392
57	13,481,392	-	2,492,820	228,669	1,077,115	11,837,018
58	11,837,018	-	2,235,244	234,386	976,540	10,343,928
59	10,343,928	-	1,990,416	240,246	886,248	8,999,513
60	8,999,513	-	1,759,502	246,252	806,017	7,799,776

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	\$ 7,799,776	\$ -	\$ 1,543,416	\$ 252,408	\$ 735,539	\$ 6,739,490
62	6,739,490	-	1,342,787	258,718	674,430	5,812,415
63	5,812,415	-	1,157,997	265,186	622,244	5,011,476
64	5,011,476	-	989,249	271,816	578,482	4,328,893
65	4,328,893	-	836,607	278,612	542,601	3,756,276
66	3,756,276	-	699,936	285,577	514,023	3,284,786
67	3,284,786	-	578,933	292,716	492,144	2,905,280
68	2,905,280	-	473,087	300,034	476,345	2,608,504
69	2,608,504	-	381,686	307,535	466,008	2,385,290
70	2,385,290	-	303,810	315,223	460,528	2,226,784
71	2,226,784	-	238,371	323,104	459,327	2,124,637
72	2,124,637	-	184,172	331,182	461,869	2,071,152
73	2,071,152	-	139,961	339,461	467,662	2,059,392
74	2,059,392	-	104,484	347,948	476,270	2,083,230
75	2,083,230	-	76,533	356,646	487,311	2,137,362
76	2,137,362	-	54,942	365,562	500,460	2,217,317
77	2,217,317	-	38,612	374,702	515,448	2,319,452
78	2,319,452	-	26,536	384,069	532,059	2,440,906
79	2,440,906	-	17,811	393,671	550,132	2,579,557
80	2,579,557	-	11,664	403,513	569,550	2,733,930

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 (3.26%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
1	\$ 42,338,082	\$ 3,623,774	\$ 3,623,774	\$ -	\$ 3,503,235	\$ -	\$ 3,503,235
2	44,299,323	3,799,206	3,799,206	-	3,432,552	-	3,432,552
3	46,663,858	3,976,963	3,976,963	-	3,358,088	-	3,358,088
4	49,104,769	4,129,664	4,129,664	-	3,258,903	-	3,258,903
5	51,645,257	4,343,052	4,343,052	-	3,203,082	-	3,203,082
6	54,221,026	4,537,801	4,537,801	-	3,127,769	-	3,127,769
7	56,855,433	4,764,710	4,764,710	-	3,069,318	-	3,069,318
8	59,505,021	4,986,987	4,986,987	-	3,002,340	-	3,002,340
9	62,184,658	5,258,955	5,258,955	-	2,958,948	-	2,958,948
10	64,841,939	5,540,771	5,540,771	-	2,913,562	-	2,913,562
11	67,460,104	5,819,967	5,819,967	-	2,860,163	-	2,860,163
12	70,026,169	6,111,250	6,111,250	-	2,806,833	-	2,806,833
13	72,519,333	6,478,910	6,478,910	-	2,781,024	-	2,781,024
14	74,857,354	6,744,643	6,744,643	-	2,705,690	-	2,705,690
15	77,117,871	7,033,079	7,033,079	-	2,636,821	-	2,636,821
16	79,249,376	7,297,158	7,297,158	-	2,556,850	-	2,556,850
17	81,317,728	7,534,299	7,534,299	-	2,467,235	-	2,467,235
18	83,342,182	7,774,102	7,774,102	-	2,379,217	-	2,379,217
19	85,323,276	7,992,228	7,992,228	-	2,285,957	-	2,285,957
20	87,287,554	8,183,552	8,183,552	-	2,187,551	-	2,187,551
21	89,256,518	8,294,819	8,294,819	-	2,072,237	-	2,072,237
22	91,317,804	8,403,707	8,403,707	-	1,962,093	-	1,962,093
23	93,499,599	8,540,548	8,540,548	-	1,863,592	-	1,863,592
24	95,800,320	8,625,111	8,625,111	-	1,758,919	-	1,758,919
25	97,232,676	8,731,758	8,731,758	-	1,664,176	-	1,664,176
26	99,656,935	8,801,587	8,801,587	-	1,567,742	-	1,567,742
27	97,873,388	8,853,504	8,853,504	-	1,473,822	-	1,473,822
28	95,851,196	8,855,421	8,855,421	-	1,377,702	-	1,377,702
29	93,642,409	8,865,143	8,865,143	-	1,288,986	-	1,288,986
30	91,230,100	8,832,757	8,832,757	-	1,200,259	-	1,200,259

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 (3.26%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
31	\$ 88,647,846	\$ 8,792,058	\$ 8,792,058	\$ -	\$ 1,116,568	\$ -	\$ 1,116,568
32	85,890,662	8,761,473	8,761,473	-	1,039,892	-	1,039,892
33	82,941,332	8,693,111	8,693,111	-	964,278	-	964,278
34	79,821,106	8,551,750	8,551,750	-	886,540	-	886,540
35	76,593,985	8,378,263	8,378,263	-	811,734	-	811,734
36	73,297,963	8,164,314	8,164,314	-	739,257	-	739,257
37	69,979,013	7,942,338	7,942,338	-	672,110	-	672,110
38	66,652,339	7,713,976	7,713,976	-	610,080	-	610,080
39	63,329,032	7,479,963	7,479,963	-	552,871	-	552,871
40	60,015,171	7,240,672	7,240,672	-	500,172	-	500,172
41	56,716,877	6,996,116	6,996,116	-	451,662	-	451,662
42	53,440,687	6,745,964	6,745,964	-	407,021	-	407,021
43	50,193,936	6,489,732	6,489,732	-	365,945	-	365,945
44	46,984,975	6,226,914	6,226,914	-	328,155	-	328,155
45	43,823,262	5,957,162	5,957,162	-	293,401	-	293,401
46	40,719,276	5,680,366	5,680,366	-	261,466	-	261,466
47	37,684,347	5,396,846	5,396,846	-	232,164	-	232,164
48	34,730,263	5,107,300	5,107,300	-	205,335	-	205,335
49	31,868,918	4,812,879	4,812,879	-	180,839	-	180,839
50	29,111,843	4,515,060	4,515,060	-	158,550	-	158,550
51	26,469,852	4,215,642	4,215,642	-	138,351	-	138,351
52	23,952,651	3,916,544	3,916,544	-	120,126	-	120,126
53	21,568,640	3,619,661	3,619,661	-	103,758	-	103,758
54	19,324,845	3,326,982	3,326,982	-	89,129	-	89,129
55	17,226,726	3,040,410	3,040,410	-	76,123	-	76,123
56	15,278,154	2,761,763	2,761,763	-	64,623	-	64,623
57	13,481,392	2,492,820	2,492,820	-	54,514	-	54,514
58	11,837,018	2,235,244	2,235,244	-	45,683	-	45,683
59	10,343,928	1,990,416	1,990,416	-	38,018	-	38,018
60	8,999,513	1,759,502	1,759,502	-	31,409	-	31,409

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 (3.26%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
61	\$ 7,799,776	\$ 1,543,416	\$ 1,543,416	\$ -	\$ 25,749	\$ -	\$ 25,749
62	6,739,490	1,342,787	1,342,787	-	20,937	-	20,937
63	5,812,415	1,157,997	1,157,997	-	16,874	-	16,874
64	5,011,476	989,249	989,249	-	13,472	-	13,472
65	4,328,893	836,607	836,607	-	10,648	-	10,648
66	3,756,276	699,936	699,936	-	8,326	-	8,326
67	3,284,786	578,933	578,933	-	6,436	-	6,436
68	2,905,280	473,087	473,087	-	4,915	-	4,915
69	2,608,504	381,686	381,686	-	3,706	-	3,706
70	2,385,290	303,810	303,810	-	2,757	-	2,757
71	2,226,784	238,371	238,371	-	2,022	-	2,022
72	2,124,637	184,172	184,172	-	1,460	-	1,460
73	2,071,152	139,961	139,961	-	1,037	-	1,037
74	2,059,392	104,484	104,484	-	723	-	723
75	2,083,230	76,533	76,533	-	495	-	495
76	2,137,362	54,942	54,942	-	332	-	332
77	2,217,317	38,612	38,612	-	218	-	218
78	2,319,452	26,536	26,536	-	140	-	140
79	2,440,906	17,811	17,811	-	88	-	88
80	2,579,557	11,664	11,664	-	54	-	54

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.